# Evaluation of the implementation of the Strategy for the EU school fruit, vegetables and milk scheme for the academic years 2017-2023 

Final report

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## Key abbreviations and terms

| Agency | Rural Business and Market Development Agency <br> CAP <br> EC <br> EU |
| :--- | :--- |
| Ermmon Agricultural Policy |  |
| European Commission |  |
| Commission | Order No. V-964 of the Minister of Health of 11 November 2011 'On the Approval of <br> the Description of the Procedure for the Organisation of Children's Catering' |
| Fruit and Vegetables and Milk and Dairy Products in Children's Educational |  |
| Institutions for the academic years 2017-2023 |  |

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## Introduction

The evaluation of the implementation of the Strategy for the EU school fruit, vegetables and milk scheme (hereinafter referred to as 'the Programme') for the academic years 2017-2023 has been prepared in accordance with the Contract No. 8P-22-164 of the Ministry of Agriculture of the Republic of Lithuania (liet. Lietuvos Respublikos žemès ūkio ministerija) (hereinafter referred to as 'the MA') and Smart Continent LT, which was concluded on 11 October 2022.

The Programme aims to promote healthy eating habits among children by providing fruit, vegetables, milk, and dairy products to educational institutions. A Strategy for the Programme for the Promotion of Fruit and Vegetables and Milk and Dairy Products in Children's Educational Institutions for the academic years 2017-2023 (hereinafter referred to as 'the Strategy') has been developed to implement the Programme. It sets out the measures to implement the objectives of the Programme, with a budget and a set of principles and rules. One of the measures foreseen in the Strategy is an evaluation to determine the impacts of and effectiveness of the Programme. This evaluation covers the period from 1 September 2017 to the end of 2021-2022.

The purpose of the evaluation is to assess the results achieved by the Strategy in the period 2017-2022, to compare them with the objectives set out in the Strategy, and to analyse the reasons for these results. The Programme implements the objectives set out in the Strategy and includes these actions:

- distribution of fruit and vegetables and milk and dairy products to children in educational institutions.
- educational measures.
- inform about the Programme.

To achieve the stated purpose, the evaluation needs to be carried out based on the following objectives:

- assessing the achievement of the objectives and targets set out in the Strategy, covering the following elements: a) effectiveness, (b) efficiency, (c) relevance, (d) coherence, and (e) evaluation of EU added value:
- to assess the results of the implementation of the Strategy against the Programme indicators set out in point 39 of the Strategy.
- analyse the achieved results against the planned results.
- assess the effectiveness and efficiency of the implementation of each of the Programme's measures.
- to analyse the Programme's implementation arrangements (administrative framework) and to assess financial implementation.
- evaluate the impact of the distribution of fruit and vegetables and milk and dairy products under the Programme on children's recommended daily intakes of nutrients and energy.
- assess the level of wastage (product loss) of products distributed under the Programme.
- analyse the problems encountered in implementing the Programme.
- provide evaluation-based conclusions and recommendations on the achievement of the Programme's objectives, the measures to be taken to improve value for money and the achievement of results.

The Strategy also sets out impact, result and productivity indicators to measure the effectiveness of the Programme (see table below).

Table 1. Impact, result, and productivity indicators set out in the Strategy

Impact indicators in the Strategy

- $70 \%$ of children in childcare facilities should eat fruit and vegetables several times a day, every day.
- $85 \%$ of children attending childcare facilities should consume milk and dairy products several times a day, every day.

Result indicators in the Strategy

- the proportion of children enrolled in the Programme compared to the total number of children eligible for the Programme.
- the proportion of schools participating in the Programme compared to the total number of schools eligible for the Programme.
- the proportion of children participating in educational activities compared to all children eligible for the Programme.

Productivity indicators in the Strategy

- number of children participating in the Programme.
- number of educational institutions participating in the Programme.
- quantity of products distributed to pupils free of charge.
- average consumption of products per pupil.
- number of children participating in educational activities.
- the amount of money spent on distributing products.
- the amount of money spent on educational measures.


## Source: prepared by the Consultant

The assessment was carried out using data provided by the Rural Business and Market Development Agency (liet. Kaimo verslo ir rinkos plétros agentūra)(hereinafter referred to as 'the Agency') annual reports as well as publicly available legal acts and other documents. A questionnaire survey method was used to assess the achievement of the impact indicators, the consumption of food suitable for the Programme since the start of the implementation of the Strategy, food waste and other issues. A total of three questionnaires were developed for educational institutions: one for students, one for school representatives and one for kindergarten representatives. To complement the data collected during the surveys and to better understand the reasons for the identified trends, interviews were carried out with representatives of the participating educational institutions, the Agency in charge of the implementation of the Programme, product suppliers, educational institutions that have participated in the Programme but have discontinued their membership, and parents of students whose children are participating in the Programme.

The report consists of 11 chapters. Chapter 1 describes the methodology used. The second chapter evaluates the implementation of the Programme by analysing the achievement of productivity, result, and impact indicators. Chapter 3 assesses the intervention logic. Chapter 4 analyses the scope of the Programme's target group. Chapter 5 assesses the system of distribution of products in educational institutions. Chapter 6 evaluates the implemented educational measures. Chapter 7 assesses the communication and information actions related to the visibility of the Programme. Chapter 8 assesses the conditions and procedures for the Programme implementation. Chapter 9 assesses the actual involvement of public authorities and stakeholders in the planning, implementation, monitoring, and evaluation of the Programme. Chapter 10 answers the evaluation questions. Chapter 11 presents conclusions and recommendations.

## 1.Methodology used

An analysis of secondary sources was carried out to assess the results of the implementation of the Strategy in the period 2017-2022, to compare them with the objectives set out in the Strategy and to analyse the reasons for the results. This approach allowed to evaluate the implementation of the Strategy based on documents already available (legislation, various reports, etc.). A questionnaire survey method was also used. It was designed to assess the achievement of the impact indicators, the consumption of fruit and vegetables since the implementation of the Strategy and the consumption and waste of milk and dairy products. The questionnaire survey was carried out with primary school students and representatives of the educational institutions most familiar with the Programme. After all the data had been compiled, an interview questionnaire was prepared. The in-depth interviews allowed to refine the obtained knowledge from the desk analysis and the questionnaire survey, also to better understand the problems faced by educational institutions while implementing the Programme and the aspects of the Programme that could be improved or changed (see figure below). Interviews were carried out with representatives of the educational establishment most familiar with the Programme, the responsible Agency, product suppliers, parents of children participating in the Programme, and educational institutions that had previously participated in the Programme but had subsequently withdrawn from it.


Figure 1. Evaluation design and methods used
Source: prepared by the Consultant

### 1.1. Survey

Preparation of Questionnaires. To assess the achievement of the impact indicators as well as consumption of fruit, vegetables, milk, and dairy products from the start of the Strategy to 2021-2022, a survey method was chosen. A total of three questionnaires were developed: for schools, schools' representatives, and nursery and kindergarten representatives.

To analyse the progress made during the implementation of the Programme, the questionnaires were based on the questionnaires used in the Interim Evaluation of the Strategy for the Implementation of the Programme for the Promotion of the Consumption of Fruit and vegetables and Milk and Dairy Products in Children's educational institutions for the academic years 2017-2020 (the 'Interim Evaluation'), which took place in 2020. This allowed a comparison of the data collected during the Interim Evaluation and the present Evaluation and to draw
conclusions on progress made. In the light of the aim and objectives of this Evaluation, the questionnaires used in the Interim Evaluation have been revised, the wording has been adjusted as necessary and new questions have been added to better assess the results of the Programme.

The aim of the questionnaire for students is to determine the fruit, vegetable, milk and/or dairy consumption habits of the pupils participating in the Programme (what they eat and how often), their attitudes towards the products they eat (which products they like; if they do not like them, why), their knowledge of foods and their health benefits. The questionnaire consists of 32 closed-ended questions to which the respondent is asked to choose one (or more) of the given answer options.

A questionnaire for school representatives aims to determine the fruit, vegetable, milk and/or dairy consumption habits of the participating students (what they eat and how often), their attitudes towards the products they eat (which products they like; if they do not like them, why), their knowledge of food and its health benefits. In addition, the aim is to find out how schools are doing in implementing the Programme, what challenges they face and how they are addressing them. The questionnaire consists of 37 questions (including multiple-choice questions): 28 closed-ended questions to which the respondent chooses one (or more) of the given answer options and 9 open-ended questions to which the respondent provides his/her own answers.

A questionnaire for nursery and kindergarten representatives aims to determine the fruit, vegetable, milk and/or dairy product consumption habits of the children participating in the Programme (what they eat and how often), their attitudes towards the products they eat (which products they like; if they do not like them, why), their knowledge of food and its health benefits. It also aims to find out how pre-schools are doing in implementing the Programme, what challenges they face and how they are tackling them. The questionnaire consists of 42 questions (including questions with multiple parts): 33 closed-ended questions to which the respondent chooses one (or more) of the given answers and 9 open-ended questions to which the respondent gives his/her answer.

SAMPLING. 1,577 educational institutions providing pre-school and/or general education and other services are participating in the Programme for the academic years 2022-2023. These institutions are divided into six categories according to the type of services provided:

- Schools (676 institutions) - this category includes general education institutions, i.e., schools, primary schools, international schools, pro-gymnasiums, gymnasiums, lyceums, and art schools. This category also includes rehabilitation centres-schools and schools for children with special needs.
- Nursery schools (753 institutions) - this category includes pre-school education institutions, i.e., private, or municipal nursery schools and nursery schools.
- Kindergartens-schools (92 institutions) - this category includes kindergartens-schools and other institutions where children are educated in pre-school and/or general education programmes.
- School centres (29 institutions) - this category includes multi-purpose centres and multi-purpose gymnasium centres.
- Other centres (27 institutions) - this category includes (multi-purpose) multifunctional centres, education and/or leisure centres, i.e., institutions that provide educational, rehabilitative, social, and other assistance to children and/or pupils of all ages. Also, institutions providing social assistance to families, pre-school, or non-formal educational services. For example, Šiauliai Spindulys Educational Centre, Kaunas Pranas Daunys Educational Centre, Blessed J. Matulaitis Family Assistance Centre, Šiauliai City Municipality Home for infants with disabilities and others.

Educational institutions that provide dual services: school-centres and other centres were reviewed. Questionnaires were sent to pupils and school representatives in the general educational settings. If the establishment also provides pre-school education, an additional questionnaire was sent to kindergarten representatives. For institutions providing only pre-school education, a questionnaire was sent to kindergarten representatives only. For institutions with mixed or non-identified services, all three questionnaires were sent with the purpose of each questionnaire (see figure below).


Figure 2. Distribution of questionnaires by educational establishment
Source: prepared by the Consultant
With over 500 pre-school and over 500 general education institutions participating, the Programme uses a sampling approach and sample. Sampling is the basis of social research methodology, where the characteristics of a small proportion of the population can be used to infer the characteristics of the general population. When the general population exceeds 500 people, a sampling technique is used, the essential requirement being that each unit of the general population has an equal probability of being included in the sample. A sample is a subsample of the population that is similar or even identical in characteristics to the population. Sampling techniques (methods) shall be used to select the sample to ensure that the results obtained can be extended to the population at large. The sampling unit is the smallest element of the sample - the participant. Simple random sampling shall be used to select the participants.

The sample will consist of 383 respondents representing 113,600 pupils, 262 respondents representing 891 preschools and 269 respondents representing 819 general education institutions (see table below).

Table 2. Number of respondents and sample size for 2022-2023


Number of schools participating in the Programme (including other categories of general education schools and nursery schools)

686 institutions (excluding nursery schools) 262 institutions
124 institutions (kindergartens-schools only)
In total: 819 institutions

Number of kindergartens participating in the Programme (including other categories of pre-primary education and kindergarten-schools)

767 institutions (excluding kindergartens- 269 institutions schools)
124 institutions (kindergartens-schools only)
In total: 891 institutions

SURVEY PERIOD. Depending on the type of educational establishment, questionnaires were sent out by e-mail to the participating institutions. A total of $1543^{1}$ invitations to participate in the survey were sent (see table below). School and kindergarten representatives filled in the questionnaires after receiving electronic links by e-mail, and the questionnaires were distributed to pupils via e-journals and/or given to them to fill in in the computer lab.

Table 3. Number of questionnaires sent and completed


Questionnaire for students
Questionnaire to be completed by the students themselves or with the help of their parents/guardians)


661 letters sent out to general education A total of 4077 questionnaires were institutions

Questionnaire for school representatives
(Questionnaire to be completed by students in grades 1-4 on their own or with the help of a parent/guardian or a member of the school community)

Questionnaire for kindergarte representatives kindergarten
(Questionnaire to be completed by one person from the educational establishment who is most familiar with the Programme)
completed, of which 2536 were fully completed. Only fully completed questionnaires were used for further analysis.

Number of completed questionnaires

A total of 402 questionnaires were completed, of which 181 were fully completed. Only those questionnaires that were fully completed were used for further analysis.

All three questionnaires

758 letters sent out to pre-school A total of 421 questionnaires were completed, institutions of which 182 were fully completed. Only those questionnaires that were fully completed were used for further analysis.

124 letters sent out to institutions with it is not possible to determine how many mixed services (pre-school and institutions completed all three mainstream) or with unidentified services questionnaires, so the number of completed questionnaires has been added to the total number of questionnaires completed by the students, schools or nursery and kindergarten representatives.

## Source: prepared by the Consultant

The questionnaires were activated on 22 November 2022 and sent to participating educational institutions on 24, 25 and 28 November. A reminder to take part in the survey was sent to all educational institutions on 5 December 2022. Data collection was carried out until and including 15 December 2022. A total of 4077 students took part in the student survey, 421 representatives in the kindergarten survey and 402 representatives in the school survey, respectively. However, not all questionnaires were fully completed, so only those questionnaires that were fully completed were used in further analysis.

The questionnaire for school pupils was fully completed by 2536 respondents. To be representative and to represent $95 \%$ of the population with a margin of error $5 \%$, the data were weighted using IBM SPSS Statistics (SPSS) software to match the intended sample size ( $n=383$ ).

[^0]The questionnaire for school representatives was completed by 402 respondents, of whom 181 completed the questionnaire in full. To be representative and to represent $95 \%$ of the population with a margin of error of $5 \%$, the data obtained were weighted using SPSS software to match the intended sample size ( $n=262$ ).

The questionnaire for nursery and kindergarten representatives was fully completed by 421 respondents. To be representative and represent $95 \%$ of the population with a margin of error of $5 \%$, the data collected were weighted using SPSS software to match the intended sample size ( $\mathrm{n}=269$ ).

The table below shows the demographics of the respondents to the surveys.
Table 4. Respondent demographics

| Questionnaire for students ( $\mathrm{n}=383$ ) |  |  |
| :---: | :---: | :---: |
| What is your gender? | 48\% - boy ( $\mathrm{n}=184$ ) | 1\% - not labelled ( $\mathrm{n}=4$ ) |
|  | $51 \%$ - girl ( $\mathrm{n}=195$ ) |  |
| Which grade are you in? | 22,6\% - first grade ( $\mathrm{n}=87$ ) | 26,2\% - third grade ( $\mathrm{n}=100$ ) |
|  | $24,1 \%$ - second grade ( $\mathrm{n}=92$ ) | $27 \%$ - fourth grade ( $\mathrm{n}=103$ ) |
| Which region your school is in? | 4,3\% - Alytus ( $\mathrm{n}=16$ ) | 14,9\% - Šiauliai ( $\mathrm{n}=57$ ) |
|  | $14 \%$ - Kaunas ( $\mathrm{n}=54$ ) | $0,1 \%$ - Taurage ( $n=0$ ) |
|  | $8,4 \%$ - Klaipėda ( $\mathrm{n}=32$ ) | 6,5\% - Telšiai ( $\mathrm{n}=25$ ) |
|  | 4,1\% - Marijampole ( $n=16$ ) | 4,5\% - Utena ( $\mathrm{n}=17$ ) |
|  | $9 \%$ - Panevėžys ( $\mathrm{n}=34$ ) | $34,3 \%$ - Vilnius ( $n=131$ ) |
| Questionnaire for school representatives ( $\mathrm{n}=262$ ) |  |  |
| Please indicate the type of educational establishment you work in. | 8,8\% - kindergarten-school ( $n=23$ ) | 16\% - primary school ( $\mathrm{n}=42$ ) |
|  | $27,6 \%$ - gymnasium ( $\mathrm{n}=72$ ) | 18,8\% - pro-gymnasium ( $\mathrm{n}=49$ ) |
|  | 22,7\% - secondary school ( $\mathrm{n}=59$ ) | $6,1 \%$ - other ( $\mathrm{n}=17$ ) |
| In which region is your educational establishment located? | 7,7\% - Alytus ( $\mathrm{n}=20$ ) | 9,4\% - Šiauliai ( $n=25$ ) |
|  | 13,3\% - Kaunas ( $\mathrm{n}=35$ ) | $2,2 \%$ - Taurage ( $\mathrm{n}=6$ ) |
|  | 8,8\% - Klaipėda ( $\mathrm{n}=23$ ) | $5 \%$ - Telšiai ( $n=13$ ) |
|  | 4,4\% - Marijampole ( $n=12$ ) | 4,4\% - Utena ( $\mathrm{n}=12$ ) |
|  | 6,1\% - Panevėžys ( $\mathrm{n}=16$ ) | $38,7 \%$ - Vilnius ( $n=101$ ) |
| What are your job responsibilities? | 6,6\% - headteacher ( $\mathrm{n}=17$ ) | $4,4 \%$ - public health specialist ( $\mathrm{n}=12$ ) |
|  | 14,9\% - deputy headteacher ( $n=39$ ) | $45,9 \%$ - other ( $\mathrm{n}=120$ ) |
|  | 28,2\% - teacher ( $\mathrm{n}=74$ ) |  |
| Questionnaire for nursery/kindergarten representatives ( $\mathrm{n}=269$ ) |  |  |
| Please indicate the type of educational establishment you work in. | 78\% - nursery ( $\mathrm{n}=210$ ) | 2,2\% - multifunctional centre ( $\mathrm{n}=6$ ) |
|  | 7,7\% - kindergarten ( $\mathrm{n}=21$ ) | $3,3 \%$ - other ( $\mathrm{n}=9$ ) |
|  | 8,8\% - kindergarten-school ( $\mathrm{n}=24$ ) |  |
| In which region is your educational establishment located? | $3,8 \%$ - Alytus ( $\mathrm{n}=10$ ) | 7,1\% - Šiauliai ( $\mathrm{n}=19$ ) |
|  | 14,3\% - Kaunas ( $\mathrm{n}=38$ ) | $0 \%$ - Taurage ( $\mathrm{n}=0$ ) |
|  | 15,4\% - Klaipėda( $\mathrm{n}=41$ ) | $6 \%$ - Telšiai ( $n=16$ ) |
|  | 3,3\% - Marijampole ( $\mathrm{n}=9$ ) | 3,3\% - Utena ( $\mathrm{n}=9$ ) |
|  | 7,1\% - Panevėžys ( $\mathrm{n}=19$ ) | $39,6 \%$ - Vilnius ( $n=106$ ) |
| What are your job responsibilities? | 25,3\% - headmaster ( $\mathrm{n}=68$ ) | $11 \%$ - public health specialist ( $n=30$ ) |
|  | 23,1\% - deputy headmaster ( $\mathrm{n}=62$ ) | $37,4 \%$ - other ( $\mathrm{n}=101$ ) |
|  | 3,3\% - teacher ( $\mathrm{n}=9$ ) |  |

Source: prepared by the Consultant based on the Annual Monitoring Results

### 1.2. Secondary source analysis

The evaluation of the implementation of the Strategy uses existing data, reports, and other documents:

- Monitoring reports on the implementation of the Strategy shall be examined to assess the achievement of the Strategy's results, the achievement of productivity indicators, and the involvement of public authorities and stakeholders in the planning, implementation, monitoring, and evaluation of the Programme. Monitoring is also used to analyse the implementation of educational measures (number and nature of activities). The financial data contained in the reports is used to assess the financial implementation and effectiveness of the Programme.
- The Programme's rules and the Strategy are examined to assess the conditions and procedures governing the implementation of the Programme, the administration system, and the product distribution system.
- The European Commission (EC) regulations, the Programme documents and the Strategy are analysed to assess the logic of the intervention, to identify the links between the identified problems, the identified objectives, the identified measures, the need for them, and to identify the conditions that can be put in place to ensure the effective implementation of the Programme.


### 1.3. Interview

Considering the data obtained from secondary sources and the questionnaire survey, an additional semistructured questionnaire has been developed and will be used for the interviews. The aim is to verify the available data and to better understand the reasons for the identified trends, the difficulties faced by the participants in the Programme and what aspects of the Programme can be improved or modified to achieve the best result.

Some of the interviewees were selected after invitations to take part in the survey were sent. The email mentioned that interviews with educational institutions would take place and asked if the respondent could participate. Those who responded positively were invited for an interview. The other interviewees were selected at random.

## Interviews conducted with:

- 4 representatives of the participating educational institutions who are familiar with the Programme (school, kindergarten, and nursery).
- 9 representatives of educational institutions (school, kindergarten, and nursery) that used to participate in the Programme but have since withdrawn from it.
- 3 representatives of suppliers participating in the Programme.
- 13 parents, whose children participate in the Programme (parents 3 kindergarteners and 10 schoolchildren).
- 5 representatives of the Agency.


## 2. Evaluation of the implementation of the Programme

This chapter assesses the implementation of the Programme against the indicators set out in the Strategy and their achievement in terms of impact, effectiveness, and efficiency.

### 2.1. Measuring the achievement of productivity and performance indicators

The Programme implementation Strategy set out impact, performance, and productivity indicators to measure progress in implementing the Programme. The Strategy only sets targets for the impact indicators and does not set targets for the outcome and productivity indicators. Therefore, this chapter examines data covering the period 2017-2022 to establish the current situation.

### 2.1.1. Trends in the volume of products distributed

FRUIT AND VEGETABLES. Apples, pears, and carrots may be distributed to children, depending on the requirements of the Programme.

The quantity of pears distributed to children increased until 2019-2020: 0,3 tonnes of pears were distributed in 2017-2018 and 7 tonnes in 2019-2020. However, in the following school years, the number decreased. In 20212022, a total of 3 tonnes of pears were distributed to children.

Also, apples were distributed to the children (see figure below). It was found that the quantities distributed varied from school year to school year. The highest number of apples was distributed in 2018-2019 (1024 tonnes) and in 2018-2019 (1397 tonnes), whilst the lowest number was in 2019-2020 (818 tonnes). Nevertheless, the number of apples distributed in 2021-2022 increased again, with a total of 972 tonnes distributed.


Figure 3. Quantity of pears and apples distributed under the Programme in tonnes
Source: prepared by the Consultant based on the Annual Monitoring Reports
A different trend emerges when analysing the quantities of vegetables given to children. The number of carrots distributed has increased from 1,7 tonnes in 2017-2018 to 282 tonnes in 2021-2022, an increase of 280,3 tonnes or $99 \%$ (see figure below). The increase in quantity of carrots is due to changes in legislation. Interviews with the Agency in 2020 revealed that the quantity of carrots supplied should be significantly higher, but that they require additional work by the staff of the educational institutions to prepare them properly for the children, which is why most of the time the institutions choose not to supply them at all. In view of this problem, an amendment to the Programme was adopted in 2020 to increase the quantity of carrots supplied to children. Point 20.1 of the Strategy
specifies the type of carrots to be provided to children: washed, peeled, and cut. Where possible, carrots should be vacuum-packed to ensure longer freshness and ease of storage ${ }^{2}$.

Quantity of carrots distributed


Figure 4. Quantity of carrots distributed under the Programme in tonnes

Source: prepared by the Consultant based on the Annual Monitoring Reports

A different trend could be noticed when looking at the quantities of juice distributed. The highest number of fruit and/or vegetable juices distributed in 2018-2019 was 255 thousand litres. This figure has subsequently decreased, with 88 thousand litres of juice distributed in 2020-2021. In 2021-2022, the quantity of juice distributed increased again, with a total of 190 thousand litres of juice distributed.

Quantity of juice distributed


Figure 5. Quantity of juice distributed under the Programme, thousand litres
Source: prepared by the Consultant based on the Annual Monitoring Reports

The quantity of products per child also evolved between 2017 and 2022 (see table below). It was found that children received the most products in 2018-2019 and the least in 2020-2021, when the country was in the state of emergency and education was organised remotely and no products were distributed. Later, when kindergartens were reopened, the number of children attending was lower as some children stayed at home with their parents. In schools, the education was remote and therefore the Programme did not distribute products more than once a month. There has been little change in the quantity of products per child between 2017-2018 and 2021-2022.

[^1]The exception is carrots, which increased from 7 g to 1.2 kg per child. This is due to the introduction of a new requirement in the Programme Strategy to distribute carrots which are cut up (unless small carrots are given).

Table 5. Fruits, vegetables, and juices per child 2017-2022

| Impact indicators in the Strategy | Average product quantity per child per year |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2017-2018 | 2018-2019 | 2019-2020 | 2020-2021 | 2021-2022 |
| Apples | $4,6 \mathrm{~kg}$ | $5,9 \mathrm{~kg}$ | $3,5 \mathrm{~kg}$ | 3,6 kg | 4,3 kg |
| Pears | 1 g | 18 g | 28 g | 22 g | 15 g |
| Carrots | 7 g | 8 g | 1 g | 0,9 kg | 1,2 kg |
| Juice | 0,81 | 11 | 11 | 0,41 | 0,8। |

Source: prepared by the Consultant
MILK AND DAIRY PRODUCTS. Milk or dairy products were distributed to children. The Programme provides for the distribution of dairy products up to three times a week in educational institutions, of which at least two must be milk. The distribution of milk was very similar for all the school years analysed, approximately 1100-1300 thousand litres (see figure below). The only exception was for the years 2021-2022, when a total of 1416 thousand litres of milk was given. A comparison between 2017-2018 and 2021-2022 shows an increase of 191 thousand litres of milk consumption or $13 \%$.


Figure 6. Quantity of milk distributed under the Programme, thousand litres
Source: prepared by the Consultant based on the Annual Monitoring Reports

The amount of fermented/ripened cheese handed out increased each school year. From 2017-2018 to 20212022 (apart from 2018-2019), this quantity increased by 3 tonnes or $37,5 \%$ (see figure below). Fresh cheese is given more than fermented/ripened cheese in educational institutions. The quantity of fresh cheese distributed has remained very similar between 2017-2018 and 2021-2022. The only difference was between 2019-2020 and 2020-2021, when the distribution of fresh cheese fell by 25-26 tonnes.


Figure 7. Quantity of fermented/ripened and fresh cheese distributed under the Programme, tonnes

Source: prepared by the Consultant based on the Annual Monitoring Reports

Educational institutions could choose to provide yoghurt to children without additives. It was found out that more of this dairy product was distributed in 2017-2018, totalling 178 tonnes. In the following school year, the quantity distributed decreased to 8 tonnes. The least amount of yoghurt without additives was distributed in 2019-2020, totalling 2 tonnes. In the following years there was an increase, with 36 tonnes distributed in 2021-2022. A comparison between 2017-2018 and 2021-2022 shows a decrease of 142 tonnes or $80 \%$ in the distribution of yoghurt without food additives.

On the other hand, the trend in the distribution of yoghurt with additives did not show a significant decrease (see figure below). In 2017-2018 a total of 622 tonnes of the product were distributed with a decreasing trend in the following academic years and a low of 253 tonnes in 2020-2021. In the period of 2021-2022, 288 tonnes of yoghurt with additives were distributed. A comparison between 2017-2018 and 2021-2022 shows a decrease of 344 tonnes or $46 \%$ in the distribution of yoghurt with additives.


Figure 8. Quantity of yoghurt without and with additives distributed under the Programme, in tonnes

Source: prepared by the Consultant based on the Annual Monitoring Reports

The number of products per child also evolved between 2017 and 2022 (see table below). It was found that children received the highest amount of milk and dairy products in 2017-2018 (around 9 kg per child) and the lowest in 2020-2021, when the country was in a state of emergency and education was remote (around 7 kg per child). On the other hand, a comparison between 2017-2018 and 2021-2022 shows an increase of 0,9 litres of milk distributed per child and a decrease of $2,1 \mathrm{~kg}$ of yoghurt handed out. According to interviews with suppliers, one of the reasons for the decrease in demand is the increase of the price of yoghurt and the change in the size
of the basket per child. Educational institutions indicated that they order less yoghurt because the portions are distributed without spoons, which causes inconvenience when eating.

Table 6. Milk and dairy products per child 2017-2022

| Impact indicators in the Strategy | Average milk and dairy product quantity per child per year |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2017-2018 | 2018-2019 | 2019-2020 | 2020-2021 | 2021-2022 |
| Milk | 5,31 | 5,21 | 4,71 | 5,61 | 6,21 |
| Cheese (fermented / ripened) | 36 g | 62 g | 37 g | 47 g | 49 g |
| Cheese (fresh) | 0,146 kg | 0,137 kg | 0,109 kg | 0,119 kg | 0,145 kg |
| Yoghurt (with and without additives) | 3,5 kg | 2,1 kg | 1,3 kg | 1,2 kg | $1,4 \mathrm{~kg}$ |

Source: prepared by the Consultant based on the Annual Monitoring Reports

## Evaluation of implementation of indicators:

- In 2017-2022, the following were distributed free of charge to children: 19 tonnes of pears, 4982 tonnes of apples, 286 tonnes of carrots, 940,000 litres of juice, 6218,000 litres of milk, 53 tonnes of fermented cheese, 152 tonnes of fresh cheese, 239 tonnes of yoghurt with no additives and 1973 tonnes of yoghurt with additives.
- The quantities of products distributed free of charge during the period 2017-2022 remained similar for all academic years of the period considered. The quantity of carrots distributed has increased, due to the requirement in the Programme Strategy to distribute carrots ready for consumption (washed, peeled, cut). The quantity of yoghurt without additives has also decreased, due to the taste, i.e., children do not like and do not eat this product, and the increased price of the product.
- The average number of apples per child in $2021-2022$ was $4,3 \mathrm{~kg}, 15 \mathrm{~g}$ of pears, $1,2 \mathrm{~kg}$ of carrots, $0,8 \mathrm{I}$ of juice, $6,2 \mathrm{I}$ of milk, 49 g of fermented cheese, 145 g of fresh cheese and $1,4 \mathrm{~kg}$ of yoghurt (both with and without added ingredients). The average quantity of apples per child decreased by $0,3 \mathrm{~kg}$ between 20172018 and 2021-2022, pears increased by 14 g , carrots increased by almost $1,2 \mathrm{~kg}$ and juice remained stable. The average amount of milk per child increased by 0,9 litres between 2017-2018 and 2021-2022, cheese (fermented/ripened) increased by 13 g , while cheese (fresh) decreased by only $0,001 \mathrm{~kg}$ and yoghurt (with and without additives) decreased by $2,1 \mathrm{~kg}$.


### 2.1.2. Programme funds

Between 2017 and 2022, a total of $€ 20$ million were spent on the distribution of products under the Programme, of which $51 \%$ was EU funding and $49 \%$ was national funding. The funds used for the supply and distribution of products in educational institutions showed a decreasing trend between 2017-2018 and 2020-2021, with a difference of $€ 1,53$ million in that period. $€ 3,87$ million were used for the supply and distribution of products in 2021-2022. Comparing 2017-2018 with 2021-2022, the amount spent decreased by $€ 0,96$ million or $20 \%$ (see figure below). The share of national funds ( $€ 0,75$ million or $28 \%$ ) and EU support ( $€ 0,2$ million or $9 \%$ ) decreased accordingly.


Figure 9. Funds used for the distribution of fruit, vegetables, milk, and dairy products under the Programme, million euros
Source: prepared by the Consultant based on the Agency's reports to the EC (2017-2021) and Annual Monitoring Reports (20212022)

During the period under analysis, from 2017-2018 to 2021-2022, the share of funds spent in the dairy part of the Programme was higher than in the fruit and vegetables part of the Programme (see the figure below). The highest difference between the use of funds was found in the period 2021-2022 ( $€ 0,3$ million or $46 \%$ points) and the lowest in the period 2017-2018 ( $€ 2,06$ million or $29 \%$ points).


Figure 10. Funds (national and EU support) used for the dairy part of the Programme and the fruit and vegetables part of the Programme, million euros

Source: prepared by the Consultant based on the Agency's reports to the EC (2017-2021) and Annual Monitoring Reports (20212022)

The largest share of funds (EU and national) was spent on fresh fruit and vegetables (24-37\%), whilst the lowest share was spent on dairy products without additives (7-14\%). Also, it was found that the percentage of funding used for the supply and distribution of fruit and vegetables in educational institutions increased, while the percentage used for non-fermented dairy products with natural additives decreased (see graph below).


Figure 11. Breakdown of funding for products distributed under the Programme, \%
Source: prepared by the Consultant based on the Agency's reports to the EC (2017-2021) and Annual Monitoring Reports (20212022)

Looking at the proportions of funds used, the milk and dairy product part of the Programme used $71 \%$ of the total funding (EU and national funds) in 2017-2018, whereas the fruit and vegetables part of the Programme used $26,8 \%$ of the total funding (EU and national funds). While the gap narrowed in 2021-2022, the dairy part of the Programme used $19 \%$ more funding than the fruit and vegetables part of the Programme ( $€ 2,10$ million and $€ 1,77$ million, respectively).

The fruit and vegetable part of the Programme. The funds used for the supply and distribution of fruit, vegetables and/or their juices based on the Programme evolved during the considered period (see figure below). Between 2017-2018 and 2021-2022, the national funding used increased by €0,52 million or $58 \%$, while the received EU support decreased ( $€ 0,13$ million or $13 \%$ ). Nevertheless, the total funding for the period of 2021-2022 increased by $€ 0,39$ million compared to the funding for the period of 2017-2018.


Figure 12. Funds used for the distribution of fruit, vegetables and/or their juices under the Programme, million euros
Source: prepared by the Consultant based on the Agency's reports to the EC (2017-2021) and Annual Monitoring Reports (20212022)

EU and national funding for fresh fruit and vegetables accounted for the bulk of the funds, with a $13 \%$ increase between 2017-2018 and 2021-2022 (see figure below). The funding spent on processed fruit and vegetables (e.g., juice) varied between 123 and 364 thousand euros during the analysed period. The amount of funds available for the implementation of the Programme depends on the indicative amount set by Council Regulation (EU) 2016/795. The funds are foreseen from the European Agricultural Guarantee Fund and the Lithuanian State budget, considering the indicative amount and the capacity of the Lithuanian State budget.


Figure 13. Funds used for the distribution of fruit and vegetables under the Programme (left, million euros) and for the distribution of processed fruit and vegetables under the Programme (right, thousand euros)

Source: prepared by the Consultant based on the Agency's reports to the EC (2017-2021) and Annual Monitoring Reports (20212022)

The funds used for the supply and distribution of milk and dairy products in educational institutions decreased by €1,34 million or $39 \%$ between 2017-2018 and 2021-2022 (see figure below). Both the use of funds from the Lithuanian State budget and the EU support fund decreased during the analysed period, by 54\% and 7\% respectively (comparing 2017-2018 and 2021-2022).

The milk and dairy product part of the Programme. The funds used for the supply and distribution of milk and dairy products in educational institutions decreased by €1,34 million or 39\% between 2017-2018 and 2021-2022 (see figure below). Both the use of funds from the Lithuanian state budget and the EU fund decreased during the period under analysis, by 54\% and 7\% respectively (comparing 2017-2018 and 2021-2022).


Figure 14. Funds used for the distribution of milk and dairy products under the Programme, million euros
Source: prepared by the Consultant based on the Agency's reports to the EC (2017-2021) and Annual Monitoring Reports (20212022)

Between 2017-2018 and 2021-2022, the amount of EU and national funds spent on the supply and distribution of milk decreased by $9,4 \%$ or $€ 100,000$. While the total value of funding for milk and dairy products showed a downward trend, the funds used only for milk showed little change in the last academic year, with an average of around $€ 1,1$ million between 2019-2020 and 2021-2022.


Figure 15. Funds used for the distribution of milk under the Programme, million euros
Source: prepared by the Consultant based on the Agency's reports to the EC (2017-2021) and Annual Monitoring Reports (20212022)

Between 2017-2018 and 2021-2022, the funds used to supply and distribute non-fermented dairy products with natural additives (i.e., yoghurt with added flavours, fruit) in educational institutions decreased by $€ 908,000$ or $60 \%$. During the same period, EU support decreased by $66 \%$ ( $€ 95,000$ ) and national funds by $58 \%$ ( $€ 813,000$ ).

A similar trend was observed when looking at the funds spent on the supply and distribution of dairy products without additives (i.e., cheese, cottage cheese, yoghurt without added flavours, fruit, nuts, or cocoa) in educational institutions. It was found that between 2017-2018 and 2021-2022, the funds used to supply these products decreased by $€ 340,000$ or $49 \%$. During this period, EU support decreased by $33 \%(€ 118,000)$ and national funds by $65 \%(€ 222,000)$.


Figure 16. Funds used for the distribution of dairy products under the Programme, thousand euros
Source: prepared by the Consultant based on the Agency's reports to the EC (2017-2021) and Annual Monitoring Reports (20212022)

## Evaluation of the implementation of the indicators:

- Between 2017 and 2022, a total of $€ 20$ million was spent on the distribution of products under the Programme, of which $51 \%$ was EU funding and $49 \%$ was national funding. Between 2017-2018 and 20212022, the amount of funds spent under the Programme decreased by $20 \%$ or EUR 0,96 million.
- The milk part of the Programme was more heavily financed than the fruit and vegetables part of the Programme in the period 2017-2022.


### 2.2. Assessing the achievement of impact indicators

The Strategy includes two key impact indicators:

- aim that $70 \%$ of children in childcare settings eat fruit and vegetables several times a day, every day.
- aim that $85 \%$ of children attending childcare facilities consume milk and milk products several times a day.

This chapter assesses the achievement of the impact indicator based on the results of the questionnaire surveys carried out between 2022 and 2023.

Students in general education: consumption of fruit, vegetables, and fruit. $83,6 \%$ of pupils reported that they eat fruit every day, while only $0,7 \%$ reported that they do not eat fruit (see figure below). $57,6 \%$ of pupils eat fruit 1 or 2 times a day and $27,2 \%$ eat it more than 3 times a day.


- Every day (1-2 times per day)
- Every day (3-4 times per day)
- Every day (5 or more times per day)
- Rarely (several times per week or less)
- I do not eat fruit

Figure 17. Frequency of students eating fruit ( $n=383$ ), \%

Source: prepared by the Consultant

Pupils are more likely to eat fruit at home than at school (see figure below). $84,7 \%$ of pupils eat fruit every day at home, while $59,1 \%$ eat it at school, either when given by their parents or when they buy it from the canteen. $9,8 \%$ of respondents indicated that they do not eat fruit at school at all, while the proportion of pupils who do not eat fruit at home is $0,8 \%$.


Figure 18. Frequency of eating fruit at school and at home ( $n=383$ ), \%

Source: prepared by the Consultant
$80,5 \%$ of the surveyed pupils in grades 1-4 indicated that they eat vegetables every day, while only $1,3 \%$ said that they do not eat vegetables (see figure below). 60,2\% eat them 1 or 2 times a day and $20,3 \%$ eat them more than three times day.


Figure 19. Frequency of students eating vegetables ( $n=383$ ), \%

Source: prepared by the Consultant

Students are more likely to eat vegetables at home than at school when they are given by their parents or bought from the canteen (see figure below). 81,5\% of pupils eat vegetables every day at home, compared to $55,9 \%$ at school. $13 \%$ of respondents reported that they do not eat vegetables at school at all, while $1,6 \%$ reported that they do not eat vegetables at home.


Figure 20. Frequency of students eating vegetables at school and at home ( $n=383$ ), \%

Source: prepared by the Consultant
$40,7 \%$ of the students reported that they drink fruit and/or vegetable juices every day, while $54,8 \%$ drink them rarely (several times a week or less). 4,5\% of pupils do not drink juice (see figure below).


> Every day (1-2 times per day)
> Every day (3-4 times per day)
> Every day (5 or more times per day)
> Rarely (several times per week or less)
> I do not drink juice

Figure 21. Frequency of consumption of juice (e.g., apples, carrots, multivitamins) by schoolchildren (n=383), \%

General education students: consumption of milk and dairy products. When asked how often they drink milk and consume dairy products, $75,9 \%$ said daily. $42,1 \%$ of pupils drink milk or eat dairy products 1 or 2 times a day and $33,8 \%$ of pupils 3 or more times (see figure below). $22,7 \%$ of pupils indicated that they rarely consume milk or dairy products, several times a week or less.


Figure 22. Frequency of consumption of milk and dairy products by schoolchildren ( $n=383$ ), \%

Source: prepared by the Consultant

Pupils are more likely to drink milk and eat dairy products at home than at school, when given by their parents or bought from the canteen (see figure below). 78,9\% of pupils consume these products daily at home, compared to $41,3 \%$ at school. $18,5 \%$ of respondents reported that they do not drink milk or eat dairy products at school, while $1,9 \%$ reported that they do not consume these products at home.


Figure 23. Frequency of consumption of milk and dairy products at school and at home ( $n=383$ ), \%

Sources: prepared by the Consultant

Pre-School children. Pre-school children (up to 6 years old) are fed in educational institutions according to a specially designed menu, which considers the daily recommended intakes of fruit, vegetables, milk, and dairy products. Order No. V-964 of the Minister of Health of 11 November 2011 'On the Approval of the Description of the Procedure for the Organisation of Meals for Children' (hereinafter 'the Order') states that if meals are provided 3 times a day in an educational establishment, the establishment must ensure that children receive at least 3 different types of vegetables (i.e., one type as a single portion, including fresh, salad or heat-treated vegetables). One portion of vegetables per day can be replaced by 100-200 ml of vegetable juice. Children in an educational establishment should receive at least 1 type of fruit per day, but there is no specification on the number of times per day that fruit should be provided to children, so it is up to the educational institutions to choose. One portion
of fruit per week can be replaced by 100-200 ml of fruit juice. Children should also receive a portion of milk at least 1 time a day. For pre-school children, it is recommended (unless otherwise advised by a doctor) that at least 200 ml of pasteurised milk or a calcium-matched number of dairy products per day be served. It is worth bearing in mind that in many cases children are also fed at home, so the actual intake of fruit, vegetables, milk, and dairy products may be higher.

According to the survey results, most students in the Programme eat fruit and vegetables every day, at least several times a day. $83,6 \%$ of children eat fruit and $80,5 \%$ eat vegetables every day. Children may eat a portion of these products when they return home, so the actual intake of fruit, vegetables, milk, and dairy products may be higher. In this context, the impact indicator of the Strategy of $70 \%$ of children attending ECEC consuming fruit and vegetables several times a day has been achieved. It is difficult to determine how many pre-school children eat vegetables or fruit at least several times a day, as they did not participate directly in the survey. On the other hand, interviews with kindergarten representatives revealed that most children are always very willing to eat vegetables as a side dish and fruit and vegetables as a snack. Parents are also satisfied that their children eat the recommended portion of fruit and vegetables during the day in kindergarten.

Given that, according to the Order, pre-school children must receive at least one serving of milk or dairy products every day and receive additional milk or dairy products under the Programme, all children attending pre-schools drink milk and/or eat dairy products daily, and possibly several times a day (if they consume additional milk or dairy products at home).

Evaluation of the implementation of the indicators:

- $83,6 \%$ of pupils in grades $1-4$ eat fruit at least several times a day and $80,5 \%$ eat vegetables at least several times a day.
- $75,9 \%$ of pupils in grades $1-4$ consume milk and dairy products at least once a day and $33,8 \%$ consume them 2 times or more.
- According to the Ordinance, children (up to 6 years old) in pre-school education receive at least 1 portion of fruit and at least 3 portions of vegetables per day. Children also receive 200 ml of pasteurised milk or a calcium-matched number of dairy products daily. In addition, they receive these products also under the Programme.
- The impact indicator set out in the Strategy, that $70 \%$ of children attending childcare should consume fruit and vegetables several times a day, has been achieved.
- The impact indicator set in the Strategy of $85 \%$ of children attending childcare facilities consuming milk and milk products several times a day was partially achieved. While children (up to 6 years) in pre-school establishments are consuming the required amount of calcium daily, pupils in grades 1 to 4 do not consume the recommended amount of milk and milk products.


## 3. Intervention logic assessment

This chapter assesses the intervention logic of the Strategy in relation to its main objectives, the instruments and indicators used to achieve them.

Need and objectives. The Fruit, Vegetable, Milk and Dairy Programme is designed to integrate the objectives of EU health policy into the EU's Common Agricultural Policy (CAP). The EU population's consumption of fruit, vegetables, milk, and dairy products is not in line with international and national recommendations. For example, according to World Health Organisation recommendations, the daily intake of fruit and vegetables per person should be at least 400 g . In Lithuania, the intake is only 260 g . The Strategy, based on the results of previous studies, found that around $31-40 \%$ of pre-school children do not eat fruit and vegetables every day, and lack knowledge of what products they should eat daily. They also consume too much food high in added sugar, fat, or salt, which leads to obesity. To improve the health of the population, an intervention has been carried out to distribute products in educational institutions across the EU. Each Member State participating in the Programme is required to develop and implement a Strategy for the implementation of the Programme for a period of 6 years.

At the highest EU policy level, the Programme aims to contribute to the implementation of the Europe 2020 strategy ${ }^{3}$ for smart, sustainable, and inclusive growth. First, it contributes to a more sustainable and greener economy. It also contributes to stabilising and promoting the internal agricultural market. As the consumption of milk and dairy products in the EU declines, so do farmers' incomes, so intervention contributes to stabilising the incomes of agribusiness operators. Secondly, it aims at reducing the long-term negative socio-economic consequences that may arise from malnutrition. The consumption of milk at an early age can prevent or reduce the risk of obesity if low-fat products are chosen, which will lead to fewer illnesses and fewer health resources needed in the future.

In line with the objectives of the first pillar of the Common Agricultural Policy, the milk and dairy products part of the Programme is aimed not only to address health concerns, but also to stabilise the dairy market in the EU by ensuring a stable demand. However, the dairy promotion component is increasingly perceived to achieve positive health changes, as reflected in the EU strategy on nutrition, overweight and obesity. Milk is seen as a useful source of calcium, protein, and vitamins (D, A and B12) to help combat overweight and health problems.

The Programme to promote the Consumption of Fruit and Vegetables and Milk and Dairy Products in Children's Educational Institutions started on 1 September 2017. It combined the activities of the Programme for the Promotion of Fruit Consumption in Children's Educational Institutions and the Programme for the Promotion of Milk Consumption in Children's Educational Institutions. The aim was to make the Programme more efficient and focus on health and education activities in line with EC Regulation 2017/39.

The Strategy has two objectives based on the issues and needs (see figure below):

- increase children's intake of fruit and vegetables and milk and dairy products in educational institutions.
- increase children's awareness of the benefits of fruit and vegetables and milk and dairy products consumption and healthy eating.

The implementation of the targets is measured through an impact indicator, which indicates what proportion of children consume the recommended rate of fruits, vegetables, and dairy products. For the desired effect to occur, it is necessary to fulfil at least several conditions:

- education institutions should work successfully with suppliers to ensure that products are delivered on time, at the desired frequency and in the quantities requested by education institutions.
- sufficient administrative capacity and resources are needed in educational institutions to ensure smooth product distribution, monitoring and accountability.

[^2]- education professionals (i.e., teachers or public health professionals) should be active and interested in the implementation of the activities - children's habits may change not only because of increased consumption of healthy products at school, but also because of an authority figure, an interesting presentation on healthy eating, or educational activities that are attractive to children.
- parental involvement in promoting healthy eating is needed. If parents feed their children unhealthy food before and after school, rarely buy fruit and vegetables or additive-free dairy products, the impact of the Programme may be limited.

Although the Strategy mentions only one aspect of the impact, other aspects of the impact are also addressed with its own measures and tasks - reduced consumption of unhealthy food among children, deepened knowledge of children about healthy nutrition and products. At the EU level, it helps to achieve a long-term impact by improving the health of the population, increasing physical activity, ensuring product demand and supply, stabilizing the market, and creating a better image of the EU and the agricultural sector.


Figure 24. Intervention logic of the Strategy
Source: prepared by the Consultant

Measures and performance indicators. From 1 August 2017 to 31 July 2023 the EU allocates a budget of $€ 250$ million per year to implement the Programme. €150 million for the vegetables and fruit part and $€ 100$ million for
the milk and dairy products part. Member States receive a fixed amount for the fruit and vegetable's part ${ }^{4}$. The Directorate-General for Agriculture and Rural Development is responsible for allocating the funds.

Measures financed by EU funds and the state budget in Lithuania:

- supply of products to educational institutions, including transport and distribution costs.
- educational measures.
- raising public awareness of the Programme.

The lists of products to be distributed in educational institutions shall be drawn up by the responsible authorities of the Member States in accordance with Article 23 of Regulation (EC) No 1308/20135. Accordingly, Article 23 of this Regulation specifies the ingredients that cannot be included in the products intended for children under the Programme (no sugar, salt, fat, sweeteners, artificial flavours, and flavour enhancers).

There are 7 indicators for the measures and their activities. 3 of them cover the number of pupils and institutions participating in the Programme and its educational activities. 2 indicators measure expenditure, and the other 2 indicators measure the quantity and average consumption of products. There is no indicator indicating the number of educational activities implemented, which would allow a better measurement of the intensity of the activities. The current indicator on the number of children participating in activities does not provide a good enough picture of the frequency with which pupils take part in these activities (whether it is a process that lasts the whole school year, or whether it is just a one-off event, etc.). There are also no product indicators for the Programme's outreach tool to assess the audience reached.

For the outcome indicators, the indicator chosen is a derivative of the product indicator defining the number of children and institutions participating in the Programme, but for the outcome it is chosen to measure the percentage of the total target group in Lithuania. It is important to note that the Strategy does not specify the exact result to be achieved - the percentage of participants out of the total target group at the end of the implementation of the Strategy.

[^3]
## 4.Scope of the Programme's target group

This section analyses the Programme's target groups. The Strategy identifies the target group of the Programme as children attending pre-school education institutions and general education schools with pre-school, preprimary and primary education programmes. In short, children up to 6 and/or 7 years of age and pupils in grades 1-4.

PARTICIPATING EDUCATIONAL INSTITUTIONS. From 2017-2018 to 2021-2022, the number of educational institutions participating in the Programme has been decreasing. This is due to a decrease in the total number of educational institutions (see figure below). The fruit and vegetable part of the Programme has reached $84 \%$ of the total number of participating institutions in 2017-2018, 2019-2020 and 2021-2022. The outlier was 2018-2019, when 1533 educational institutions, or 83\%, participated in this part of the Programme. The outlier was also 2020-2021, when a state of emergency was declared in the country and remote education was implemented, and when several educational institutions withdrew from the Programme and resumed their participation at the end of this year. Between 2022 and 2023, 1378 educational institutions participated in the Programme, or $80 \%$ of all educational institutions.


Figure 25. Number of educational institutions participating in the fruit and vegetables (left) and milk components (right) of the Programme, units

Source: prepared by the Consultant based on the Agency's reports to the EC (2017-2021) and Annual Monitoring Reports (20212022)

More educational institutions participated in the milk and milk products part of the Programme than in the fruit and vegetable's part. The percentage distribution of participating institutions in the dairy part of the Programme showed different trends. The percentage of institutions participating in this part of the Programme as a percentage of the total number of institutions varied between $81 \%$ and $89 \%$ over the period analysed. It is noteworthy that, despite the decrease in the number of participating institutions, the percentage of total institutions was the highest in the period 2021-2022, as the total number of institutions is decreasing as well.

A similar number of general education schools and pre-schools participate in the Programme (see figure below). Primary education institutions are the least likely to participate in the Programme, as the number of this type of institutions in Lithuania is lower than for other types of education institutions.

Vegetable and fruit part of the Programme


Figure 26. Number of educational institutions participating in the fruit and vegetables part of the Fruit and Vegetable Programme (left) and in the milk part of the Milk Programme (right), units

Source: prepared by the Consultant based on the Agency's reports to the EC (2017-2021) and Annual Monitoring Reports (20212022)

Number of Children in the programme. In all academic years of the period under analysis, more than 85\% of all children attending educational institutions (pre-school and grades 1-4) participated in the Programme (see figure below). The highest participation of children in the fruit and vegetables part of the Programme was in 2018-2019 and 2019-2020 (93\% of all children attending institutions). The lowest participation rate was observed in the years 2020-2021 when the country was under quarantine ( $89 \%$ of all children attending facilities).


Figure 27. Children participating in the fruit and vegetables part of the Fruit and Vegetables Programme (left) and in the milk part of the Milk Programme (right), thousands

Source: prepared by the Consultant based on the Agency's reports to the EC (2017-2021) and the information in the Education Management Information System (2021-2022)

More children participated in the dairy part of the Milk and Dairy Products Programme than in the Fruit and Vegetables Programme. The highest number of children enrolled in the Milk and Dairy part of the Programme in 2018-2019 was 245,000, or 98\% of the total number of children attending educational institutions. In 2019-2020, 234,000 children or $93 \%$ of the total number of children attending institutions participated in the Dairy part of the Programme. The lowest participation rate was observed in 2020-2021, when the country was under quarantine (222,000 or $89 \%$ of the total enrolment).

More pupils in grades 1-4 participated in the Programme than pre-school and/or pre-primary school children (see figure below). From 2017-2018 to 2021-2022, more than 93\% of all Lithuanian students in grades 1 to 4 participated in the Programme, and $99 \%$ of pupils from 124 classes in Lithuania (117,000 pupils) participated in the Programme in 2019-2020.

More than $80 \%$ of all pre-school and/or pre-primary school children in Lithuania were enrolled in the Programme in all academic years during the analysed period. The highest number of children participated in the Programme in 2018-2019 (130,000 or 99\% of all Lithuanian pre-school and/or pre-primary children) and the lowest number of children participated in the Programme in 2020-2021 (108,000 or $82 \%$ of all Lithuanian pre-school and/or preprimary children).


Figure 28. Children participating in the Programme by age group: pre-school and/or pre-primary school-age children (left) and schoolage children (right), thousands

Source: prepared by the Consultant based on the Agency's reports to the EC (2017-2021) and the information in the Education Management Information System (2021-2022)

Between 2017-2018 and 2021-2022, 80-89\% of Lithuanian educational institutions participated in at least one part of the Programme. In the milk and dairy products part of the Programme, 81-89\% of eligible institutions participated, and in the fruit and vegetables part of the Programme, $80-84 \%$ of eligible institutions participated. Also, during the period, $93-99 \%$ of school-age children and $81-99 \%$ of pre-school and/or pre-primary school children participated in at least one part of the Programme. More children were found to participate in the milk and dairy product part of the Programme than in the fruit and vegetables part.

EdUcational institutions that withdrawn from the programme. Between 2017-2018 and 2021-2022, 1,157 educational institutions have participated in the Programme without interruption. Following the imposition of a state of emergency and quarantine in the country, some institutions withdrew from the Programme, but resumed their participation when the restrictions were eased or lifted. A total of 129 educational institutions participated in the Programme with interruption(s). Some 449 institutions stopped their participation in the Programme during the period, while some 57 institutions that had never participated in the Programme joined it in the period 20212022.

The interviews with educational institutions that are no longer participating in the Programme have identified several key reasons for dropping out. Many smaller institutions with fewer than 30 children would like to participate in the Programme, but milk and dairy products are not provided to them (fruit and vegetables are not provided if the establishment has fewer than 20 children). It was also found that educational institutions (often schools) do not have the capacity to store milk and dairy products in the way required by the rules, i.e., no refrigerators, and therefore do not participate in this part of the Programme. Some institutions highlighted that they do not participate in the fruit and vegetables part of the Programme because they do not have sufficient human resources to prepare the products for the children, i.e., washing, shaving, and cutting apples and carrots to prepare the products for easy consumption. Some of the educational institutions interviewed indicated that pupils receive free meals and therefore some of the products distributed under the Programme were not eaten because children were more likely to play with the food rather than eat it, so it was decided to discontinue participation in the Programme to avoid food waste. Some educational institutions (schools and kindergartens) refuse to participate in the Programme because it is difficult to predict the number of children in advance, which often results in shortages. To avoid inconvenience, it has been decided not to participate in the Programme.

Evaluation of implementation of indicators:

- More educational institutions participate in the milk and dairy part of the Programme than in the fruit and vegetables part. On average, more than 1,400 institutions participate in at least one of the subprogrammes each year, or $84 \%$ of the total number of establishments in Lithuania that could participate (i.e., pre-primary, and primary education).
- More children participate in the milk and dairy part of the Programme than in the fruit and vegetables part. There are also more pupils in grades 1-4 than in kindergarten (children up to 6 years old). On average, 233,000 children participate in at least one part of the Programme each year, representing 93-99\% of school-age children and 81-99\% of pre-school and/or pre-primary school children.


## 5.Evaluation of the system for distributing fruit and vegetables and milk and dairy products in educational institutions

This chapter evaluates the system for distributing fruit, vegetables and milk and dairy products in educational institutions. It considers the requirements of the Strategy and their practical application in educational institutions.

PRocedure for distribution of fruits and vegetables, milk and dairy products in educational institutions. The Strategy stipulates that fruit and vegetable products should be distributed to children up to three times a week; vegetables must be distributed at least twice a month and fruit and/or vegetable juice may be provided once a month. It also stipulates that the distribution of fruit and vegetable products must be evenly spaced throughout the month so that a portion of fruit and/or vegetable and/or their juice is served each week.

Milk and dairy products must be distributed to children up to three times a week, with at least two of those times being milk, in accordance with the requirements of the Programme. Ripened cheese may also be provided once a month.

According to the Agency's reports to the EC, fruit, vegetables, and dairy products are distributed in schools up to 3 times a week for up to 36 weeks a year. Milk or dairy products are usually provided 3 times a week and fruit and vegetables 8 times a month. The data is supported by the results of the school survey (see figure below). School representatives were asked how often fruit and vegetables are distributed in their educational institution. 79,6\% of respondents indicated that these products are distributed more than 2 times a week. Most institutions (40,3\%) indicated that they distribute fruit and vegetables 2 times a week. Thus, on average, pupils receive fruit and vegetables 8 times a month. Milk and dairy products were distributed to pupils more frequently than fruit and vegetables. $78,2 \%$ of the respondents indicated that these products are distributed more than 2 times a week. Most educational institutions (49,7\%) indicated that they distribute milk and milk products 3 times a week.


Figure 29. Frequency of products distributed in schools under the Programme: fruit and vegetables (left), milk and dairy products (right) (n=262), \%

Source: prepared by the Consultant

The Strategy also recommends that products be distributed to children at a special brunch or evening meal for the Programme and, if this is not possible, products can be distributed during regular meals in educational institutions, distinguishing that they are products provided under the Programme. The results of the survey of school representatives show that many schools distribute the products during regular meals ( $48,6 \%$ ) and only a few distribute the products during the special mealtimes of the Programme (33,1\%). 18,2\% of the respondents
indicated that there is a place where products are provided in the school and that the pupils are free to take as much as they want (see figure below).


Figure 30. Distribution of time when products are distributed in schools ( $n=262$ ), \%

Source: prepared by the Consultant

The same questions were asked of the kindergarten representatives. $39,6 \%$ of the respondents indicated that their institution distributes fruit and vegetables 3 times a week based on the Programme. More than half of the institutions $(52,7 \%)$ indicated that they distribute these products 2 times a week (see figure below). Thus, on average, pupils receive fruit and vegetables 8 times a month.

Milk and dairy products were distributed to children in kindergartens more often than fruit and vegetables. 48,9\% of respondents indicated that they distribute these products 3 times a week, while $42,3 \%$ distribute them 2 times a week.

## Frequency of distribution of fruit and vegetables



Figure 31. Frequency of products distributed in kindergartens under the Programme: fruit and vegetables (left), milk and dairy products (right) ( $n=269$ ), \%

Source: prepared by the Consultant

The Strategy also recommends that products should be distributed to children at a dedicated brunch or evening meal, or, if this is not possible, products may be distributed during regular meals in educational institutions, with a distinction made that they are products provided under the Programme. The results of the survey of kindergarten representatives show that most kindergartens provide the products specifically for the Programme at brunch or dinner $(71,4 \%)$, a quarter at regular meals $(26,9 \%)$, and only a minority of the respondents indicated
that the kindergarten has a place where products are provided so that the children can take as much as they want (see figure below).


- During regular meals (with the exception that the
- There is a place where the products received under the Programme are provided (not individually portioned) and where the children are allowed to pour themselves a drink of milk or yoghurt or kefir
- During a lunch or evening meal specially dedicated to the Programme

Figure 32. Distribution of time when products are distributed in kindergartens ( $\mathrm{n}=269$ ), \%

Source: prepared by the Consultant

During the first quarantine (from 16 March 2020 to 16 June 2020), the education was carried out remotely and no products were supplied, as no guidelines were in place to guide this. After the second quarantine (from 7 November 2020 to 1 July 2021), some educational institutions have resumed their activities, with kindergartens accepting children and schools providing remote education. The Programme Strategy has been updated to reflect this situation. The updated Programme Strategy foresaw a change in the distribution requirements following the declaration of a national emergency. In such a situation, a ration of products could be formed and distributed to children once every 30 calendar days. On a pre-scheduled day, a representative of the educational establishment would wait for the parents/guardians to come and collect the ration of products (fruit, vegetables, milk and/or dairy products) for the child. On average, 6,27 thousand units of such rations were distributed in the years 20202021.

Fruit, vegetables, milk and dairy products distributed in general education institutions. 77,3\% of general education institutions distributed apples and carrots to pupils, the most common combination of fruit and vegetables. Carrots and juice were the least frequently given to pupils, with $1,1 \%$ of educational institutions giving this combination of fruit and vegetables. Almost a tenth ( $9,9 \%$ ) of the general education institutions gave only apples to pupils (see figure below).
$76,8 \%$ of general education pupils received milk and yoghurt, $5 \%$ milk and cheese. The least common combination was cheese and cottage cheese ( $0,6 \%$ ). At the same time, $14,4 \%$ of educational institutions distributed only milk to pupils. It was also found that $94,8 \%$ of educational institutions distributed milk (including combinations) and $77,1 \%$ distributed yoghurt (including combinations).


Figure 33. The most common products distributed to students at school: fruit and vegetables (left) and milk and dairy products (right) ( $n=262$ ), \%

Source: prepared by the Consultant

Fruit, vegetables, milk and dairy products distributed in pre-schools. A survey of kindergarten representatives found that $55,5 \%$ of pre-schools distribute apples and juices to children, the most common fruit and vegetable combination. The least frequent combination of fruit and vegetables given to pupils was apples, pears, and carrots, with $4,9 \%$ of the nurseries giving this combination. It was also found that $99,6 \%$ of educational institutions distributed apples to pupils and $88,5 \%$ distributed carrots (see figure below). The least frequent recipient was pears (11,5\%).

50,5\% of pre-schools distributed milk, yoghurt, and cheese to children and $27,5 \%$ distributed milk and yoghurt. The least common combination was milk and cheese (1,1\%). At the same time, $13,2 \%$ of pre-schools distributed only milk to pupils. It was also found that $95,2 \%$ of pre-schools distributed milk to children and $79,6 \%$ distributed yoghurt.


Figure 34. The most common products distributed to pupils in kindergartens: fruit and vegetables (left) and milk and dairy products (right) (n=269), \%

[^4]While apples and carrots are the most distributed food items in both schools and kindergartens, kindergartens, in contrast to schools, distribute more fruit and/or vegetable juices. In the case of milk and dairy products, milk and yoghurt are the most distributed in both schools and kindergartens.

Use of undistributed food: general education institutions. The student survey showed that students in grades 1-4 were most likely to eat apples ( $67,4 \%$ ), drink juice ( $58,5 \%$ ) and eat carrots ( $53,7 \%$ ). Yoghurt and milk are most often not eaten (taken home, thrown away, given to a friend, etc.) (see figure below).


Figure 35. Consumption of products distributed under the Programme ( $n=383$ ), \%

Source: prepared by the Consultant

In this context, pupils were asked why they do not eat all the portions given to them at school. Most respondents indicated that they like the fruit and vegetables they are given at school (more than 70\%, see figure below). On the other hand, the taste of the product was cited as one of the main reasons for not eating apples, carrots, pears or drinking juice. $11,8 \%$ indicated that they do not like the taste of carrots, while $5,2 \%$ gave other reasons. A similar trend was found for other products.


Figure 36. Main reasons why pupils do not consume the fruit distributed by the Programme share of fruit and vegetables (left) and share of milk and dairy products (right) (n=383), \%

Source: prepared by the Consultant

A similar trend was observed for milk and dairy products such as cottage cheese, yoghurt, and cheese. Students were asked why they do not like to drink or eat these products. Most respondents indicated that they like these products, but the least liked was cottage cheese ( $57,8 \%$ ). The main reason why pupils do not like this, and other products is taste. $26,1 \%$ of the respondents indicated that they do not find cottage cheese tasty. Comparing the results of the 2020 and 2022 surveys, the results are consistent, with taste being the main reason why pupils do not like this or that product (in 2020, as many as $38,8 \%$ of respondents indicated that they do not eat milk or dairy products because they do not like the taste).

Similar questions were also included in the questionnaire for school representatives. They considered that pupils in Years 1-4 like all the products distributed to them under the Programme (56,7\%). However, the school representatives like vegetables the least and eat them the least (see figure below). Only 2,9\% of respondents indicated that their children do not like fruit. Thus, there is a convergence in the views of both the pupils and the school representatives. Many pupils like all the products distributed (fruit, vegetables, milk, and dairy products), while the least like vegetables.


Figure 37. Students disliked or less liked products they do not or eat less of (=262), \%
Source: prepared by the Consultant

When school representatives were asked whether pupils eat all the food distributed under the Programme, more than half of them said they eat everything. Respondents noted that many pupils eat the apples ( $87,3 \%$ ), carrots ( $57,5 \%$ ) and juice ( $75,7 \%$ ) distributed to them (see figure below). Also, many pupils in grades $1-4$ consume milk and yoghurt portions ( $60,2 \%$ and $65,7 \%$ respectively). Yoghurt and carrots are the most taken home by pupils, according to school representatives ( $11,6 \%$ and $8,3 \%$ respectively).


Figure 38. Consumption of fruit and vegetables distributed under the Programme ( $n=262$ ), \%

## Source: prepared by the Consultant

The main reasons why pupils do not eat the products distributed during the Programme vary according to the school. Most respondents indicated that one of the main reasons why pupils do not eat apples is that they are more used to eating sweets or junk food ( $4,4 \%$ ). Pears, carrots, and juices, as well as cottage cheese, are eaten less by pupils because parents do not pay enough attention to educating their children and introducing them to healthy food ( $5 \%, 5 \%, 5 \%$ and $8,8 \%$ respectively). In the case of milk and yoghurt, the taste of the products is a major influence ( $9,4 \%$ and $9,9 \%$ respectively). On the other hand, the school observes that many students in grades 1 to 4 like the products they are given (see figure below).


Figure 39. The main reasons why pupils do not like or do not eat the products distributed under the Programme, according to school representatives ( $n=262$ ), \%

Source: prepared by the Consultant

The school representatives also indicated that products that students do not eat are usually given to students participating in the Program to take home (in the case of apples, pears, carrots, yogurt) (see figure below). In rare cases, the educational institution has a place where the Products can be picked up by other members of the community (this is usually the case with juice). However, part of the products that were distributed to the students, but remained uneaten, are utilized (the largest proportion of utilization was found in the case of milk).


Figure 40. Consumption of products distributed but not consumed under the Programme ( $n=262$ ), \%
Source: prepared by the Consultant
USE OF UNDISTRIBUTED FOOD: PRE-SCHOOL EDUCATION INSTITUTIONS. The same or similar questions were included in the questionnaire of kindergarten representatives. In their opinion, slightly more than a quarter of children like all the products given to them ( $31,3 \%$ ). $52,7 \%$ representatives of the kindergarten indicated that children like drinking kefir the least (see figure below).


Figure 41. Disliked or less liked foods that children in kindergartens do not eat ore at less of ( $n=269$ ), \%
Source: prepared by the Consultant

When kindergarten representatives were asked whether the children eat all the food items distributed under the Program, many indicated that the children eat everything. Respondents observed that most students eat the apples $(86,3 \%)$, carrots ( $59,3 \%$ ) and juice ( $80,2 \%$; see figure below) that are given to them. Also, many children consume portions of milk and yogurt ( $67 \%$ and $69,8 \%$, respectively). Only a small part of the products is given to children to eat at home (from 0,5 percent to 5,5 percent).


Figure 42. Consumption of fruit, vegetables, milk, and dairy products distributed in kindergartens under the Programme ( $n=269$ ), $\%$
Source: prepared by the Consultant

According to kindergarten representatives, the main reasons why children do not eat the products distributed during the Program are different. Most of the respondents stated that one of the main reasons why students do not eat apples, pears, carrots, and drink milk is because parents do not pay enough attention to children's healthy nutrition (respectively $2,7 \%, 2,7 \%, 13,2 \%$ and 7,1 percent). Children do not like juice, yogurt, cottage cheese and cheese because they are used to other, sweet products ( $5,5 \%, 7,7 \%, 9,3 \%$ and $5,5 \%$, respectively). On the other hand, kindergarten representatives note that most children like the products given to them.


Figure 43. Main reasons why children in kindergartens do not like or do not eat the products distributed under the Programme ( $n=269$ ), \%

Source: prepared by the Consultant

Kindergarten representatives also indicated that uneaten products are given to children participating in the Programme to take home (usually in the case of apples and yogurt) (see figure below). In rare cases, the educational institution has a place where the products can be picked up by other members of the community (most often in the case of carrots). In pre-school education institutions, products are used more often than in the case of general education institutions. Mostly milk and carrots are used.


Figure 44. Utilisation of products distributed but not consumed under the Programme ( $n=262$ ), \%
Source: prepared by the Consultant

In summary, both 1st-4th grade students and children usually eat all the products given during the Program. However, the reasons why they do not eat one or another product may be different. Among the students, it is a surplus of products, they are given to the students to take home, while the representatives of the kindergarten indicated that in most cases the products are disposed of.

## 6. Evaluation of implemented educational measures

This section assesses the educational measures taken. It considers the measures taken, their effectiveness and their benefits.

### 6.1. Educational measures

EdUCATIONAL MEASURES IMPLEMENTED. As part of the implementation of the Strategy, various educational activities were organized in Lithuania on topics defined by the European Commission in accordance with EC Regulation 2017/40 ${ }^{6}$ (see table below). Educational measures such as introducing children to agriculture, healthy eating, organic food, and food waste were implemented in all years of the period considered. The following types of measures have been implemented: educational gardens, classes, lectures, workshops, competitions.

Table 7. Topics of educational measures implemented in Lithuania, 2017-2021

| Educational topics under EC Regulation 2017/40 | Topics of educational measures implemented in Lithuania |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2017-2018 | 2018-2019 | 2019-2020 | 2020-2021 | 2021-2022 |
| Introducing children to agriculture |  | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Healthy eating habits | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Local food supply chain | 人 | 3 | \$ | N | $\checkmark$ |
| Organic food | $\checkmark$ | $\checkmark$ | - | $\checkmark$ | $\checkmark$ |
| Sustainable production | E | 3 | 3 | $\checkmark$ | $\checkmark$ |
| Food waste | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |

Source: prepared by the Consultant based on reports from the Agency to the EC

2020-2021 stood out in that more active education on the topic of sustainability and food waste was started. In cooperation with the Food and Agriculture Organization of the United Nations, educational materials of the 'Do Good Save Food' project were prepared and translated, and related articles were published. This project aims to solve the problem of food waste and irresponsible consumption. This publication is the result of a multifaceted, science-based, and inclusive creative process involving both the public and private sectors. It is a response to the ever-growing public desire to understand why such a large amount of food waste is generated and how this problem could be solved. The content is adapted for children from 5 to 9 years old and a separate version has been created for school management. Remote seminars were organized in which the Agency trained teachers to use the educational material provided on the website www.pienasvaisiai.It and how to apply it to the lessons conducted at school. Created methodological and educational materials: 'How do I behave? Sustainably!', ‘Do well-save food!', 'Grow up healthy, child' and various cartoons, virtual tours, lesson recordings.

[^5]According to the Agency's reports to the EC, no educational activities on local food supply chains were organised during the analysed period.
In addition to the usual teaching materials, seminars, methodological materials and lessons, other educational tools were also used: educational visits and gardens of educational institutions. During the organized competitions, children were not only encouraged to take an interest in food supply themselves (the project 'How do we get ... on our tables?'), but the winners were also able to visit the growers' farms (2019-2020). 2021-2022 the first gardens of educational institutions were established, planting apple and pear trees in the territories of schools and kindergartens. Participating schools and kindergartens received three apples and two pears each.

EdUCATIONAL MEASURES IMPLEMENTED: GENERAL EDUCATION INSTITUTIONS. When schools' representatives were asked how many times a year their school organises special events and activities under the Programme to educate and inform students about healthy eating, fruit, vegetables, milk, and dairy products, 61,9\% of the respondents indicated 3 or more times (see figure below). $32 \%$ of respondents organised such events 1-2 times a year.


Figure 45. Frequency of special events and activities organised in schools under the Programme ( $n=262$ ), \%
Source: prepared by the Consultant

Most often, schools organize information lessons for students ( $87,8 \%$ ), tasting and food preparation lessons for students $(46,4 \%)$, educational sports competitions ( $45,4 \%$ ). Courses and seminars for parents ( $2 \%$ ), events on the topic of sustainable agriculture ( $8,7 \%$ ) and courses and seminars for school employees ( $10,2 \%$ ) are less common.


Figure 46. The most common activities organised in schools to educate about the benefits of fruit, vegetables, and dairy products under the Programme ( $n=262$ ), \%

Source: prepared by the Consultant
When asked about the most common topics covered by the special sessions, $87,4 \%$ of respondents said healthy eating and the food pyramid, $72,5 \%$ said the impact of nutrition on human health and the benefits of exercise,
and $65,3 \%$ said the variety of fruit and vegetables and how they can be brought 'from field to table'. The least frequent topic was the benefits of milk and dairy products, variety, and delivery from 'farm-to-table'.


Figure 47. The most common themes and activities of the Programme's special events in schools ( $n=262$ ), \%
Source: prepared by the Consultant
EdUCATIONAL MEASURES IMPLEMENTED: PRE-SCHOOL EDUCATION. The same questions were asked in the questionnaire of the kindergarten representatives. When asked how many times a year their kindergarten organises special events and activities within the framework of the Programme to educate and inform children about healthy eating, fruit, vegetables, milk, and dairy products, $73,1 \%$ of the respondents indicated 3 times or more (see figure below). $24,7 \%$ organise such events 1-2 times a year and $2,2 \%$ indicated that no special events and activities were organised in their educational establishment.


Figure 48. Frequency of special events and activities organised in kindergartens under the Programme ( $\mathrm{n}=269$ ), \%
Source: prepared by the Consultant
The most common activities organised by kindergartens are information lessons for children ( $75,1 \%$ ), tasting and cooking lessons for children (71\%), and educational sports competitions (34,6\%). Courses and seminars for parents ( $4,8 \%$ ) and courses and seminars for school staff ( $14,9 \%$ ) are less common. Other activities mentioned by some respondents included gardening activities in the yard or inside the kindergarten groups (i.e., growing onion leaves, parsley, etc. on windowsills), creative exhibitions (i.e., drawings, mouldings, etc.), various campaigns, projects and competitions, environmental education lessons (i.e., 'We are the little detectives'), prepared displays, and playing various games on healthy eating.


Figure 49. The most common educational activities in kindergartens on the benefits of fruit, vegetables, and dairy products under the Programme ( $n=269$ ), \%

Source: prepared by the Consultant
$14,3 \%$ of respondents reported that their kindergarten organised events on the following topics: information lessons; tasting and cooking lessons. $8,2 \%$ of the educational institutions organised only information lessons. 7,7\% of respondents indicated that educational events were organised in their educational establishment on the following topics: information lessons; tasting and cooking lessons; trips to horticultural and dairy farms.

In kindergartens, the most common educational and informative activities were education and information activities on healthy eating, the food pyramid ( $91,8 \%$ ), the variety of fruit and vegetables and how they are brought from the field to the table ( $86,2 \%$ ), and the impact of nutrition on human health and the benefits of exercise ( $73,2 \%$ ). The least frequent topic was sustainable farming $(8,9 \%)$.


Figure 50. Themes and activities of the most common special events in kindergartens ( $\mathrm{n}=269$ ), \%
Source: prepared by the Consultant
When comparing the results of the questionnaire between school and kindergarten representatives, it was observed that most of the institutions used educational measures for pupils and children, with a small proportion of them for teachers ( $10,2 \%$ in schools and $14,9 \%$ in kindergartens). Parents were the least educated ( $2 \%$ in schools and $4,8 \%$ in kindergartens). The interviews revealed that courses or seminars for teachers focus on the delivery of material to pupils and children, and on advice on how to implement educational measures more successfully. Teacher training has been successful because pupils and children enjoy the educational measures, learn new things, learn to communicate, and express themselves on healthy eating and other topics, and the
various activities develop their teamwork skills and creativity. However, parents lack information about the Programme, and some are unsure about which part of the Programme their child participates in, how often and what products they receive. Some parents do not realise that the Programme combines both product distribution and educational activities.

THE GOOD PRACTICE. Interviews with the Agency revealed that the national quiz 'How do I behave? Sustainably' was very popular, so the deadline for the quiz activity was extended at the request of many respondents. Interviews with school representatives confirmed the Agency's findings. Teachers noted that the national quiz was very popular with pupils in grades 1-4. They had the opportunity to use their existing knowledge of mathematics and science and apply it to the quiz questions on the consequences of mindless eating, climate change, farming, ecology and fruit, and vegetables. This format appealed to both students and teachers, and some teachers have adapted it to their lessons or other educational activities in their educational institution.

Also, in the opinion of many educational institutions, the project 'The Garden and Garden Goods' is particularly liked by children, because they not only see, but also contribute to the growing of products. Institutions that have a greenhouse or vegetable garden teach children about how food ends up on their table. Children can plant, care for, and watch food grow. Educational institutions that do not have such an opportunity grow smaller products on the windowsills (for example, onion leaves, parsley, etc.). Later, the harvested crop is eaten or shared with other members of the community of the educational institution. During the interview, the representatives of the educational institutions noticed that the students create recipes together with the teachers and cook easy-toprepare dishes. Thus, children not only think about how products appear, but learn to process and make them. In this way, respect for food is developed.

Other educational institutions that do not have a greenhouse, a vegetable garden or a windowsill garden have quizzes on healthy lifestyles. Children form teams, have active discussions, answer prepared questions, and learn new knowledge. The youngest children are introduced to fruit and vegetables by reading books and tasting the produce, and they take part in various drawing competitions to draw their favourite fruit or vegetable. These and similar activities help children to learn about products, communicate about them with others and develop competences for healthy living.

Number of participants in educational activities. The number of participants in education activities remained stable before the quarantine restrictions, with more than 230,000 participants, including teachers and children and pupils of all ages, taking part in the activities each school year (2017 to 2020). In 2017-2018, 237,000 children and pupils took part in lessons, lectures and/or seminars aimed at increasing their knowledge of the benefits of fruit, vegetables, and dairy products. In 2018-2019, the education programme was complemented by food production lessons, product tastings, quizzes, and competitions, involving 222 children and pupils. In 2019-2020, a complex competition at national level was organised with the participation of both children and students. Participants were able to learn and better understand how food ends up on their plates. The three winners took part in excursions to Lithuanian fruit, vegetable, and dairy farms. Other participants received merchandise from the Programme. In total, more than 1,600 children and pupils took part in the competition.

Due to the national emergency and restrictions prohibiting close contact, the number of students participating in educational activities fell 2,200 in 2020-2021 (see figure below). Alternatively, competitions, quizzes, and similar types of interactive activities organised remotely or via radio/social networking platforms have been given more attention in the period 2020-2021 (800 participants in total).

In 2021-2022, 1,234 teachers have registered their student groups to take part in the fun lessons, and 1,200 educational institutions in the national quiz. In addition, various photo and drawing competitions were held on the Programme's Facebook page, with between 5,000 and 20,000 participants (children and their parents/guardians). 815 institutions received the educational booklets 'Do Well - Save Food'. This way in the period of 2021-2022, virtual excursions to Lithuanian farms were organised, often integrated by teachers into their lessons. It is difficult to determine the exact number of participants in the educational measures, as educational institutions often integrate the educational measures into children's daily education.


Figure 51. Number of children enrolled in educational activities, 2017-20217
Source: prepared by the Consultant based on EC reports provided by the Agency
In the survey of school representatives, questions were asked to determine how many students, school staff and parents participated in special activities designed to educate and inform about healthy nutrition, fruits, vegetables, milk, and dairy products. According to respondents, an average of 173 students from each school ( $n=234$ ), 24 school staff from each school ( $n=207$ ) and 68 parents from each school ( $n=120$ ) participated in the sessions. It is worth considering that not all educational institutions carried out educational or informative activities for teachers and parents, the focus was on students.

Also, in the survey of kindergarten representatives, questions were asked about the participation of children, employees and parents in special activities designed to educate and inform about healthy nutrition, fruits, vegetables, milk, and dairy products. According to the respondents, on average 115 children from each educational institution ( $n=257$ ), 21 kindergarten workers from each educational institution ( $n=228$ ) and 51 parents from each educational institution ( $n=146$ ) participated in the activities. It is worth considering that not all educational institutions carried out educational or informational activities for employees and parents, the focus was on children.

Financing of educational measures. Funds from EU funds and the state budget were used for educational measures. In the period 2017-2022, significant fluctuations in the funding used for educational measures can be seen between different academic years. A total of 432,3 thousand euros were used for educational measures during the analyzed period. National funds accounted for $10 \%$ to $17 \%$ of total funding for educational measures. The funding used for educational measures was the same for both parts of the Program: milk and dairy products and fruits and vegetables.

[^6]

Figure 52. Funding spent on educational measures, 2017-2022
Source: prepared by the Consultant based on reports from the Agency to the EC
Under the funding mechanism defined in the Strategy, no more than $15 \%$ of the total fund dedicated to the Programme can be allocated to education measures.

Table 8. Funding for educational measures as part of the overall Programme in 2017-20228


Source: prepared by the Consultant based on Agency's data

In all years of the considered period, the funding used for educational measures did not exceed the intended limit. However, it should be emphasized that the share of funds allocated to educational measures was much lower than the established limit and ranged from only 1 to 3 percent. This shows that the focus of the program is on product sharing.

Evaluation of implementation of indicators:

- On average, 234,000 children, or $94 \%$ of all children who could have participated in these educational activities, took part in educational activities in 2017-2020. The quarantine made remote education a reality, requiring all educational tools to be adapted to work remotely. The total number of children who took part in educational activities that year was 2,000 , or $1 \%$ of the total number of children who could have taken part in the Programme's educational activities.
- In the period 2021-2022, various educational activities were carried out both in person (in educational institutions) and remotely. In total, more than 1,234 classes of primary school children, around 1,200 educational institutions, between 5,000 and 20,000 children and parents/guardians (based on the number of remote participants) took part. Educational material on moderate consumption and food saving was also distributed to 815 establishments (this publication is also available in e-format).
- The total amount of funds spent on education measures in the period 2017-2022 is €432,3 thousand (EU funding $€ 363,7$ thousand and national funding $€ 68,6$ thousand).

[^7]
### 6.2. Children's knowledge of fruit, vegetables, milk, and dairy products

To assess how well students in grades 1-4 know fruits and vegetables, a questionnaire for students included two questions to identify different products from pictures (see the table below). To determine how well the students recognized the fruit, 4 pictures were presented - raspberry, gooseberry, banana, and kiwi, as well as 12 answer options from which the respondents could choose the correct one.

To determine how well the students identify vegetables, they were presented with 4 pictures of an avocado, an onion, a sweet pepper, and an aubergine, as well as 13 response options from which they could choose the most appropriate.

Table 9. Questions used in the student survey
Question 28: Mark the 4 vegetables shown in the pictures (there are 4 pictures of vegetables, and you need to circle the options given):


Question 29: Mark the 4 fruits shown in the pictures (there are 4 pictures of fruit and you need to circle the options from the pictures accordingly):


Source: prepared by the Consultant
All fruits were identified by $88,8 \%$ of respondents (see figure below). Almost all students identified the banana ( $99,1 \%$ ) and the kiwi $(98,5 \%)$. They were slightly less successful in identifying the sweet gooseberry ( $98,3 \%$ ) and raspberry (91,3\%).


Figure 53. Proportion of pupils who correctly identified the fruit presented ( $n=383$ ), \%
Source: prepared by the Consultant

All vegetables were correctly identified by $95,7 \%$ of respondents (see figure below). Almost all students identified the avocado $(98,9 \%)$ and the onion ( $98,6 \%$ ). They were slightly less successful in identifying sweet chilli $(98,3 \%)$
and aubergine (97\%). Pupils are less likely to be exposed to aubergine, which may lead to confusion with other vegetables.


Figure 54. Proportion of pupils who correctly identified the vegetables given among all respondents ( $n=383$ ), \%
Source: prepare by the Consultant

Student survey showed that most pupils are familiar with both fruit and vegetables. Given that the products in the photos are not included in the Programme, pupils are familiar with them at home or at school (e.g., in textbooks).

To assess students' understanding of the dairy cycle, the survey asked them to answer 2 closed questions. The results showed that pupils in grades 1 to 4 know how milk is produced and what cheese is made of (see figure below). It was found that $92,3 \%$ of the pupils correctly stated how the milk reaches their table and $7,7 \%$ of the pupils chose the wrong answer option.

How milk is made?


## What is milk made of?



Figure 55. Students' knowledge of how milk is made (left) and how cheese is made (right) ( $n=383$ ), \%

Source: prepared by the Consultant

When answering the question of what cheese is made from, $94,4 \%$ of students chose the correct answer that cheese is made from milk, and $5,6 \%$ chose the wrong answer. Nevertheless, the results of the survey reveal that students know how milk and cheese are made. Such results were influenced by the variety of educational activities, interesting lessons and products provided during the Programme.

A comparison of the 2020 and 2022 surveys shows an increase in the proportion of pupils who identified aubergine and avocado in 2022. On the other hand, the proportion of pupils who know how milk is made decreased: $95,9 \%$
in 2020 and $92,3 \%$ in 2022. The proportion of pupils who know what cheese is made of remained the same ( $94,2 \%$ in 2020 and 94,4\% in 2022).

To assess the knowledge of pre-school children (up to 6 years old) about fruit and vegetables, a questionnaire was administered to kindergarten representatives, with questions referring to the children's existing knowledge. Most respondents $(96,2 \%)$ indicated that children recognise fruit and vegetables, while $3,8 \%$ identified only some of them (the survey was carried out in all kindergartens with children up to 6 years of age, so it is worth considering that the youngest children will have less knowledge of produce and will be less able to identify it than the oldest). It should be noted that none of the kindergarten representatives indicated that children cannot distinguish between fruit and vegetables.


Figure 56. Proportion of children who can identify fruit and vegetables ( $n=269$ ), \%

Source: prepared by the Consultant

According to the survey, conducted in 2020, $96,7 \%$ of children were able to identify the fruit and vegetables they were taught about or given to eat.

### 6.3. Children's knowledge of the health benefits products

To assess students' knowledge of the health benefits of fruit and vegetables, they were asked if they knew that these foods should be eaten daily. $96 \%$ of respondents say they know that fruit and vegetables should be eaten every day and several times a day (see figure below). Only $4 \%$ of respondents indicated that they do not know how often they should eat these products.


Figure 57. Distribution of students who know that fruit and vegetables should be eaten several times a day and who do not know it ( $n=383$ ), \%

Source: prepared by the Consultant

Notably, when asked a follow-up question about their most common snack choices, most pupils in grades 1 to 4 indicated fruit (40,5\%) and dairy products (19,1\%)(see figure below). The third most popular answer was found to be sweets (18\%) and the fourth was potato chips (10,1\%). Vegetables as a snack were chosen by only $6,3 \%$ of respondents. 6\% of students reported eating other foods for snacks, such as sandwiches, baked goods (muffins, biscuits, bread), crisps or nuts. Thus, although most students know that fruit and vegetables should be eaten every day, $46,8 \%$ of respondents choose these products for snacks, while $28,1 \%$ choose sweets and crisps.


Figure 58. Proportion of students who choose healthy and unhealthy snacks at school among all respondents ( $\mathrm{n}=383$ ), \%

Source: prepared by the Consultant

When students were asked what constitutes unhealthy food, i.e., food that should be avoided because it is not good for health due to its high sugar and salt content, $73,8 \%$ of them identified the correct products and dishes potato chips, pizza, hamburger, and sweets (see figure below). $6 \%$ of the students correctly identified only three foods - potato chips, pizza, and sweets - and did not classify the burger as an unhealthy food. The best performing food was potato chips ( $94,7 \%$ ), and the worst was a hamburger ( $86 \%$ ). Interestingly, some students ( $2,9 \%$ ) also classified nuts as an unhealthy food.


Figure 59. Proportion of pupils who correctly identified unhealthy foods ( $n=383$ ), \%
Source: prepared by the Consultant

Healthy eating recommendations are often represented by a food pyramid. Healthy eating recommendations emphasise eating whole-grain cereal products such as bread, porridge, pasta, etc. several times a day. It is also recommended to eat at least 400 g of a variety of (preferably fresh) vegetables and fruit every day. White meat such as poultry, rabbit meat and/or fish, as well as legumes, can be added in moderation to the diet. To test
students' knowledge of healthy eating (and thus the food pyramid), students were asked to identify the 2 food groups they should eat most often. The correct pair of groups, vegetables, greens, and cereals were chosen by $25 \%$ of the respondents. $38,3 \%$ of them indicated that they should eat meat, fish, vegetables, and greens most often and $6,3 \%$ meat, fish, and cereals. The most frequently chosen products were vegetables and greens, meat and fish, and cereals (see figure below). $83,1 \%$ of students indicated that vegetables and greens should be the most frequently eaten, $59,6 \%$ meat and fish, and $44,6 \%$ cereals.


Figure 60. Proportion of pupils who correctly identified the 2 foods that should be eaten most often in the food pyramid ( $n=383$ ), \%

Source: prepared by the Consultant

So, students understand they should eat vegetables and greens most of the time, but they lack the knowledge that it is also important to eat cereal products frequently and that eating meat once a day or less is recommended.

Students were also asked if they knew what organic products are. 49,2\% of respondents indicated that they know what organic products are, $40,1 \%$ indicated that they have heard of organic products but do not know for sure, and only $10,7 \%$ have not heard of organic products (see figure below).


Figure 61. Proportion of students who know what organic products are ( $n=383$ ), \%
Source: prepared by the Consultant

In summary, pupils in grades 1-4 know that they need to eat fruit and vegetables several times a day, and that they can distinguish between foods, products or dishes that are good for their health. However, some pupils lack knowledge about the food pyramid and organic products.

To assess the students' knowledge about the benefits of fruits and vegetables, school representatives were also involved. In the questionnaire, they were asked if they thought the students had enough knowledge about healthy
eating (for example, whether they understand the health risks of foods with a lot of added sugar or fat, or they know the benefits of vegetables and fruits). 63\% of respondents say that students have enough knowledge, and $19,3 \%$ indicated that students still lack knowledge (see the figure below). Thus, school representatives evaluate students' knowledge more moderately than the students themselves.


$$
\begin{aligned}
& \square \text { Enough } \\
& \text { Not enough } \\
& \text { Cannot answer }
\end{aligned}
$$

Figure 62. Distribution of students with sufficient and insufficient knowledge about healthy nutrition ( $n=262$ ), \%

Source: prepared by the Consultant

When school representatives were asked what students most often choose for snacks, the majority indicated fruit ( $46,4 \%$ ) and various sweets ( $23,2 \%$ )(see figure below). Notably, $13,8 \%$ of respondents indicated that students do not eat snacks at school, while 10\% indicated that they eat other products such as sandwiches, cereals, baked goods (bread, biscuits, muffins), nuts or berries for snacks. Interestingly, according to school representatives' opinion, a very small proportion of pupils eat vegetables ( $2,2 \%$ ) and milk or dairy products ( $3,9 \%$ ) for snacks.


Figure 63. Proportion of students who choose healthy and $u$ healthy snacks at school among all respondents ( $n=262$ ), \%

Source: prepared by the Consultant

The questionnaire data of school representatives and students' match. Both sides reported that most of the students eat fruit and one-quarter eat sweets and potato chips as snacks.

School representatives were also asked to indicate whether pupils knew and understood the food pyramid. 83,4\% of respondents indicated that most or all pupils have the required knowledge and only 6,6\% indicated that only a small proportion of pupils know and understand the food pyramid. It is noteworthy that school representatives rate pupils' knowledge higher than was found in the pupil questionnaire ( $25 \%$ of pupils have a good understanding and $38,3 \%$ have only a partial understanding).


Figure 64. Proportion of students who know and understand the food pyramid ( $\mathrm{n}=262$ ), \%

Source: prepared by the Consultant

The school representative's questionnaire thus asked whose influence is the most important in encouraging students to eat healthy. $24,3 \%$ of the respondents indicated that parents and school influence it, 20\%- parents, school, and peers/friends and $12,7 \%$ - parents and peers/friends. Many school representatives believe that the role of parents ( $98 \%$ ), school $(53,4 \%)$ and peers/friends ( $36,8 \%$ ) is very important in encouraging students to eat healthy. It was also found that television and social networks are not the most suitable ways to promote healthy eating ( $5,9 \%$ and $83 \%$, respectively).


Figure 65. Key factors influencing students to eat healthily ( $n=262$ ), \%

Source: prepared by the Consultant

To assess how well pre-school children (up to 6 years old) know about fruit and vegetables, the questionnaire for kindergarten representatives included questions referring to children's knowledge. According to the respondents, $86,8 \%$ of the children understand and can distinguish between healthy and unhealthy diets, i.e., diets that benefit the body and health (e.g., natural, fresh, free from added sweeteners, preservatives, colours, enriched with beneficial nutrients, fibre, vitamins. and minerals) and diets that do not (e.g., fatty, sugary, high-salt foods) (see figure below). Only 2,2 kindergarten representatives indicated that most children do not understand.

When kindergarten representatives were asked whether children know what the food pyramid is, $80,8 \%$ of respondents indicated that most of them do and only $3,3 \%$ indicated that most of the children do not.


Figure 66. Proportion of children who understand what constitutes a healthy and unhealthy diet (left) and understand the food pyramid (right) ( $n=269$ ), \%

Source: prepared by the Consultant

In a survey, conducted in 2020, $89,9 \%$ of respondents indicated that most children were able to identify healthy and unhealthy foods, while $84,1 \%$ indicated that children knew what the food pyramid was. Thus, both the 2020 and 2022 surveys showed that many children have a good understanding of healthy and unhealthy diets and the food pyramid.

In contrast to schoolchildren, kindergarten children eat more health-friendly foods such as fruit, vegetables, or dairy products for snacks (see figure below). This is influenced by the 'food control' in kindergartens, where snacks are distributed by teachers who make sure that the products are healthy and nutritious. Parents also make sure that their children have healthy food when preparing them for kindergarten. In many cases, kindergartens do not allow parents to put foods high in added sugar, salt, and fat in their lunch boxes.


Figure 67. Proportion of children in kindergarten who choose healthy or unhealthy snacks at school ( $n=269$ ), \%
Source: prepared by the Consultant

In summary, schools and kindergartens believe that students and children have sufficient knowledge about healthy eating and the food pyramid, but that pupils do not always put this knowledge into practice when choosing snacks. To help pupils and children eat healthily, it is important to help them understand why healthy eating is beneficial and to apply the knowledge they have gained both at home and in the educational establishment.

### 6.4. Children's attitudes towards the products distributed during the Programme

Students in grades 1-4 enjoy eating both fruits and vegetables (see figure below). 97,4\% of students indicated that they like to eat fruit, and $85,3 \%$ indicated that they like to eat vegetables. It was also found that students like fruits more than vegetables (a difference of 12,1 percentage points).


Figure 68. Distribution of students who like and dislike eating fruit (left) and vegetables (right) ( $\mathrm{n}=383$ ), \%

Source: prepared by the Consultant

When asked what they like best, more than half of the students (52\%) said they like all products, i.e., fruit, vegetables, and juices (see figure below). Only $0,6 \%$ of respondents indicated that they did not like any of the products mentioned. It was also found that $26,6 \%$ of pupils like fruit only, which is 11 percentage points more than those who like vegetables only ( $15,5 \%$ ). The lowest number of pupils who chose juice as their favourite was $4,8 \%$. The 2020 survey also showed that pupils liked both fruit and vegetables and juice (37\%). Only 0,3\% of respondents indicated that they did not like either product. The most liked product was fruit (25\%).


> Vegetables
> Fruit
> Like all of them
> Juice
> Do not like any of them

Figure 69. Distribution of pupils who like to eat fruit and vegetables ( $n=383$ ), \%
Source: prepared by the Consultant
$79,5 \%$ of students in grades 1-4 were found to enjoy drinking milk (see figure below). When asked which dairy products (including milk) they prefer to take or drink, $18,3 \%$ chose milk, yoghurt, and cheese, $14,2 \%$ milk, cottage cheese and yoghurt and $10,1 \%$ milk and yoghurt. Yoghurt was also found to be the most preferred dairy product by pupils, with $66,9 \%$ of respondents indicating it as their favourite. Milk was the product most liked by $66,2 \%$ of students. Kefir was the least preferred product, chosen by only $12,7 \%$ of the students.


Figure 70. Proportion of students who like to drink milk (left) and proportion of students' favourite products (right) ( $\mathrm{n}=383$ ), \%
Source: prepared by the Consultant

Interestingly, a 2020 survey showed that $8,9 \%$ of pupils dislike drinking milk or eating dairy products, while in the 2022 survey only $2,4 \%$ of pupils did so. It is also observed that in 2020 and 2020 the most liked dairy product by students was yoghurt.

When asked if they would like to eat more fruit, vegetables, milk, or dairy products, more than half of the students said they eat enough (see figure below). 44,1\% of students said they would like to eat more fruit, $33,5 \%$ would like to eat more vegetables and $27,6 \%$ would like to eat more milk or dairy products.


Figure 71. Proportion of students who would like to eat more fruit, vegetables and milk and dairy products (n=383), \%

Source: prepared by the Consultant

Given that children (up to 6 years old) participated in the survey, a question about children's willingness to eat more or less food was included in the questionnaire of the kindergarten representatives. More than half of the respondents indicated that children eat enough fruit, vegetables and milk, or dairy products (see figure below). $32,4 \%$ or respondents indicated that children would like to eat more fruit and $14,3 \%$ would like to eat more milk or dairy products. $15,4 \%$ of nursery representatives also indicated that children would like to receive less vegetables.


Figure 72. Proportion of children who would like to eat more fruit, vegetables and milk and dairy products ( $n=269$ ), $\%$
Source: prepared by the Consultant
The 2022 survey data shows that both students and children like fruit more than vegetables and would be willing to eat them more often. The generational difference is also reflected in the fact that school-age children would like to consume less milk and dairy products, while kindergarten representatives indicated that children would like to consume less vegetables and more milk and dairy products.

## 7.Evaluation of communication and outreach measures related to the visibility of the Programme

This section assesses the communication and information activities related to the implementation of the Programme. It reviews the measures, their effectiveness, and their financing.

COMMUNICATION AND OUTREACH MEASURES. The Strategy foresees the use of information measures to raise awareness of the Programme and to make the Programme more effective. To this end, a variety of communication and information measures may be used (see table below).

Table 10. Communication and outreach measures from 2017-2018 to 2021-2022

| Public information measures | Year of implementation of the measure | Title of the measure |
| :---: | :---: | :---: |
| Creation of the program's visual identity | 2017-2018 | - creation of the 'Healthy Food-healthy Child' logo <br> - creation of posters for the 'Milk for Children' and 'Promoting Fruit Consumption in Children's Educational Institutions' programmes |
|  | 2018-2019 | - characters created: Carrot, Apple, and Teddy |
|  | 2020-2021 | - developing the Programme's communication idea and creating banners |
| Setting up and maintaining a website and social networking accounts (Facebook, etc.) | 2017-2018 | - creation of the website 'Milk for Children'9 |
|  | 2021-2022 | - Facebook advertising management services |
|  | All year round | - maintenance of the Facebook account 'Healthy Food-Healthy Child'10, 'Milk for Children' ${ }^{11}$ and 'Fruit for School' ${ }^{12}$ sections of the Agency's website and 'Healthy Food-Healthy Child' website |
| Preparation of information material (brochures, leaflets, and other information publications) on the Programme | 2017-2018 | - development of the 'Grow up healthy, child' educational books |
|  | 2018-2019 | - printing of the educational books 'Grow up healthy, child' by Šviesa (for children aged 2-4 years, 5-6 years old, 1-2 grade and 3-4 grade). Presentation of these books were also held in educational institutions. <br> - food boxes and water jugs made as gifts. |
|  | 2019-2020 | - developing the Programme's key communication ideas and banners <br> - development and layout of video material and posters to publicise the Programme, continuing the communication idea of the Programme publicity <br> - production of reflectors, badges |
|  | 2021-2022 | - layout and printing services for gifts (notebooks and sticker sheets) <br> - gift acquisition services (sports bags) |
|  | 2019-2020 | - developing the Programme's key communication ideas and banners |

[^8]| Public information measures | Year of implementation of the measure | Title of the measure |
| :---: | :---: | :---: |
| Publicising Programme various media |  | publicising the Programme on the 'Tamo Dienynas' and 'Mano Dienynas' virtual diary platforms <br> publicity of the Programme on the radio station M-1 <br> publicity of the Programme in external advertising areas and waiting pavilions (stops) of public transport in Vilnius, Kaunas, Klaipėda, Šiauliai and Panevė̌ys showing a film on public transport in all major cities: Vilnius, Kaunas, Klaipéda, Šiauliai and Panevěžys on the importance of agricultural production and introducing the Programme <br> publicising the Programme through a 15 -minute network with non-traditional promotions in public spaces in Kaunas and Vilnius <br> preparation and publicity of articles and video reports on specific topics |
|  | 2020-2021 | publicising the Programme on the 'National Education Centre Website' and 'Your School' website <br> article and video production and publicity services <br> production and broadcasting services for social advertising-educational videos (on food waste and sustainable agriculture) <br> non-traditional advertising broadcasting services on the $\mathrm{M}-1$ radio station |
|  | 2021-2022 | commissioning and publicity services for articles and video reports advertorials on the 'Tamo Dienynas' and 'Mano Dienynas' virtual diary platforms advertising and game organisation services on radio airwaves |

## Source: prepared by the Consultant based on the information provided by the Agency

The 'Healthy Food-Healthy Child' Face book page 3,7 thousand followers and 3,5 thousand likes at the time of the evaluation (6 December 2022). It provides information material in various forms, sharing not only articles but also video footage and children's achievements in participating in the Programme. The information published on the website also covers different topics, such as sharing useful information on healthy eating, fruit and vegetable production and the dairy cycle. 'Healthy Food-Healthy Child' organises various competitions, shares interesting facts about specific products, provides recipes using healthy products and offers advice for parents. It shares moments from celebrations in schools and kindergartens, publicises educational activities for children, tastings and more.

The 'Healthy Food-Healthy Child' website, which was visited by 8,800 internet users at the time of the evaluation (27/12/2022), provides information material o the benefits of a healthy lifestyle, the promotion of ecoconsciousness in young children, the benefits and the importance of a sustainable lifestyle, the prevention of food waste, and good practices in Lithuanian educational institutions. This page also provides practical information on how to join the Programme or fill in the Programme application forms.

Other communication channels were also used to publicise the Programme. For instance, colourful posters promoting the Programme in 2019-2020 were placed at public transport stops and on buses in major Lithuanian cities. The Programme was also publicised on radio. An information Programme on healthy eating was broadcast and listeners could take part in a game to win prizes. Banners promoting the Programme were placed in electronic diaries where they could be seen by children, parents, and members of the school community. Promotional merchandise for the Programme was created.

In 2017-2018, the Programme was promoted in schools with 8,000 posters produces and displayed. In 20182019, the focus was on educational institutions and their communities, with the preparation of methodological material on the benefits of fruit, vegetables, and dairy products for children, pupils, and teachers (educators). A total of 25,000 items were distributed in 2018-2019. In 2019-2020, a lot of attention was paid to informing the public about the Programme: public transport buses decorated with the colours and symbols of the Programme
were deployed in the five largest cities of Lithuania; information boards were displayed at bus stops; and enewsletter was sent to the public in the form of an e-bulletin for two months. The Programme's website was updated, and 7 videos and 28 articles were uploaded on healthy eating habits, local market products, organic products, etc., a radio programme was organised to talk to children about fruit, vegetables, milk, and dairy products. In the period 2020-2021, public awareness was raided through quizzes (e.g., 'Save Food') and radio broadcasts. Courses and seminars have also been developed for teachers working on the implementation of the Programme in educational institutions.

A lot of attention was paid to educating children and schoolchildren through various events and printed publications. In interviews, representatives of schools and kindergartens were positive about these measures. They consider that pupils like interactive activities and learning through games the most. Quizzed and other teambuilding activities were also popular. Such activities help children and pupils to better retain information and healthy eating, agriculture and sustainable production, local food supply chains and sustainable food consumption. Some children share their knowledge with their parents/guardians and try to eat what is healthy.

Teachers/educators received the least attention, but the interviews showed that the information available to them is sufficient, as they need to familiarise themselves with the information before presenting it to the children and students and are supported by the methodological material provides.

Money spent on communication and information measures. The amount spent on public information ranges from $€ 7,2$ thousand to $€ 92,8$ thousand (see figure below). An increase in both national and EU funds was observed between 2017-2018 and 2019-2020. Thereafter, the amount of funds used decreased. A total of $€ 216,42$ thousand were spent on information measures during the period.


Figure 73. Proportion of children who would like to eat more fruit, vegetables and milk and dairy products ( $n=269$ ), \%
Source: prepared by the Consultant based on report submitted by the Agency to the EC (2017-2019) and information provided by the Agency (2020-2022)

The funds earmarked for awareness-raising measures were used to finance posters, a website, and a social network to provide information on healthy eating and the benefits of fruit, vegetables, and milk. Promotional gifts were also purchased for the participants of the Programme.

## 8. Evaluation of the conditions and procedures for the implementation of the Programme

This chapter assesses the conditions and procedures for implementing the Programme. It considers the administrative burden and other problems faced by the participants in the Programme, the system of distribution of support, the differences or synergies between the fruit and vegetables and milk and milk products parts of the Programme. It shall also consider the changes in the distribution of products following the introduction of a national state of emergency for the period 2020-2021.

The administrative burden on programme participants. The Rules for the implementation of the Programme to promote the consumption of Fruit and Vegetables and Milk and Dairy products in Children's Educational institutions, approved by the Order of the Minister of Agriculture of the Republic of Lithuania No. 3D-599 of 21 September 2017 (hereinafter referred to as 'the Rules'), set out the system for determining the support for the products distributed and the administrative management.

The Agency may be approached for the permanent distribution of products under the Strategy by children's educational institutions and product suppliers who have won a public tender for the supply of products to educational institutions or who have acquired the right to do so by contract. According to the rules, applicants (a person or an institution that has submitted a duly completed application to the Agency in accordance with the established procedure or has been successful in a public procurement procedure organised by the Agency for the implementation of the measures under the Programme) must ensure the quality of the products they supply before applying for participation in the Programme. Operators (educational institutions or suppliers of products) must fulfil these prior requirements before applying for participation in the Programme and receiving support:

- products are purchased from certified organic or National Quality Products (NQP) certified producers/growers (from 2022 onwards, in addition to Ekoagros, certification services are provided by the private certifier Ekoliuks) ${ }^{13}$;
- suppliers of dairy products must be registered in the Register of Animal Food Processing Entities with Veterinary Approval or the Register of Food Processing Entities.
- suppliers must have won a public tender for the supply of products to educational institutions or have acquired the right to do so by contract.
- educational institutions must apply for participation to the Agency.

High criteria also apply to the supply of the products themselves. The rules stipulate that fruit and vegetables should be packaged and labelled in such a way that their contents cannot be altered.

The Agency is responsible for preparing the relevant forms of documentation needed to participate in the Programme. According to the Agency's methodological information, an operator wishing to become an applicant and supply fruit and vegetables and milk, and dairy products must submit separate applications for each product group. If an operator wishes to supply only fruit and vegetables or only milk and dairy products, he shall submit only one application. Documents to be drawn up by the Agency and to be submitted by applicants:

- register of products distributed (to educational institutions).
- register of products distributed (to suppliers).
- an application for approval of the applicant.
- a list of educational institutions with which suppliers have concluded contracts for the supply of products under the Programme.
- documentation of dairy products demonstrating compliance with the requirements of the Strategy (composition of the products, description of the technological process) (if the dairy products to be supplied

[^9]to children by the applicant are already included in the list of the recommended range, no further documentation is required).

- applicants and/or educational institutions shall provide a register in the form prescribed by the Agency, recording the names and addresses of the educational institutions to which the products are supplied, the number of children who have consumed the products in each educational establishment and the quantities of products distributed to them, by type of product.

To qualify for support, following the implementation of a food distribution measure, applicants shall submit to the Agency through the Market Regulatory Measures Management Information System:

- payment application (separately for fruit and vegetables and dairy products distributed).
- justification of the price of the products delivered to the educational establishment - extracts from VAT invoices.
- a note explaining why NPCs were provided instead of organic products.
- a register containing the names and addresses of the educational institutions to which the products are supplied, the number of children who have consumed the products in each educational institution and the quantities of products distributed to them by type.

Based on these documents and data provided by the Agency, the National Paying Agency (hereinafter referred to as the NPA) orders the support funds and makes payments to the applicants in accordance with the identified eligible costs.

The product distribution facility reimburses applicants for expenditure based on invoiced payment claims. If the price of the applicant's product exceeds the price determined based on the methodology, the difference shall be borne by the applicant. The applicant shall submit a payment claim, with a price justification (invoice), via the Market Regulatory Measures Management Information System. At the same time, a certificate shall be provided explaining why organic products (if any) have not been provided instead of NPC. In accordance with the instructions of the Strategy, NPCs shall be provided in the absence of the possibility to provide organic products.


Figure 74. Intervention logic for the implementation of the product distribution measure
Source: prepared by the Consultant

The implementation of public information and education measures is carried out by economic operators selected through public procurement procedures. Educational measures may also be carried out by educational institutions. For both measures, public procurement is carried out by the Agency.

After the implementation of the education and publicly measures, applicants shall submit a report on the implementation of the measures carried out, a VAT invoice or an invoice for the service(s) rendered, and a sample of the information material or pictorial evidence of the event. The costs of implementing the educational measures and public information measures, excluding VAT, shall be covered by the European Agricultural Guarantee Fund.


Figure 75. Intervention logic for the implementation of education and information measures
Source: prepared by the Consultant
SYSTEM FOR DETERMINING SUPPORT FOR DISTRIbUTED PRODUCTS. The amount of the aid for fruit and vegetables is determined in accordance with the method of determination described by the Rules. According to this methodology, the amount of aid for the distribution of apples, pears and carrots shall be equal to the average farm-gate price from Lithuanian producers during the period from September of the previous year to June of the current year. This increase is 2,8 times for organic products and 2,3 times for NPC. The buying price is determined based on the monthly reports on buying of vegetables, mushrooms, potatoes, fruit, and berries from Lithuanian producers. It is worth underlining that, compared to the older versions of the rules, the multipliers for 2020 were 3,3 times and 2,8. times respectively.

The amount of aid for juice distributed for the following school year shall be determined based on the prices calculated in accordance with the methodology of the Statistical Survey of Retail Prices of Agricultural Products and Groceries in Chain Stores, or, if no such prices are available, based on a survey of juice producers. If only the price of NPC juice is known from the data provided, the price of organic juice shall be determined by increasing the price of NPC juice by $20 \%$, and if only the price of organic juice is known, the price of NPC juice shall be determined by reducing the price of organic juice by $20 \%$.

For the calculation of the amount of aid for the distribution of organic milk and organic dairy products (kefir, yoghurt, fresh cheese, cottage cheese), the monthly reports on the production and sale of milk and other products shall be used; for matured semi-hard and hard cheese, the monthly reports on the sale of products shall be used ${ }^{14}$.

From 2017-2018 to 2022-2023, there is a trend increase in support. During this period, support for organic apples, pears and carrots grew by $44 \%, 51 \%$ and $50 \%$ respectively, while support for organic juices grew by $54 \%$. Support for heat-treated milk grew at a slower rate of $14 \%$ over the analysed period. The increase in support was recorded despite the reduction in the multiplier for fruit and vegetables (see table below).

[^10]Table 11. The amount of financial support for the presented products, 2017-2023

| Distinguishing features of the products | Amount of aid, excluding VAT, Eur per $1 \mathrm{~kg} / \mathrm{l}$ |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2017-2018 | 2018-2019 | 2019-2020 | 2020-2021 | 2021-2022 | 2022-2023 |
| Apples (organic) | 1,12 | 1,24 | 1,33 | 1,12 | 1,23 | 1,62 |
| Apples (NPC) | 0,95 | 1,05 | 1,13 | 0,97 | 1,01 | 1,33 |
| Pears (organic) | 1,78 | 1,78 | 1,75 | 1,75 | 1,48 | 2,69 |
| Pears (NPC) | 1,51 | 1,51 | 1,48 | 1,48 | 1,27 | 2,21 |
| Carrots (organic) | 0,63 | 0,77 | 0,95 | 0,86 | 0,86 | 0,94 |
| Carrots (NPC) | 0,53 | 0,66 | 0,81 | 0,73 | 0,73 | 0,80 |
| Carrots cut into stick (organic) | - | - | - | 1,40 | 1,40 | 1,47 |
| Carrots cut into sticks (NPC) | - | - | - | 1,20 | 1,20 | 1,27 |
| Juice (organic) | 1,30 | 1,30 | 1,56 | 1,40 | 1,68 | 2,00 |
| Juice (NPC) | 1,05 | 1,05 | 1,26 | 1,15 | 1,40 | 1,60 |
| Heat-treated milk | 0,81 | 0,81 | 0,80 | 0,78 | 0,86 | 0,92 |
| Kefir, drinking yoghurt (without additives) | 1,00 | 1,09 | 0,66 | 0,79 | 0,90 | 1,04 |
| Yoghurt (without additives), 125 g each | 2,06 | 2,15 | 2,15 | 2,07 | 2,46 | 3,16 |
| Fresh cheese | 4,35 | 4,60 | 4,63 | 5,05 | 6,14 | 7,17 |
| Curd (without added sugar) | - | 3,56 | 3,58 | 3,46 | 3,99 | 4,72 |
| Matured semi-hard cheeses | 3,63 | 3,80 | 3,76 | 3,82 | 4,57 | 5,63 |
| Aged cheese | 7,67 | 8,08 | 8,50 | 8,49 | 9,24 | 9,11 |

Source: prepared by the Consultant
Distribution of products to children during the state of emergency in the country. The Interim Evaluation identified that the Programme did not define the mechanisms between suppliers and educational institutions during emergencies.

In response to the state of emergency and the report's observations, the Rules have been supplemented with clauses defining the actions of suppliers and educational institutions and the administrative/financial management of the strategy in a national emergency ${ }^{15,16}$. In the event of a state of emergency declared at national level and the suspension of the educational process in the institutions, the applicant may include perishable products (milk, kefir, yoghurt, cottage cheese, sliced carrots) in the request for payment for products distributed to children, which were already delivered after the suspension of the educational process, but not in time to distribute to children. During and emergency, an emergency event and quarantine, when educational institutions stop the process of organizing education for a period longer than 3 weeks, distribution of products to children educated remotely can be organized. The rules specify that a ration can be formed for children in remote education. Product rations may be provided to children every 30 calendar days, when remote education is continuously organised in the educational institution.

USE OF UNDISTRIBUTED PRODUCTS. The Interim Evaluation suggested for the distribution of perishable products. It was recommended that perishable products should not be written off and should be distributed to other target

[^11]groups. From 2020 onwards, products not distributed to children should be handed over to legal persons whose statutes provide for the collection of food aid and the provision of charity, in accordance with the Rules.

Respondents identified the problem of recording and predicting the number of pupils to whom products are distributed. Educational institutions identify that providing an exact, predictable number of children in an educational establishment is difficult and not always accurate. As this information is provided to the suppliers and the products arrive based on this information, situations arise where insufficient or too much product is delivered. It has been observed that if too many products are brought in, it is impossible or very difficult to return them from the establishment to the supplier.

DIfferences or synergies in the fruit/vegetable and dairy portions of the programme. When evaluating the Programme, from 2017 by combining the programs for the promotion of fruit consumption in educational institutions and the promotion of milk consumption in children's educational institutions, it was expected that this would help reduce the administrative burden for both application providers and administrative institutions. However, the funds are still distributed separately, and the different specificities of products lead to the fact that there is no need and opportunity for further combining the programmes in other aspects. Differences and similarities in handling dairy and fruit/vegetable products (see table below).

Table 12. Differences in administration and supply of milk and dairy products and fruit/vegetables

| Criteria | Milk and dairy products | Fruit and vegetable products/juice |
| :---: | :---: | :---: |
| Methodology for calculating support | the amount of support for milk and dairy products equal to the average selling price | the amount of aid equal to the average farmgate price of the vegetables/fruit plus a multiplier for the product type. |
| Criteria for applicants by product | suppliers of dairy products must be registered in the Register of Animal Food Business Operators with Veterinary Approval or the Register of Food Business Operators. <br> provide the Agency with documentation confirming that the dairy products they wish to supply to children comply with the requirements of the Strategy. <br> the dairy products must be included in the reference range. <br> the products must comply with the legal requirements for organic production of agricultural products and food. If organic products are not available, they may be supplied in accordance with the rules of the National Food Quality System (certified NQP). | the fruit and vegetables supplied must be packaged by the producers/growers in such a way that their contents cannot be altered. <br> the products must comply with the legal requirements for organic production of agricultural products and food. In the absence of organic products, they may be supplied in accordance with the rules of the National Food Quality System (NQP). |
| Documents to be submitted for payments | a payment request accompanied by a justification of the price of the products. extracts from registers. | a payment request accompanied by a justification of the price of the products (the VAT invoice must contain additional information on the products). <br> extracts from registers. <br> a certificate explaining why organic products have not been supplied (if such products have not been supplied). |

## Source: prepared by the Consultant

The merger of the Fruit and Vegetables Programme and the Milk and Milk Products Programme into one has not led to significant changes. Payment claims have been harmonised and common rules have entered into force. It is worth underlining that these changes have not had a significant impact on suppliers as most of them supply
only one type of products, i.e., only milk or dairy products or only fruit/vegetables. Only a small number of companies supply both dairy products and fruit/vegetables. However, the merging of the programmes has reduced the number of regulations governing them, harmonised the main provisions for their implementation and made the administration of the Programme easier.

Problems affecting the results of implementation of the programme and its measures in general education institutions. About 70\% of school representatives indicated that they did not encounter any difficulties during the implementation of the Program (see the figure below). On the other hand, $4.4 \%$ of respondents encountered obstacles when making payment requests. Some of them notice that sometimes there are errors in the invoices received from product suppliers and it is necessary to wait a long time for the errors to be corrected and new invoices to be generated. 6.6\% encountered administrative difficulties in submitting and/or completing reports. Some school representatives mentioned that filling out the reports takes a lot of time, and the data is not always accurate, because it is difficult to predict the exact number of students who will come to the school. Therefore, insufficient quantities of products are often produced, as educational institutions are asked to estimate the need for the quantity of products on the smaller side and cannot order more. To ensure that all children receive products during distribution, some institutions must distribute their own separately purchased products.

The school representatives also note that checking attendance is time-consuming, as the e-diary does not provide all the necessary summaries and the data must be collected by checking the attendance of the pupils in the ediary. The rules for the implementation of the Programme provide that the difference between the number of children recorded as consuming the products on the day of supply and the number of children recorded in the diary may be up to $3 \%$. This rule is introduced to allow the educational institutions to purchase a larger number of dairy products as a hedge, as the attendance rate varies constantly. As attendance cannot often be provided to suppliers on the same day, the quantity of products supplied often does not correspond to the actual number of children and educational institutions are often faced with a shortage of products rather than a surplus.

In the survey, $6,1 \%$ of respondents indicated that they face difficulties in dealing with suppliers. They reported that suppliers sometimes deliver fruit and vegetables that are not fresh and milk and dairy products that are past their sell-by date. In the case of milk and dairy products, respondents noted that the packaging is not of good quality (i.e., the bags leak liquid products). School representatives also note that sometimes suppliers are late in delivering orders and the actual number of products delivered does not match the documented number.
$13,8 \%$ of school representatives reported other difficulties. Many noted that milk arrives at the school in large packages (sometimes including juice), making it inconvenient to distribute and serve to pupils. Respondents felt that milk and yoghurt could be distributed in small packets, one portion per child, or disposable cups could be distributed with milk, or disposable spoons for yoghurt. Suppliers note that they can provide disposable cups and spoons with milk products to educational institutions, but this would not be environmentally friendly, and it has been agreed with most educational institutions that no utensils will be provided.

The questionnaire also showed that not all pupils like drinking milk but like eating yoghurt, but the quantity ordered must be the same for both products, which sometimes leads to the problem of excess milk. If the milk was rationed, it could be consumed later or taken home.

Some respondents indicated that they receive unpeeled and very large carrots, which require preparation for the pupils at the school, i.e., washing, peeling, and cutting, at no extra cost. On the other hand, finely sliced carrots lose their aesthetic appearance more quickly and are therefore not always eagerly eaten by pupils. They also spoil more quickly, and the school would like to see smaller portions of sliced carrots in smaller bags. This would make it easier to distribute them to the pupils and if they do not eat all the carrots, they can be used later. The school indicated that small portions of pre-packaged carrots could also be provided to pupils. If they do not eat them at the school, they could take them home.


Figure 76. Proportion of school representatives who encountered difficulties or obstacles in implementing the Programme ( $n=262$ ), \%

Source: prepared by the Consultant
Problems affecting the results of the implementation of the Programme and its measures in pre-school EDUCATIONAL INSTITUTIONS. The same questions as those asked of the representatives of general education institutions were also asked of the representatives of pre-school education institutions. Respondents were asked what difficulties they had encountered in implementing the Programme. About $82 \%$ of the kindergarten representatives indicated that they had not encountered any difficulties (see figure below). 1,1\% of the respondents encountered difficulties in submitting payment claims. $6,6 \%$ faced administrative difficulties in submitting and completing reports. Some of the nursery representatives interviewed indicated that the forms of the reports change frequently, which causes additional inconvenience in filling them in. They also point out that reports sometimes must be sent several times to different contact persons because the document (or documents) gets lost.

Like the school representatives, the kindergarten representatives pointed out that completing the reports is timeconsuming and the data is not always accurate, as it is difficult to predict the exact number of pupils who will come to the educational institution.
$4,9 \%$ of respondents indicated that they face difficulties in dealing with suppliers. They reported that suppliers sometimes deliver products that are not fresh (rotten, shrivelled, bruised) or expired. Milk and dairy products are provided in damaged or poor-quality packaging. The nursery also notes that suppliers are sometimes late in delivering orders and uncooperative over the phone or by letter. However, such cases are rare. The interviews revealed that all educational institutions (schools and kindergartens) know who they can contact for help, advice, or questions.
$6 \%$ of kindergarten representatives reported other difficulties. For example, they would like to see a wider variety of products in the nursery. They also indicated that they are unable to participate in the milk and milk products part of the Programme because the number of children in the nursery is not sufficient, i.e., the number of children on the list is 30 or less. Institutions with a registered number of children of 20 or less cannot participate in the fruit and vegetables part of the Programme even if they want to. Produce is not transported to such institutions.


Figure 77. Percentage of kindergarten representatives who encountered difficulties or obstacles in implementing the Programme ( $n=269$ ), \%

Source: prepared by the Consultant
In summary, the Programme has room for improvement, with most respondents pointing out that it is difficult to predict children's attendance, which sometimes results in shortages or surpluses of products. Problems with suppliers are also highlighted, as the products received are not always of good quality or safely transported. On the other hand, most educational institutions do not encounter any difficulties or obstacles, and if they have questions or need advice, they know where to turn. The implementation of the Programme can be considered effective.

IMPROVING THE IMPLEMENTATION SYSTEM AND ADMINISTRATION OF SHARED PRODUCTS. When school representatives were asked what they would suggest improving or change in the Programme to make it effective in encouraging students to increase their consumption of health products, most of them indicated that the range of fruit should be increased ( $68,7 \%$ ) (see figure below). Respondents indicated that the Programme could include berries (plums, grapes, blueberries, etc.), watermelons and dried fruit. Some indicated exotic fruits that could be added to the range from time to time, such as bananas, kiwifruit, citrus fruits (oranges, tangerines) and nectarines. Fruit purees were also mentioned as an alternative to fruit by some school representatives. Parents of pupils also share this view and have expressed a desire to extend the range of products distributed.

Half of the respondents (50,6\%) also indicated that it is important to increase the range of dairy products. School representatives indicated that the Programme could include cottage cheese, cottage cheese with additives, provide a wider variety of cheeses (Pik-Nik cheese sticks, Džiugo cheese, cheese with additives (fruit, vegetables, honey, etc.). They also pointed out that not all pupils can consume products with lactose and that it would be worth adding lactose-free products to the list of dairy products. This view is also shared by the parents of pupils and the range of milk and milk products could be extended to include products of plant origin or lactose-free products.
$36,8 \%$ of respondents indicated that the range of vegetables should be increased and enriched with other goodies from Lithuanian farmers, such as cucumbers, tomatoes, beetroot, radishes, and others. 30,2\% of the school representatives also indicated that a wider variety of juices should be provided.


Figure 78. Aspects of the Programme to be improved to help encourage pupils to increase their consumption of healthy foods ( $n=262$ ), \%

Source: prepared by the Consultant
It was found that $9,9 \%$ of respondents chose the multiple answer options of increasing the range of fruit and increasing the range of dairy products. $6,6 \%$ chose the following options: increasing the range of vegetables, increasing the range of fruit, and increasing the range of dairy products. And $4,4 \%$ chose: increasing the range of vegetables, increasing the range of fruit, increasing the range of dairy products, and increasing the frequency of education and distribution of educational material.

A fifth of the school representatives stated that the Programme is effective and that no changes are needed, but others felt that the range of fruit and dairy products should be increased, as children get tired of eating the same products.

In summary, $73,5 \%$ of school representatives indicated that the Programme has made a significant contribution to the development of healthy eating habits among pupils, while a quarter considered the Programme to be effective, but with a very limited contribution to the development of healthy eating habits (see figure below). $90 \%$ of the respondents indicated that the Programme is useful and should be continued in the future, with as many as $49,7 \%$ of them considering the Programme very useful. $9,4 \%$ of respondents gave a neutral assessment of the Programme, considering that it is only partly useful and that its continuation or discontinuation would not make a significant difference to the development of healthy eating habits among students.

Does the Programme have a significant impact on contributing to the development of healthy eating habits among pupils?

Is the Programme useful and should it be continued in the future?


■ Very useful, the Programme should be continued

- Useful, the

Programme should be continued

- Somewhat useful,
the Programme could be continued or discontinued
- Unuseful, the Programme should not be continued

Figure 79. Proportion of school representatives indicating that the Programme is important in contributing to students' healthy eating habits (left) and proportion of school representatives indicating that the Programme is useful and should be continued (right), \%

Source: prepared by the Consultant
Kindergarten representatives were also asked what they would suggest improving or change in the Programme to make it effective in encouraging children to consume more healthy products, and most of the respondents indicated that the range of fruit should be increased (59,9\%)(see figure below). Respondents indicated that the Programme could include berries (plums, grapes, blueberries, strawberries, etc.), watermelons and melons. Some indicated exotic fruits that could be added to the range, such as bananas and citrus fruits (oranges, mandarins).
$37,2 \%$ of respondents indicated that increasing the range of dairy products is important. Dessert cottage cheese and cheeses without chocolate coating can be included in the Programme. A third of the nursery representatives indicated that the range of vegetables should be increased $(34,9 \%)$. According to the kindergarten representatives, tomatoes, cucumbers, peppers, radishes, turnips, kohlrabi, or other seasonal vegetables could be included in the Programme. Dried vegetables or nuts could also be added to the range of vegetables.


Figure 80. Aspects of the Programme that could be improved to increase children's consumption of healthy foods ( $n=269$ ), \%
Source: prepared by the Consultant

It was found that $11 \%$ of respondents chose multiple answer options - increasing the range of vegetables, increasing the range of fruit, increasing the range of fruit and/or vegetable juices and increasing the range of dairy products. $5,5 \%$ chose the following answers: increasing the range of vegetables, increasing the range of fruit, increasing the range of dairy products. Just under a fifth $(23,1 \%)$ chose only one answer: the Programme is effective, and no improvements are needed.

85,7\% of kindergarten representatives indicated that the Programme has made a significant contribution to children's healthy eating habits. $13,7 \%$ of the surveyed representatives considered the Programme to be effective, but for a very limited period (see figure below). $94,5 \%$ of the respondents indicated that the Programme is useful and should be continued in the future, of which $61,5 \%$ consider it very useful. $4,9 \%$ of the respondents gave a neutral assessment of the Programme, considering that the Programme is only partly useful and that its continuation or discontinuation would not make a significant difference to children's healthy eating habits.


Figure 81. Proportion of kindergarten representatives who indicated that the Programme is important in contributing to children's healthy eating habits (left) and proportion of kindergarten representatives who indicated that the Programme is useful and should be continued ( $n=269$ ), \%

Source: prepared by the Consultant
Summarising the results of the questionnaires from both school and kindergarten representatives, both sides are satisfied with the implementation of the Programme. They consider the Programme to be effective in contributing to the development of healthy eating habits among pupils and children. The parents' survey also showed that the Programme helps them to develop healthy eating habits. Although all parents are positive about the Programme, they do not tend to notice significant changes in diet/nutrition. However, both teachers, kindergarten representatives and parents would like to see the Programme continue in the future. To make it even more attractive, the list of products provided could be enriched with a wider variety of fruit, vegetables, and dairy products. Children with allergies who cannot consume certain products should also be considered and given the possibility to choose other products.

# 9.Assessment of the actual involvement of public authorities and stakeholders in the planning, implementation, monitoring, and evaluation of the Programme 

This section assesses the involvement of actual authorities and other stakeholders in the Programme. The Ministry of Agriculture (MA) (liet. Lietuvos Respublikos Žemés ūkio ministerija), the Agency (liet. Kaimo verslo ir rinkos plètros agentūra), the NPA (liet. Nacionaliné mokejjimo agentūra), the State Food and Veterinary Service (SFVO) (liet. Valstybine maisto ir veterinarijos tarnyba), the Ministry of Health (MH) (liet. Lietuvos Respublikos Sveikatos apsaugos ministerija) and the Ministry of Education, Science and Sport (MESS) (liet. Lietuvos Respublikos Švietimo, mokslo ir sporto ministerija) are involved in the planning, implementation, monitoring and evaluation of the Programme (see table below).

Table 13. Responsibilities of public authorities in implementing the Programme


Source: prepared by the Consultant based on reports to be submitted to the European Commission between 2021 and 2021
Based on the information provided in the EC reports and on the responsibilities set out in the Strategy and the Rules, the MA is involved in all phases of the Programme: the development of the Programme Strategy, the development of the Rules and the review of the annual monitoring reports. They are prepared by the Agency. It is also responsible for the implementation of the Programme, the evaluation of applications and all other administrative functions, such as the preparation of documentation forms, the collection of statistical information, methodological material, and tools, reporting and execution of EC and other related functions. MH makes recommendations on eligible products under the Programme and participates in the Monitoring Commission. The MESS makes recommendations on educational measures and participates in the supervisory commission. The NPA is involved as financial manager of the Programme. The NPA is responsible for disbursements and accounting of disbursed funds. The SFVO ensures the control of the quality and composition of the products in accordance with the requirements of the Programme (see figure below).


Figure 82. Responsibilities and roles of the institutions involved in the implementation of the Strategy
Source: prepared by the Consultant

The implementation of the Strategy shall be monitored and decided by the Implementation Monitoring Commission (hereinafter referred to as the Commission). The Commission is composed of representatives of the following institutions: MA, MESS, MH, Agency, SFVO, Lithuanian Vegetable Growers' Association, Lithuanian Dairy Farmers' Association, 'Viva Sol', 'Fruit and Berries'. The inclusion of associations representing dairy, fruit and vegetable suppliers contributes to a comprehensive reflection of interests. This allows the Commission to assess the problems of not only the educational institutions but also the supply chains in the context of the Strategy, and to find solutions based on mutual understanding. The main functions of the Commission are:

- make proposals to the Minister for Agriculture for improving the Strategy.
- make recommendations to the Minister for Agriculture on the range of fruit and vegetables and milk and milk products to be distributed and on the information and education measures to be applied in implementing the Strategy.
- to make recommendations to the Minister for Agriculture on the funding requirements for each academic year for the implementation of the measures set out in the Strategy.
- analyse the annual monitoring and evaluation reports on the Strategy.
- address issues of concern in the implementation of the Strategy.

Given that one of the functions of the Commission is to assess and make recommendations on the need for funds, the involvement of the NPA in this group would be relevant.

## 10. Answers to Programme evaluation questions

The evaluation of the implementation of the Strategy sought to answer two key evaluation questions:

1. assess the achievement of the objectives and targets set out in the Strategy, covering the following elements: (a) effectiveness, (b) efficiency, (c) relevance, (d) coherence, and (e) assessment of EU added value. The evaluation of these elements shall aim to assess the results of the implementation of the Strategy, in accordance with the Programme indicators set out in point 39 of the Strategy; to analyse the results achieved in relation to the planned results; to assess the effectiveness and efficiency of the implementation of each measure of the Programme; to analyse the implementation procedures (administrative system) of the Programme, and to evaluate the financial implementation.
2. assess the impact (weight) of the distribution of fruit and vegetables and milk and dairy products under the Programme on children's recommended daily intakes of nutrients and energy.
3. assess the level of wastage (product loss) of products distributed under the Programme.
4. analyse the problems encountered in implementing the Programme.

The answers to the evaluation questions are summarised below.

### 10.1. The first question of evaluation of the Programme

Effectiveness. To determine the effectiveness of the Programme, an assessment must be made of whether the objectives set, and the intended results have been achieved. The objective of the Strategy is to increase the share of fruit and vegetables and milk and milk products in children's diets and to raise children's awareness of the health benefits of fruit and vegetables and milk and milk products. The objectives of this objective are to increase the consumption of fruit and vegetables by children in educational institutions; to increase children's awareness of the benefits of fruit and vegetables and of milk and milk products and of healthy eating. The objective and targets set are in line with the general evaluation questions and corresponding indicators set out in the European Commission's Guidelines for the evaluation of the implementation of the Programme to promote the consumption of fruit and vegetables and milk and milk products in children's institutions.

Impact, result, and productivity indicators are used to monitor and evaluate the achievement of the objective and target to increase the consumption of fruit and vegetables by children in educational institutions. The evaluation of the achievement of these indicators is discussed in the table below.

Table 14. Evaluation of the impact, result and productivity indicators set out in the Strategy

| Indicators to monitor the objectives and targets | Evaluation |
| :---: | :---: |
| Impact |  |
| aim that 70\% of children attending childcare facilities to consume fruit and vegetables several times a day | $83,6 \%$ of pupils eat fruit at least several times a day and $80.5 \%$ eat vegetables at least several times a day. <br> $100 \%$ of children in pre-primary education eat at least 3 portions of vegetables and at least 1 portion of fruit every day (according to the requirements set out in the Order). <br> the impact indicator set out in the Strategy is partially achieved. |
| aim that $85 \%$ of children attending childcare facilities should consume milk and milk products several times a day, every day | $32,6 \%$ of pupils consume milk and dairy products at least 2 times a day. $100 \%$ of children in pre-school institutions receive 200 ml of milk daily (in accordance with the requirements laid down in the Order). <br> the impact indicator set out in the Strategy has not been achieved. |
| Result |  |
| proportion of children enrolled in the Programme compared to the total number of children eligible for the Programme | on average, $91 \%$ of eligible children participate in the fruit and vegetable part of the Programme each year. <br> on average, $94 \%$ of eligible children participate in the dairy part of the Programme each year. |

- the number of children participating in the fruit and vegetables part of the Programme has remained stable when comparing the years 2017-2018 and 2021-2022.
- the number of children enrolled in the milk and milk products part of the Programme decreased by 2 percentage points between 2017-2018 and 2021-2022. The change is due to an increase in the total number of children, while the number of children participating in the Programme has changed only slightly (difference of 123 children).
the proportion of schools participating in the Programme compared to the total number of schools eligible for the Programme
- on average, $83 \%$ of eligible educational institutions participate in the fruit and vegetable part of the Programme each year.
- on average, $86 \%$ of eligible educational institutions participate in the milk and milk products part of the Programme each year.
- the percentage of educational institutions participating in the fruit and vegetables part of the Programme has not changed between 2017-2018 and 2021-2022.
- the percentage of educational institutions participating in the milk and milk products part of the Programme increased by 4 percentage points between 2017-2018 and 2021 $=2022$.
the proportion of children participating in educational activities compared to all children eligible for the Programme
- between 2017 and $2020,94 \%$ of all children who could participate in these educational activities took part. The quarantine meant that education was delivered remotely, which meant that all educational tools had to be adapted to work remotely. In total, $1 \%$ of all children who could participate in the educational activities of the Programme participated in the educational activities that year.
- for the period 2021-2022, it is not possible to determine the exact number of children who took part in the educational activities, as many of the activities were carried out remotely, and therefore classes and educational institutions were recorded rather than individuals. Parents were also involved in some activities.
Productivity
number of children participating in the Programme
number of educational institutions participating in the Programme
- on average, 233,000 children participate in at least one part of the Programme each year: 93-99\% of school-age children and 81-99\% of preschool and/or pre-primary school children.
- comparing 2017-2018 and 2021-2022, the number of children participating in the fruit and vegetables part of the Programme has increased by 4,000.
- the number of children enrolled in the milk and milk products part of the Programme has not changed between 2017-2018 and 2021-2022.
- on average, more than 1,400 institutions, or $84 \%$ of all institutions in Lithuania that could participate in the Programme (i.e., pre-primary, and primary education), take part in at least one part of the Programme each year.
- comparing 2017-2018 and 2021-2022, the number of educational institutions participating in at least one part of the Programme is decreasing each year. This is due to the restructuring of the school network, which involves merging and/or abolishing institutions with a shortage of pupils.
- in 2017-2022, the following were distributed free of charge to children: 19 tonnes of pears, 4982 tonnes of apples, 286 tonnes of carrots, 940,000 litres of juice, 6218,000 litres of milk, 53 tonnes of fermented cheese, 152 tonnes of fresh cheese, 239 tonnes of yoghurt with no additives and 1973 tonnes of yoghurt with additives.
- the quantities of products distributed free of charge during the period 2017-2022 remained similar for all academic years of the period considered. The quantity of carrots distributed has increased, due to the requirement in the Programme Strategy to distribute carrots ready for consumption (washed, peeled, cut). The quantity of yoghurt without additives has also decreased, due to the taste, i.e., children do not like and do not eat this product, and the increased cost of the product.
- the average number of apples per child in 2021-2022 was $4,3 \mathrm{~kg}, 15 \mathrm{~g}$ of pears, $1,2 \mathrm{~kg}$ of carrots, 0,8 litres of juice, 6,2 litres of milk, 49 g of fermented cheese, 145 g of fresh cheese and $1,4 \mathrm{~kg}$ of yoghurt (both with and without added ingredients).
- the average quantity of apples per child decreased by $0,3 \mathrm{~kg}$ between 20172018 and 2021-2022, pears increased by 14 g , carrots by almost $1,2 \mathrm{~kg}$ and juice remained stable.
- the average amount of milk per child increased by 0,9 litres between 20172018 and 2021-2022, cheese (fermented/ripened) increased by 13 g , while cheese (fresh) decreased by only $0,001 \mathrm{~kg}$ and yoghurt (with and without additives) decreased by $2,1 \mathrm{~kg}$.
number of children participating in educational activities
- on average, 234,000 of all children who could have participated in these educational activities took part in the 2017-2020 period. During the quarantine period, education was delivered remotely, resulting in the participation of 2,000 of the total number of children who could have participated in the Programme's education activities.
- during the period 2021-2022, various educational activities were carried out both in person (in educational institutions) and remotely. In total, more than 1,234 classes of primary school children, around 1,200 educational institutions, between 5,000 and 20,000 children and parents/guardians (based on the number of remote participants) took part. Educational material was also distributed to 815 institutions.
- between 2017 and 2022, a total of $€ 20$ million was spent on the distribution of products under the Programme, of which $51 \%$ was EU funding and $49 \%$ was national funding.
- between 2017-2018 and 2021-2022, the amount of funds spent under the Programme decreased by 20 percentage points or $€ 0,96$ million.
- the milk part of the Programme was more heavily financed than the fruit and vegetables part of the Programme in the period 2017-2022.
- the total amount of money spent on education measures in 2017-2022 is $€ 432,3$ thousand ( $€ 363,7$ thousand in EU funding and $€ 68,6$ thousand in national funding).
- comparing 2017-2018 and 2021-2022, the funds spent on education measures decreased by $€ 40,69$ thousand or $42 \%$.

Source: prepared by the Consultant

Another objective is to raise children's awareness of the benefits of consuming fruit and vegetables and milk and dairy products and eating a healthy diet.

A comparison of the 2019-2020 and 2022-2023 questionnaire surveys shows that the two generations of pupils identify fruit and vegetables in very similar ways. $90 \%$ of pupils correctly identified the fruit given to them. On the other hand, knowledge of vegetables showed an improving trend. More and more pupils correctly identified avocado ( 6,9 percentage points more pupils correctly identified it) and aubergine ( 2,7 percentage points more pupils correctly identified it). Thus, pupils' ability to identify foods is improving.

The number of pupils who understand what organic products are increases accordingly. Comparing the results of the 2019-2020 and 2022-2023 surveys, the number of pupils who understand has increased by about 6 percentage points. Thus, the educational programmes in educational institutions are paying off and students are gaining new knowledge.

It also shows that more than $90 \%$ of pupils understand how milk and cheese are made. However, it was found that their understanding of how milk is made decreased by 3 percentage points, while their understanding of how cheese is made remained unchanged. The lower knowledge of pupils was attributed to the quarantine of distance education, which made it more difficult for pupils to absorb the information, and the use of educational tools was reduced or limited (e.g., no more farm tours).

Efficiency. To determine the effectiveness of the Programme, it must be assessed whether it achieves the best value for money between the resources used and the results achieved. The funding spent per child (including funding spent on products, education, and information) was found to have decreased from 2017 to 2018, but the result achieved was very similar in terms of the number of children enrolled in the Programme. Therefore, the effectiveness of the Programme is increasing.

Table 15. Resources used and funding per child to implement the Programme

| Years | Number of children participating in the Programme | Financing of the fruit vegetables and milk and dairy products programmes, million euro | Funding of educational measures, thousands of euros | Funding for communication and information measures, thousands of euros | Total spent, million euro | Fundsing spent per child, €/child |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2017-2018 | 230144 | 4,83 | 96,79 | 7,2 | 4,9 | 21,4 |
| 2018-2019 | 244806 | 4,67 | 54,6 | 17,2 | 4,7 | 19,4 |
| 2019-2020 | 237940 | 3,56 | 108,87 | 92,8 | 3,8 | 15,8 |
| 2020-2021 | 222286 | 3,30 | 115,93 | 57,4 | 3,5 | 15,6 |
| 2021-2022 | 230267 | 3,87 | 56,11 | 41,8 | 4 | 17,2 |

Source: prepared by the Consultant

Relevancy. To determine the eligibility of the Programme, it must be assessed whether it responds to the needs identified (the objectives are appropriate to the needs and problems identified). The main problems that the Programme seeks to address are the negative socio-economic consequences of malnutrition and the declining consumption of dairy products and the declining market for dairy products. Three types of measures have been taken: distribution of fruit, vegetables and milk and milk products in pre-school and primary schools; a range of educational measures; and public information on the Programme and its objectives.

Around 233,000 children take part in the Programme each year, or $91-94 \%$ of those eligible. On average, they receive a free portion of fruit, vegetables, milk, or another dairy product 2-3 times a week. Thus, a child receives $4,3 \mathrm{~kg}$ of apples, 15 g of pears, $1,2 \mathrm{~kg}$ of carrots, 0,8 litres of juice, 6,2 litres of milk, 49 g of fermented cheese, 145 g of fresh cheese and $1,4 \mathrm{~kg}$ of yoghurt (both with and without additives) per year. These products contribute to children's overall consumption of products and have also encouraged them to like and consume them more frequently outside the educational establishment. Increased consumption of these products enriches the diet and at the same time reduces the negative socio-economic consequences of malnutrition (e.g., obesity).

Increasing numbers of children are eating more fruit and vegetables and milk and milk products. For example, in 2019-2020, $22 \%$ of children ate at least 5 portions of fruit or vegetables (not including juice) per day, while $23 \%$ ate 2-3 portions of milk or dairy products. In 2022-2023, $31 \%$ of children ate at least 5 portions of fruit or vegetables (not including juice) per day and $34 \%$ ate at least 2-3 portions of milk or dairy products. Thus, the share of pupils consuming 5 or more portions of fruit and vegetables has increased by 9 percentage points, while the share of pupils consuming 2-3 or more portions of milk and milk products has increased by 11 percentage points.

The implementation of the Programme is particularly important to increase the consumption of milk and milk products, as most pupils consume only 1 portion of these products every day. Therefore, the distribution of milk and milk products in educational institutions increases the overall consumption of these products and promotes good consumption habits. Meanwhile, pre-school children participating in the Programme consume at least 1 portion of milk ( 200 ml ) in the educational establishment in accordance with the requirements for menu planning. Therefore, the additional distribution of milk and milk products leads to an increase in the consumption of these products. This also contributes directly to halting the decline of the dairy market.
$83 \%$ to $86 \%$, or more than 1,440 educational institutions, have implemented educational measures. On average, 230,000 took part in various educational activities (excluding the quarantine period, when educational activities were remote or limited). This measure helped children to understand what a healthy diet is and why they should avoid products high in added sugars, salts, and fats. Children have taken a liking to eating carrots and drinking milk, sometimes even asking their parents to give them these products at home. Teachers and health professionals interviewed pointed out that children are increasingly choosing products based on their health benefits rather than their taste. This insight was confirmed by the results of the questionnaire survey, with around $47 \%$ of pupils indicating that they mostly choose fruit or vegetables for snacks. Similarly, $44 \%$ of pupils expressed a desire to eat more fruit, $33 \%$ more vegetables and $27 \%$ more milk or dairy products. Similar trends were found in the group of pre-school children.

Coherence. The coherence of the Programme must be assessed in terms of its performance in implementing its main components and in linking it to other EU policies or activities. The Programme has been designed to integrate the objectives of EU health policy into the EU CAP. At the highest EU policy level, the Programme aims to contribute to Europe 2020. The implementation of the strategy for smart, sustainable, and inclusive growth. It contributes to promoting the development of more sustainable and greener farms, stabilising and promoting the internal agricultural market. As the overall consumption of milk and dairy products in the EU is declining, so are farmers' incomes, the intervention contributes to stabilising the incomes of agribusinesses, educating the public on healthy diets, and reducing the long-term socio-economic consequences that may arise from poor nutrition in the population. The aim is to promote healthy eating habits from an early age, and the target group is therefore pre-school and primary school children.

The Programme is on a sponsorship basis, so participation is not compulsory, but all educational institutions can participate. Educational institutions and suppliers that meet the product requirements and wish to participate in the Programme can apply to the Agency and fill in an application form. The implementation of the Programme is going smoothly, and most educational institutions do not encounter any difficulties and, if they do, they know where to turn and who will help them. The merging of the two programmes (fruit and vegetables and milk and milk products) into one has considerably reduced the administrative burden as the Programme is subject to the same rules, regulations, and legislation. A new system (the Market Regulatory Measures Management Information System) has also been set up, which simplifies the payment process (no more handwritten entries, the information reaches its destination faster). There are also fewer and fewer irregularities related to physical and actual discrepancies between the number of children and the quality of products.

Over the period from 2017 to 2022, the Programme has made it easier to organise educational activities, and schools and children are keen to get involved. The experience gained during the quarantine in organising activities remotely is being used after the quarantine. Virtual lessons, virtual farm tours, quizzes and other tools have been successfully continued in 2021-2022 and 2022-2023. Virtual tools encourage the involvement not only of children but also of their parents/guardians, increasing the opportunities for involvement.

EU Value. The Programme is implemented in both kindergartens and schools (grades 1-4), so that children (and pupils) are introduced to fruit, vegetables, milk and dairy products and their health benefits from an early age. Children who have been educated in kindergarten go on to school. Children who did not attend kindergarten could learn about healthy eating together with their parents/guardians by visiting the Programme's website, which is full of videos, and by listening to radio programmes. The Programme produces educational material that is available to both educational institutions and parents. The use of products distributed in educational institutions, education and information tools contribute to promoting the consumption of these products and help children to understand that fruit, vegetables, milk, and dairy products have a positive impact on their health. By the end of primary school, children have a basic knowledge that they can put into practice when choosing their meals and snacks. The Programme is nationwide and open to all institutions (without restrictions or criteria for institutions), so it has a very wide coverage and provides the same opportunities for all children attending educational institutions to participate.

### 10.2. The second Programme evaluation question

The evaluation aimed to assess the impact (weight) of the distribution of fruit and vegetables and milk and dairy products under the Programme on children's recommended daily intakes of nutrients and energy. The recommended daily nutrient and energy intakes for children are set out in the Recommended Daily Nutrient and Energy Intake approved by Order No. 510 of the Minister of Health of the Republic of Lithuania of 25 November 1999 (wording of Order No. V-836 of the Minister of Health of the Republic of Lithuania of 23 June 2016) (hereinafter referred to as the Recommended Daily Nutrient and Energy Intake).

The impact of the distribution of fruit and vegetables and milk and milk products under the Programme on the energy intake has been calculated based on the average quantity of products per child per year as defined in this Assessment. The table below shows the average energy intake per child in the Programme per year and per day.

Table 16. Annual energy value of the products distributed under the Programme

| Product | Average annual per-child intake (20212022), kg | Energy value, $\mathrm{kcal} / 100 \mathrm{~g}$ or 100 ml | Energy value, kcal |
| :---: | :---: | :---: | :---: |
| Apples, kg | 4,2 | 53 | 2226 |
| Pears, kg | 0,015 | 52 | 7,8 |
| Carrots, kg | 1,2 | 31 | 372 |
| Cheese ${ }^{17}$, kg | 1,4 | 295 | 4130 |
| Milk, I | 6,2 | 44 | 2728 |
| Yoghurt, kg | 0,2 | 52 | 104 |
| Juice, I | 0,8 | 44 | 352 |
| The total annual average energy yield of the products distributed under the Programme |  |  | 9920 |
| The total energy intake of the products distributed under the Programme is averaged over a day (calculated as 365 days per year): |  |  | 27 |

Source: prepared by the Consultant based on the Recommended Daily Allowances for Nutrients and Energy

The table below shows that the energy intake varies according to the age group of the children, so that the older the children are, the less the Programme contributes to meeting the daily energy intake (average quantity per child).

Table 17. Average daily energy intake from products obtained under the Programme

| Age group of children | Daily ernergy intake, kcal | Average daily energty intake covered by the products under <br> the Programme |
| :--- | :--- | :--- |
| $1-3$ years-old | 1200 | $2,3 \%$ |
| $4-6$ years-old | 1500 | $1,8 \%$ |
| $7-10$ years-old | 1700 | $1,6 \%$ |

Source: prepared by the Consultant based on the Recommended Daily Allowances of Nutrients and Energy

The impact of the distribution of fruit and vegetables and milk and milk products under the Programme on the nutrient intake has been calculated based on the average quantity of products per child per year as defined in this Assessment. The table below shows the average nutrient intake per child in the Programme per year and per day.

Table 18. Average daily nutrient intakes met by the products obtained under the Programme


[^12]| $7-10$ years-old | 1700 | $2,0 \%$ | $2,1 \%$ | $2,2 \%$ |
| :--- | :--- | :--- | :--- | :--- | :--- |

Source: prepared by the Consultant based on the Recommended Daily Allowances of Nutrients and Energy

Thus, on average, the products distributed under the Programme meet between 1,6\% and 2,3\% of the daily energy intake (depending on the age group of the children). In addition, the products distributed under the Programme contribute to the daily intake of nutrients: 2 to $3,8 \%$ of protein, 1,2 to $1,7 \%$ of carbohydrates and 2,1 to $2,5 \%$ of fat.

### 10.3. The third Programme evaluation question

The evaluation aims to assess the level of wastage (product loss) of products distributed under the Programme.
Most of the products distributed by the Programme are eaten by children: $96 \%$ of apples, $91 \%$ of pears, $93 \%$ of carrots, $96 \%$ of milk, $89 \%$ of yoghurt, cottage cheese and $75 \%$ of kefir. Children are more likely to eat fruit and vegetables than dairy products. It has been found that pupils in grades 1-4 tend to leave more food uneaten than pre-school children.

If children are unable or unwilling to eat the products distributed to them in the educational establishment, they are allowed to take the product(s) home. In some educational institutions, there is a place where the community can pick up unconsumed products. In addition, educational institutions often store surplus products and use the surplus for the next time they order less. In this context, there is little or no unconsumed produce in educational institutions.

However, there are times when products must be disposed of. Milk and dairy products are more often disposed of than fruit and vegetables. Around $13 \%$ of milk not consumed in schools is recycled, $8 \%$ of yoghurt, $12 \%$ of cottage cheese and $13 \%$ of kefir. Fruit and vegetables are recycled to a lesser extent: around $8 \%$ of unconsumed apples and pears and $10 \%$ of unconsumed carrots. The remaining unconsumed products are distributed to the home, to community members, or are stored for redistribution.

The number of unused products in kindergartens is sometimes higher because pre-school children are sick more often and it is difficult for kindergarten officials to predict the actual number of children on the day the Programme will distribute products. As in schools, milk and dairy products are more frequently disposed of than fruit and vegetables in kindergartens. Around 43\% of unconsumed milk is recycled, $31 \%$ of yoghurt, $53 \%$ of cottage cheese and $57 \%$ of kefir. Fruit and vegetables are less likely to be recycled: about $24 \%$ of unconsumed apples, $32 \%$ of unconsumed pears and carrots. The remaining unconsumed products are distributed to the home, to community members, or stored for redistribution.

### 10.4. The fourth Programme evaluation question

The evaluation sought to analyse the problems encountered in implementing the Programme. Around 70\% of the representatives of general education institutions and around $82 \%$ of the representatives of pre-school institutions indicated that they had not encountered any difficulties in implementing the Programme.

The evaluation has identified the following main problems (which, it should be stressed, are not frequent) in the implementation of the Programme:

- administration-related:
- there are difficulties in providing a forecast of the number of children in the establishment, and the margin of error between the actual number of children and the number of products ordered may not be more than $3 \%$, which is insufficient to cover shortfalls.
- There is no additional remuneration for administering the Programme in educational institutions.
- supply-related:
- errors in invoices from providers take a long time to correct and lead to communication difficulties.
- deliveries of non-fresh fruit and vegetables and expired milk and milk products.
- milk and dairy products are packaged poorly, resulting in torn and damaged packages.
- suppliers sometimes deliver orders late and the actual number of products delivered does not correspond to the documented number.
- milk arrives at educational institutions in large packages (sometimes including juice), which makes it inconvenient to divide it into portions and serve it to pupils, leading to the problem of surplus milk.
- in cases where educational institutions receive unpeeled and very large carrots, the establishment must prepare the carrots additionally for the pupils, i.e., wash, peel and cut them; the cut carrots are supplied in large bags, which makes it more difficult to distribute them, and it is no longer possible to store the carrots if the whole quantity is not consumed.
- difficult communication with some suppliers due to lack of response to emails and telephone communication.
- educational institutions with few children cannot participate in the Programme (there are no legal restrictions).
- product-related:
- not all educational institutions have adequate facilities for storing products for longer periods of time (i.e., no fridges or other physical space).
- a small range of fruit and vegetables and milk and dairy products, not all products are liked and eagerly eaten by children.
- not all pupils are able to consume milk and milk products due to health problems.
- related to the evaluation of the implementation of the Strategy:
- the only indicators used to measure progress in implementing the Strategy, and for which targets are set, are impact indicators. The Strategy did not set numerical targets for the outcome and productivity indicators, making it difficult to assess the progress of the Programme in aspects other than impact.


## 11. Conclusions and recommendations

| Problem identified |  | Recommendation(s) |  |
| :---: | :---: | :---: | :---: |
| In educational institu administer/curate the remunerated for their wo | utions, the staff who Programme are not rk. | Consider introducing a technical assistanc additional work in educational institution implementation and administration of the set a limit on the maximum reimburseme costs of the Programme. | or similar measure to pay for for those responsible for the Programme. It is important to $t$ that can be included in the |
| Meaning | Implementation period | Expected result | Reference in the report |
| Medium | From 2023-2024 | Staff in educational institutions responsible for implementing the Programme will have a greater stake in its proper implementation and impact. | Chapter 8. Evaluation of the conditions and procedures for the implementation of the Programme |


| Problem identified |  | Recommendation(s) |
| :--- | :--- | :--- | :--- |


| Problem identified |  | Recommendation(s) |  |
| :---: | :---: | :---: | :---: |
| Educational institu number of childre allergies), are un products or certai are left without an | re seeing an increase in the for health reasons (such as consume milk or dairy vegetables. Such children ucts. | It is recommended to consider children w eat the products currently distributed und them with an alternative. For example, re with plant origin drinks and products. The enriched with a variety of fruit and vegeta | o, for health reasons, do not the Programme and provide acing milk and milk products Programme should also be les. |
| Meaning | Implementation period | Expected result | Reference in the report |
| Medium | From 2023-2024 | A wider range of products will help to ensure that children who are unable to consume certain products are able to participate in the Programme and have access to products that are suitable for them. | Chapter 8. Evaluation of the conditions and procedures for the implementation of the Programme |

## Problem identified

The Programme has a small range of fruit (apples and pears), vegetables (carrots), milk and dairy products, so children do not have the opportunity to choose an alternative to a product they do not eat.

| Meaning | Implementation <br> period |
| :---: | :---: |
| High | From 2023-2024 |

## Recommendation(s)

It is recommended that the Programme be enriched with berries (plums, grapes, or others), watermelon, dried fruit, or other fruits. It is recommended to add tomatoes, cucumbers, peppers, radishes, turnips, kohlrabi, or other seasonal vegetables to the range of vegetables. Dessert cottage cheese (i.e., cottage cheese with natural additives) and cheeses without chocolate coating should also be added to the Programme.
Educational institutions could choose products based on the preference of their educational institutions.

## Problem identified

The range of fruit and vegetables supplied by the scheme is also affected by the limited availability of perishable products and storage. Some educational institutions indicated that they had stopped participating in the Programme because they did not have the capacity to store the products they received (e.g., refrigerators).

## Recommendation(s)

It is recommended to vacuum-pack products where possible (currently only sliced carrots are vacuum-packed). Supply liquid products already divided into portions that can be consumed in one sitting. Also supply dried fruit packed in small packages.
In case of surplus products, it would be more convenient to store or distribute them to the children later when they return to the educational institutions. Children could also take such packs home.
In the case of milk and dairy products, more emphasis could be placed on the variety of cheese products, as they have a longer shelf life and are more convenient for children to distribute and eat.
Consultations with suppliers are also recommended to find the best solution.

| Meaning | Implementation <br> period | Expected result | Reference in the report |
| :--- | :--- | :--- | :--- |

## Problem identified

## Recommendation(s)

Staff and children are aware of the Programme, but parents are not as well informed (although information posters are displayed in institutions). Parents generally have limited knowledge and do not associate the Programme with educational measures

It is recommended that meetings be organised at school level to inform and advise parents on the Programme and the main challenges to be tackled in its implementation. For example, the Programme could be
(farm visits or nutrition education classes). Some parents are not even aware that their child's educational establishment is participating in the Programme.

| Problem identified |  | Recommendation(s) |  |
| :---: | :---: | :---: | :---: |
| Some educational establishments report that there are situations where suppliers are difficult to contact, do not reply to emails or calls, are late in delivering products, or deliver after working hours. They also limit the choice of products. |  | Organise a joint discussion between suppliers and representatives of educational establishments, to provide additional advice to reconcile common interests and to show representatives of educational establishments the possibilities they must influence the running of the Programme and the variety of products supplied. |  |
| Meaning | Implementation period | Expected result | Reference in the report |
| Medium | From 2023-2024 | Representatives of educational institutions will have a better understanding of their rights under the Programme and suppliers will have a better understanding of the needs of educational institutions and will be in a better position to meet them. | Chapter 8. Evaluation of the conditions and procedures for the implementation of the Programme |

## Problem identified

The only indicators used to measure progress in implementing the Strategy with targets are impact indicators. The Strategy did not set numerical targets for the outcome and productivity indicators, making it difficult to assess the progress of the Programme in aspects other than impact.

| Meaning | Implementation |
| :--- | :--- | :--- | :--- |
| period |  |$\quad$ Expected result $\quad$ Reference in the report

## Annexes

## Annex 1. Questionnaire for students used in the survey

1. What is your gender?
a. Girl
b. Boy
c. I do not wish to specify
2. Which grade are you in?
a. First $\left(1^{\text {st }}\right)$
b. Second $\left(2^{\text {nd }}\right)$
c. Third ( $3^{\text {rd }}$ )
d. Fourth $\left(4^{\text {th }}\right)$
3. Which region your school is in? A list of regions is provided.
4. What fruits and vegetables do you eat most often? (Up to 5 options)
a. Apples
b. Bananas
c. Pears
d. Carrots
e. Cucumbers
f. Tomatoes
g. Citrus (lemons, grapefruit, oranges, etc.)
h. Other (please specify)
5. How often do you eat vegetables?
a. Every day (1-2 times per day)
b. Every day (3-4 times per day)
c. Every day (5 or more times per day)
d. Rarely (several times a week or less)
e. I do not eat vegetables

5a. Where and how often you eat vegetables? (tick one answer in each row)

|  | Every day (1-2 <br> times per day) | Every day (3-4 <br> times per day) | Every day (5 or <br> more times a <br> day) | Rarely (several <br> times a week <br> or less) | I do not eat <br> vegetables |
| :--- | :--- | :--- | :---: | :---: | :---: |
| At school, <br> when the <br> teacher hands <br> out |  |  |  |  |  |


| At school, <br> when given by <br> parents or <br> bought in the <br> canteen |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Home |  |  |  |  |  |

## 6. How often do you eat fruit?

a. Every day (1-2 times per day)
b. Every day (3-4 times per day)
c. Every day (5 or more times per day)
d. Rarely (several times per week or less)
e. I do not eat fruit

6a. Kur ir kaip dažnai valgai vaisius? (pažymėk vieną atsakymą kiekvienoje eilutėje)

|  | Every day (1-2 <br> times per day) | Every day (3-4 <br> times per day) | Every day (5 or <br> more times <br> per day) | Rarely (several <br> times per week <br> or less) | I do not eat <br> fruit |
| :--- | :--- | :--- | :--- | :--- | :--- |
| At school, <br> when the <br> teacher hands <br> out |  |  |  |  |  |
| At school, <br> when given by <br> parents or <br> bought in the <br> canteen |  |  |  |  |  |
| Home |  |  |  |  |  |

7. How often do you drink juice (e.g., apple, carrot, multivitamin)?
a. Every day (1-2 times per day)
b. Every day (3-4 times per day)
c. Every day (5 or more times per day)
d. Rarely (several times per week or less)
e. I do not drink juice
8. Which dairy products do you usually consume? (Tick up to 3 options)
a. Milk
b. Curd
c. Yoghurt
d. Cheese
e. Kefir
f. Other (please specify)
9. How often do you consume milk and dairy products (yoghurt, curd, kefir, curd snack and other)?
a. Once per day
b. 2-3 times per day
c. 4 or more times per day
d. Rarely (several times a week or less)
e. I do not consume milk and dairy products

9a. Where and how often you consume milk and dairy products (yoghurt, curd, kefir, cheese and other)? (Tick one answer in each row)

|  | Every day (1 <br> time per day) | Every day (2-3 <br> times per day) | Every day (4 or <br> more times <br> per day) | Rarely (several <br> times per week <br> or less) | do not <br> consume milk <br> and dairy <br> products |
| :--- | :--- | :--- | :--- | :--- | :--- |
| At school, <br> when teacher <br> hands out |  |  |  |  |  |
| At school, <br> when given by <br> parents or <br> bought in the <br> canteen |  |  |  |  |  |
| Home |  |  |  |  |  |

10. Do you like eating fruit?
a. Yes
b. No
11. Do you like eating vegetables?
a. Yes
b. No
12. Which of these products do you like to eat or drink the most?
a. Fruit
b. Vegetables
c. Juice
d. All
e. None
13. Why do you not like eating fruit, vegetables or drinking juice?

|  | It does not <br> taste good | Do not like the <br> appearance | Do not like the <br> presentation | We do not eat <br> or drink this <br> product in my <br> family | Other reason |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Carrots |  |  |  |  |  |


| Apples |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Pears |  |  |  |  |  |
| Fruit and/or <br> vegetable <br> juice |  |  |  |  |  |

14. Do you like drinking milk?
a. Yes
b. No
15. Which of these products do you enjoy eating or drinking the most? (Tick up to 3 options)
a. Milk
b. Curd
c. Yoghurt
d. Cheese
e. Kefir
f. All
g. None
16. Why do you not like to eat or drink milk or dairy products?

|  | It does not <br> taste good | Do not like the <br> appearance | Do not like the <br> presentation | We do not eat <br> or drink this <br> product in my <br> family | Other reason |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Milk |  |  |  |  |  |
| Curd |  |  |  |  |  |
| Yoghurt |  |  |  |  |  |
| Cheese |  |  |  |  |  |
| Kefir |  |  |  |  |  |

17. Would you like to eat more fruit, vegetables, milk, or airy products?

|  | I would like to eat more | I eat enough | I would like to eat less |
| :--- | :--- | :--- | :--- |
| Fruit (apples, pears, <br> etc.) |  |  |  |
| Vegetables (carrots, <br> potatoes, etc.) |  |  |  |


| Milk or dairy products <br> (yoghurt, kefir, curd, <br> etc.) |  |  |  |
| :--- | :--- | :--- | :--- |

18. Do you know that you get apples, apple juice, carrots, or yoghurt at school through a special Programme?
a. Yes,I know
b. No, I do not know
19. Mark if you eat the food provided at school:

|  | I eat everything | I eat some | I do not eat (I take it <br> home, throw it away, <br> give it to a friend, etc.) |
| :--- | :--- | :--- | :--- |
| Apples |  |  |  |
| Pears |  |  |  |
| Carrots |  |  |  |
| Fruit and/ or vegetable <br> juice |  |  |  |
| Milk |  |  |  |
| Yoghurt |  |  |  |
| Curd |  |  |  |
| Kefir |  |  |  |

20. Did you know that fruit and vegetables should be eaten every day and several times a day?
a. Yes, I did know
b. No, I did not know
21. How did you learn that fruit and vegetables should be eaten every day and several times a day?
a. From my parents
b. From books
c. From teachers
d. From leaflets
e. From friends
f. From television
g. Other (please specify)
22. What do you usually choose for snacks?
a. Sweets
b. Chips
c. Fruit
d. Vegetables
e. Dairy products (curd snack, yoghurt, etc.)
f. Other (please specify)
23. Choose which foods are not healthy:
a. Nuts
b. Potato chips
c. Pizza
d. Oatmeal
e. Salad
f. Burger
g. Apple
h. Sweets
24. Choose the 2 foods you should eat most often according to the food pyramid:
a. Meat, fish
b. Spices
c. Vegetables and greens
d. Nuts and seeds
e. Cereal products (e.g., bread, porridge)
f. Legumes (e.g., beans, peas)
25. Choose the 4 vegetables shown in the picture (there are 4 pictures of vegetables, and you must choose the options from the pictures accordingly):

a. Cucumber
h. Cabbage
b. Squash
i. Pumpkin
c. Avocado
j. Carrot
d. Eggplant
k. Turnip
e. Broccoli
I. Onion
f. Potato
m. Bell pepper
g. Beetroot
26. Choose the 4 fruits shown in the pictures (there are 4 pictures of fruit, you must choose the options from the picture accordingly):

a. Gooseberry
b. Pineapple
c. Orange
d. Raspberry
e. Banana
f. Strawberry
g. Lemon
h. Kiwi
i. Pear
j. Apple
k. Peach
I. Plum
27. Please indicate how you think milk is produced:
a. Milk is produced in a store
b. Cows are milked on farms, the milk is taken to be packaged at the dairy, and from there it goes to the store
c. Milk is produced by workers in factories
28. What is cheese made of?
a. From sour cream
b. From butter
c. From milk
d. From grease
29. Do you know what organic products are?
a. Yes, I know
b. I have heard, but I do not know for sure
c. I do not know

## Annex 2. Questionnaire for school representatives used in the survey

1. Please indicate the name of the institution (respondent writes the answer):
2. Specify the type of educational institution:
a. Primary school
b. Elementary school
c. Progymnasium
d. Gymnasium
e. Lyceum
f. School-multifunctional centre
g. Multifunctional centre
h. Kindergarten-school
i. Kindergarten
j. Other (please specify)
3. In which region is your educational institution located? A list of regions is provided.
4. What are your job responsibilities?
a. Headmaster
b. Deputy headmaster
c. Public health specialist
d. Teacher
e. Other (please specify)
5. How often are fruits, vegetables or their juices distributed to students under the Programme?
a. 1 time per week
b. 2 times per week
c. 3 times per week
6. Which fruit and vegetables are most often distributed to students under the Programme in your school? (Two possible answers)
a. Apples
b. Pears
c. Carrots
d. Fruit and/or vegetable juice
7. Please indicate which products students do not like or eat less of (multiple choice):
a. Fruit
b. Vegetables
c. Fruit and/or vegetable juice
d. Students like all the products listed
8. Why do you think student do not like or eat less of these foods?

|  | Do not like <br> the taste | Do not like <br> the <br> presentation | Students <br> are more <br> used to <br> eating <br> sweets or <br> junk food | Parents do not <br> pay enough <br> attention to <br> educating <br> their children <br> and <br> introducing <br> them to <br> healthy food | Dor <br> understand <br> their benefits | Otheasons <br> rean |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Apples |  |  |  |  |  |  |
| Pears |  |  |  |  |  |  |
| Carrots |  |  |  |  |  |  |
| Fruit <br> and/or <br> vegetable <br> juice |  |  |  |  |  |  |

9. What do students usually eat as snacks?
a. Fruit
b. Vegetables
c. Dairy products
d. Sweets, chips, etc.
e. Do not eat snacks at school
f. Other (please specify)
10. How often are dairy products distributed to students under the Programme?
a. 1 time per week
b. 2 times per week
c. 3 times per week
11. Which dairy products are most often distributed to students in your school under the Programme? (Two possible answers)
a. Milk
b. Yoghurt
c. Cheese
d. Curd
e. Kefir
12. Please indicate which products students dislike or eat less of (multiple choice):
a. Milk
b. Yoghurt
c. Cheese
d. Curd
e. Kefir
13. Why do you think students do not like these products?

|  | Do not like the <br> taste | Do not like <br> the <br> presentation | Students <br> are more <br> used to <br> eating <br> sweets or <br> junk food | Parent do not <br> pay enough <br> attention to <br> educating <br> their children <br> and <br> introducing <br> them to <br> healthy food | Do <br> understand <br> their benefits | reasons |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Milk |  |  |  |  |  |  |
| Yoghurt |  |  |  |  |  |  |
| Curd |  |  |  |  |  |  |
| Kefir |  |  |  |  |  |  |

14. Do you think students have sufficient knowledge about healthy nutrition (e.g., do they understand the health risks of foods high in added sugar or fat, or the benefits of vegetables and fruit)?
a. Sufficient
b. Insufficient
c. Cannot answer
15. Do students know and understand the food pyramid?
a. Yes, most, or all
b. No, just a minority
c. Cannot answer
16. Whose influence do you think is the most important in encouraging students to eat healthily? (Multiple choice)
a. Parents
b. School
c. Friends/peers
d. Television
e. Social media
f. Other (please specify)
17. How many times a year does the Programme organise special events and activities in your school to educate and inform students abut healthy nutrition, fruit, vegetables, and dairy products?
a. It has not been organised
b. 1-2 times
c. 3-4 times
d. 5 or more times
18. What kind of education on the benefits of fruit, vegetables, and dairy products has been organised under the Programme? (Multiple choice)
a. Informative lessons for students
b. Tasting and cooking lessons for students
c. Courses and seminars for school staff
d. Courses and seminars for parents
e. Quizzes
f. Educational sports competitions
g. Trips to horticultural, vegetable, and dairy farms
h. Sustainable agriculture
i. Other (please specify)
19. How many students approximately participated in special sessions aimed at educating and informing students about healthy nutrition, fruit, vegetables, and dairy products? (Please fill in)
20. How many school staff members approximately participated in special sessions to educate and inform about healthy nutrition, fruit, vegetables, and dairy products? (Please fill in)
21. How many parents approximately participated in special sessions to educate and inform about healthy nutrition, fruit, vegetables, and dairy products? (Please fill in)
22. What were the most common themes of the Programme's education and information activities? (Multiple choice)
a. Healthy nutrition, food pyramid
b. Diversity of fruit and vegetables, taking them 'from field to table'
c. Benefits, diversity and 'barn-to-table' arrival of milk and dairy products
d. Physical health: the impact of diet on human health and the benefits of exercise
e. Reducing food waste
f. Sustainable agriculture
g. Other (please specify)
23. Do students know that fruit, vegetables, juice, and dairy products are provided under the Programme?
a. Yes, most of them know
b. No, few or none know
24. Mark whether students eat the food given to them:

|  | They eat <br> everything | They eat some | They do not eat <br> them | They do not eat <br> the food at <br> school, so it is <br> given to take <br> home |
| :--- | :--- | :--- | :--- | :--- |
| Apples |  |  |  |  |
| Pears |  |  |  |  |
| Carrots and/or |  |  |  |  |
| Fruit <br> vegetable juice |  |  |  |  |
| Milk |  |  |  |  |
| Yoghurt |  |  |  |  |
| Curd |  |  |  |  |
| Kefir |  |  |  |  |

25. What do you do with uneaten food?

|  | Products are <br> disposed of | Products are given <br> to take home to <br> students <br> participating in the <br> Programme | The school has a <br> place where <br> members of the <br> school community <br> can pick up <br> uneaten food |  |
| :--- | :--- | :--- | :--- | :--- |
| Apples |  |  |  |  |
| Pears |  |  |  |  |
| Carrots |  |  |  |  |
| Fruit <br> vegetable juice |  |  |  |  |
| Milk |  |  |  |  |
| Yoghurt |  |  |  |  |
| Curd |  |  |  |  |
| Kefir |  |  |  |  |

26. How is food distributed to students in your educational institution under the Programme?
a. During a lunch or evening meal specially dedicated to the Programme
b. During regular meals (with the exception that the products are provided under the Programme)
c. There is a place where the products received under the Programme are provided (not individually portioned) and where the children are allowed to pour themselves a drink of milk or yoghurt or kefir
27. Did you experience obstacles or difficulties in making payment requests while implementing the Programme?
a. Yes
b. No
c. I do not know

27a. If yes, what obstacles or difficulties do you face when making payment requests: (Please comment)
28. Do you face obstacles or administrative difficulties in reporting?
a. Yes
b. No
c. I do not know

28a. If yes, what obstacles or administrative difficulties do you face reporting? (Please comment)
29. Are there any problems in cooperation with product suppliers?
a. Yes
b. No
c. I do not know

29a. If yes, what problems do you face when working with product suppliers? (Please comment)
30. Did you encounter other problems while implementing the Programme?
a. Yes
b. No

30a. If yes, what other obstacles did you face while implementing the Programme? (Please comment)
31. What do you suggest to improve/change in the implementation of the fruit, vegetables, milk, and dairy products promotion Programme at school so that it is effective in encouraging students to eat more healthy products? (Multiple choice)
a. The Programme is effective, and no improvement are needed
b. Increase the number of fruits and vegetables distributed to students
c. Increase the variety of vegetables
d. Increase the variety of fruit
e. Increase the variety of juice
f. Increase the amount of milk and dairy products distributed to students
g. Increase the variety of dairy products
h. Educate students more often, share educational materials
i. Change the way the products are delivered
j. Change the delivery time of products
k. Other (please specify)
32. What additional foods would you suggest being included in the Programme? The respondent writes the answer.
33. Do you think that the Programme has significant influence in contributing to the formation of healthy eating habits of students?
a. Yes
b. Yes, but with very limited influence
c. No
34. Do you think the Programme is useful and should be continued in the future?
a. Very useful, the Programme should be continued
b. Useful, the Programme should be continued
c. Somewhat useful, the Programme could be continued or discontinued
d. Unuseful, the Programme should not be continued

## Annex 3. Questionnaire for kindergarten representatives

1. Please indicate the name of the institution (respondent writes the answer):
2. Specify the type of educational institutions:
a. Primary school
b. Elementary school
c. Progymnasium
d. Gymnasium
e. Lyceum
f. School-multifunctional centre
g. Multifunctional centre
h. Kindergarten-school
i. Kindergarten
j. Other (please specify)
3. In which region is your educational institution located? A list of regions is provided.
4. What are your job responsibilities?
a. Headmaster
b. Deputy headmaster
c. Public health specialist
d. Teacher
e. Other (please specify)
5. Which fruit and vegetables are most often distributed to students under the Programme in your school? (Two possible answers)
a. Apples
b. Pears
c. Carrots
d. Fruit and/or vegetable juice
e. Other (please specify)
6. The Programme offers the possibility of using a wider variety of foods to organise educational events. What additional products do you use to run educational events under the Programme?
a. Bananas
b. Kiwi
c. Citrus fruits
d. Grapes
e. Various fresh vegetables
f. Oil
g. Honey
h. Do not use them
7. How often do children in kindergarten eat or drink fruit, vegetables, or their juices under the Programme?
a. 1 time per week
b. 2 times per week
c. 3 times per week
8. Which dairy products are most often distributed to children under the Programme? (Multiple choice)
a. Milk
b. Yoghurt
c. Curd
d. Kefir
e. Other (please specify)
9. How often are dairy products distributed to children under the Programme?
a. 1 time per week
b. 2 times per week
c. 3 times per week
10. Please indicate which products children do not like or eat less of (Multiple choice):
a. Fruit
b. Vegetables
c. Fruit and/or vegetable juice
d. Like fruit, vegetables, and/or their juices
11. Why do you think children dislike or eat less of these foods?

|  | Do not like <br> the taste | Do not like <br> the <br> presentation | Parents do not <br> pay enough <br> attention to <br> their <br> children's <br> healthy <br> nutrition | Children are <br> more <br> accustomed <br> to other, <br> sugary foods | Children are <br> more <br> accustomed <br> to sweets or <br> junk food | Do not <br> understand <br> the <br> benefits of <br> these <br> products |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Carrots |  |  |  |  |  |  |
| Apples |  |  |  |  |  |  |
| Pears |  |  |  |  |  |  |
| Fruit and/or <br> vegetable <br> juice |  |  |  |  |  |  |

12. Please indicate which foods children do not like or eat less of (Multiple choice):
a. Milk
b. Curd
c. Yoghurt
d. Cheese
e. Kefir
f. Likes all the products listed
13. Why do you think children do not like or eat less of these foods?

|  | Do not like <br> the taste | Do not like <br> the <br> presentation | Parents do not <br> pay enough <br> attention to | Children are <br> more <br> accustomed | Children are <br> more <br> accustomed | Do not <br> understand <br> the |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |


|  |  |  | their <br> children's <br> healthy <br> nutrition | to other, <br> sugary foods | to sweets or <br> junk food | benefits of <br> these <br> products |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Milk |  |  |  |  |  |  |
| Curd |  |  |  |  |  |  |
| Yoghurt |  |  |  |  |  |  |
| Cheese |  |  |  |  |  |  |
| Kefir |  |  |  |  |  |  |

14. Would children like to eat more fruit, vegetables, milk, or dairy products?

|  | Would like to eat more | They eat enough | Would like to eat less |
| :--- | :--- | :--- | :--- |
| Fruits (apples, pears, etc.) |  |  |  |
| Vegetables (carrots, <br> potatoes, etc.) |  |  |  |
| Milk or dairy products <br> (yoghurt, kefir, cur, etc.) |  |  |  |

15. What do children usually eat as snacks?
a. Fruit
b. Vegetables
c. Dairy products
d. Sweets, chips, etc.
e. Do not eat snacks at school
f. Other (please specify)
16. Do children understand and know the difference between healthy and unhealthy diets?
a. Most understand
b. No, only some understand
c. Most do not understand
17. Do children know what the food pyramid is?
a. Most children know
b. Some children know
c. Most children do not know
18. Do children recognise vegetables and fruit?
a. Recognise
b. Recognised only by some children
c. Do not recognise
19. How many times a year were events or other activities organised to educate and inform children about healthy eating, fruit, vegetables, and dairy products under the Programme?
a. Were not organised
b. 1-2 times per year
c. 3-4 times per year
d. 5 or more times
20. What kind of education on the benefits of fruit, vegetables and dairy products has been organised under the Programme? (Multiple choice)
a. Information lessons for children
b. Tasting and cooking lessons for children
c. Courses and seminars for kindergarten staff
d. Courses and seminars for parents
e. Quizzes
f. Educational sports competitions
g. Field trips to horticultural, vegetable, and dairy farms
h. Other (please specify)
21. How many children approximately have participated in special sessions designed to educate and inform children about healthy eating, fruit, vegetables, and dairy products? (Please fill in)
22. How many kindergarten staff approximately participated in special sessions to educate and inform about healthy eating, fruit, vegetables, and dairy products? (Please fill in)
23. How many parents approximately have participated in special sessions on education and information on healthy eating, fruit, vegetables, and dairy products? (Please fill in)
24. What were the most common themes of the Programme's education and information activities? (Multiple choice)
a. Healthy nutrition, food pyramid
b. The diversity of fruit and vegetables and their arrival 'from field to table'
c. The benefits, variety and 'barn-to-table' arrival of milk and dairy products
d. Physical health: the impact of diet on human health and the benefits of exercise
e. Reducing food waste
f. Sustainable agriculture
g. Other (please specify)
25. Do children understand that they receive fruit, vegetables, juice, and dairy products under the Programme?
a. Most of them understand
b. Some children understand
c. Most of them do not understand
26. Mark whether students eat the food given to them:

|  | They eat everything | They eat some | They do not eat <br> them | The food is given <br> to take home |
| :--- | :--- | :--- | :--- | :--- |
| Apples |  |  |  |  |
| Pears |  |  |  |  |


| Carrots |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Fruit and/or <br> vegetable juice |  |  |  |  |
| Milk |  |  |  |  |
| Yoghurt |  |  |  |  |
| Curd |  |  |  |  |
| Kefir |  |  |  |  |

27. What do you do with uneaten food?

|  | Products are <br> disposed of | Products are given to <br> take home to students <br> participating in the <br> Programme | The school has a place where <br> members of the school <br> community can pick up <br> uneaten food | Other |
| :--- | :--- | :--- | :--- | :--- |
| Apples |  |  |  |  |
| Pears |  |  |  |  |
| Carrots and/or |  |  |  |  |
| Fruit <br> vegetable juice |  |  |  |  |
| Milk |  |  |  |  |
| Yoghurt |  |  |  |  |
| Curd |  |  |  |  |
| Kefir |  |  |  |  |

28. How is food distributed to children in your educational institution under the Programme?
a. At a lunch or evening meal specially dedicated to the Programme
b. During a regular meal (distinguishing that these are products provided under the Programme)
c. A place where the products received under the Programme are provided (not individually portioned) and where the children are allowed to pour themselves a drink of milk or yoghurt or kefir
29. Did you encounter any obstacles or difficulties in submitting payment claims during the implementation of the Programme?
a. Yes
b. No
c. I do not know

29a. If yes, what obstacles or difficulties did you encounter when submitting payment claims: (please comment)
30. Did you encounter any obstacles or administrative difficulties when reporting?
a. Yes
b. No
c. I do not know

30a. If yes, what obstacles or administrative difficulties did you face in reporting: (please comment)
31. Are there any problems with cooperation with product suppliers?
a. Yes
b. No
c. I do not know

31a. If yes, what problems did you encounter when cooperating with product suppliers: (please comment)
32. Did you encounter any other obstacles in the implementation of the Programme?
a. No
b. Yes

32a. If yes, what problems did you encountered in the implementation of the Programme: (please comment)
33. What do you suggest to improve/change in the implementation of the fruit, vegetables, milk, and dairy products promotion Programme at school so that it is effective in encouraging students to eat more healthy products? (Multiple choice)
a. The Programme is effective, and no improvement are needed
b. Increase the number of fruits and vegetables distributed to students
c. Increase the variety of vegetables
d. Increase the variety of fruit
e. Increase the variety of juice
f. Increase the amount of milk and dairy products distributed to students
g. Increase the variety of dairy products
h. Educate students more often, share educational materials
i. Change the way the products are delivered
j. Change the delivery time of products
k. Other (please specify)
34. What additional foods would you suggest being included in the Programme? The respondent writes the answer.
35. Do you think the Programme has a significant impact on helping children develop healthy eating habits?
a. Yes
b. Yes, but with very limited influence
c. No
36. Do you think the Programme is useful and should be continued in the future?
a. Very useful, the Programme should be continued
b. Useful, the Programme should be continued
c. Somewhat useful, the Programme could be continued or discontinued
d. Unuseful, the Programme should not be continued

## Annex 4. List of institutions interviewed

| Educational institutions (schools and kindergartens) | Jonava 'Neries' primary school |
| :---: | :---: |
|  | 'Balseliai' (kindergarten) |
|  | Klaipėda 'Santarvės' primary school |
|  | Pasvalys 'Riešuto' school |
|  | Non-state kindergarten 'Nendrè' |
|  | Kaišiadorys district school-kindergarten 'Rugelis' |
|  | Christian kindergarten |
|  | Anykščiai district Kavarsko secondary school pre-school education section |
|  | Kedainiai district Krakiai Mikalojaus Katkaus gymnasium |
|  | Vilniaus Gerosios Vilties progymnasium |
|  | Gediminas Sport and Health Gymnasium |
|  | Anykščiai nursery school 'Žilvitis' |
|  | Naujamiestis nursery 'Bitute' |
| Suppliers | 'Žemaitijos pienas' |
|  | 'Handelshus' |
|  | 'AVANTI HR' |
| Supervisory authority | Rural Business and Market Development Agency |


[^0]:    ${ }^{1}$ According to the Agency's data, 1,577 educational institutions (including their departments or branches) are participating in the Programme for the period 2022-2023. The lower number of emails sent is because the offices and branches of the institutions provide a single contact for the establishment and therefore the emails were sent via a single email (i.e., not sent to each individual office).

[^1]:    2 LR žemės ūkio ministerija. Vaikų ugdymo j̨staigose - daugiau daržovių. 2022-11-29. Prieiga per internetą: http://zum.Irv.lt/It/naujienos/vaiku-ugdymo-istaigose-daugiau-darzoviu

[^2]:    ${ }^{3}$ Europe 2020 Strategy. Available online: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52010DC2020\&from=LT

[^3]:    ${ }^{4}$ Europos Komisija. School Scheme explained. Prieiga per internetą: https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/market-measures/school-fruit-vegetables-and-milk-scheme/school-schemeexplained en\#overview
    ${ }^{5}$ EUROPOS PARLAMENTO IR TARYBOS REGLAMENTAS (ES) Nr. 1308/2013 2021 m. gruodžio 7 d. kuriuo nustatomas bendras žemès ūkio produktų rinkų organizavimas ir panaikinami Tarybos reglamentai (EEB) Nr. 922/72, (EEB) Nr. 234/79, (EB) Nr. 1037/2001 ir (EB) Nr. 1234/2007. Prieiga per internetą: https://eur-lex.europa.eu/legal-content/LT/TXT/HTML/?uri=CELEX:02013R130820211207\&from=EN\#tocld355

[^4]:    Source: prepared by the Consultant

[^5]:    ${ }^{6}$ Komisijos deleguotasis reglamentas (ES) 2017/40 2016 m. lapkričio 3 d. kuriuo Europos Parlamento ir Tarybos reglamentas (ES) Nr. 1308/2013 papildomas nuostatomis dè Sajungos pagalbos vaisiams ir daržovėms, bananams ir pienui tiekti švietimo ǐstaigoms, ir iš dalies keičiamas Komisijos deleguotasis reglamentas (ES) Nr. 907/2014. Prieiga internetu: https://eur-lex.europa.eu/legalcontent/LT/TXT/?uri=CELEX\%3A32017R0040

[^6]:    ${ }^{7}$ Data for 2021-2022 is not available.

[^7]:    8 Note: The data used for 2021-2022 are provided by the Agency, for the period 2017-2021 the data used are provided by the Agency to the EC.

[^8]:    ${ }^{9}$ Available online: https://www.pienasvaisiai.lt
    ${ }^{10}$ Available online: https://www.facebook.com/pienasvaisiai
    ${ }^{11}$ Available online: https://www.litfood.It/veiklos-sritys/paramos-priemones/pienas-vaikams
    ${ }^{12}$ Available online: https://www.litfood.It/veiklos-sritys/paramos-priemones/vaisiai-mokykloms

[^9]:    ${ }^{13}$ Information on Ecolux's authorisation to certify and supervise products produced under the National Food Quality System. Available online: https://ecolux.It/apie-imone/

[^10]:    14 The reports shall be drawn up and submitted to the Agency in accordance with the Order of the Minister of Agriculture of the Republic of Lithuania on the approval of the rules for the submission of data on milk and milk products on 5 June 2009 No. 3D-416.

[^11]:    ${ }^{15}$ Vaisių ir daržovių bei pieno ir pieno produktų vartojimo skatinimo vaikų ugdymo ístaigose programos igyvendinimo taisyklės, patvirtintos LR žemès ūkio ministro 2017 m. rugsèjo 21 d įsakymu. Nr. 3D-599
    ${ }^{16}$ Vaisių ir daržovių bei pieno ir pieno produktų vartojimo skatinimo vaikų ugdymo ístaigose programos igyvendinimo taisyklės, patvirtintos LR žemès ūkio ministro 2017 m. rugsèjo 21 d įsakymu. Nr. 3D-599

[^12]:    ${ }^{17}$ Calculated on the basis of the example of 'Pic Nic' cheese, since this cheese is the most commonly distributed.

