



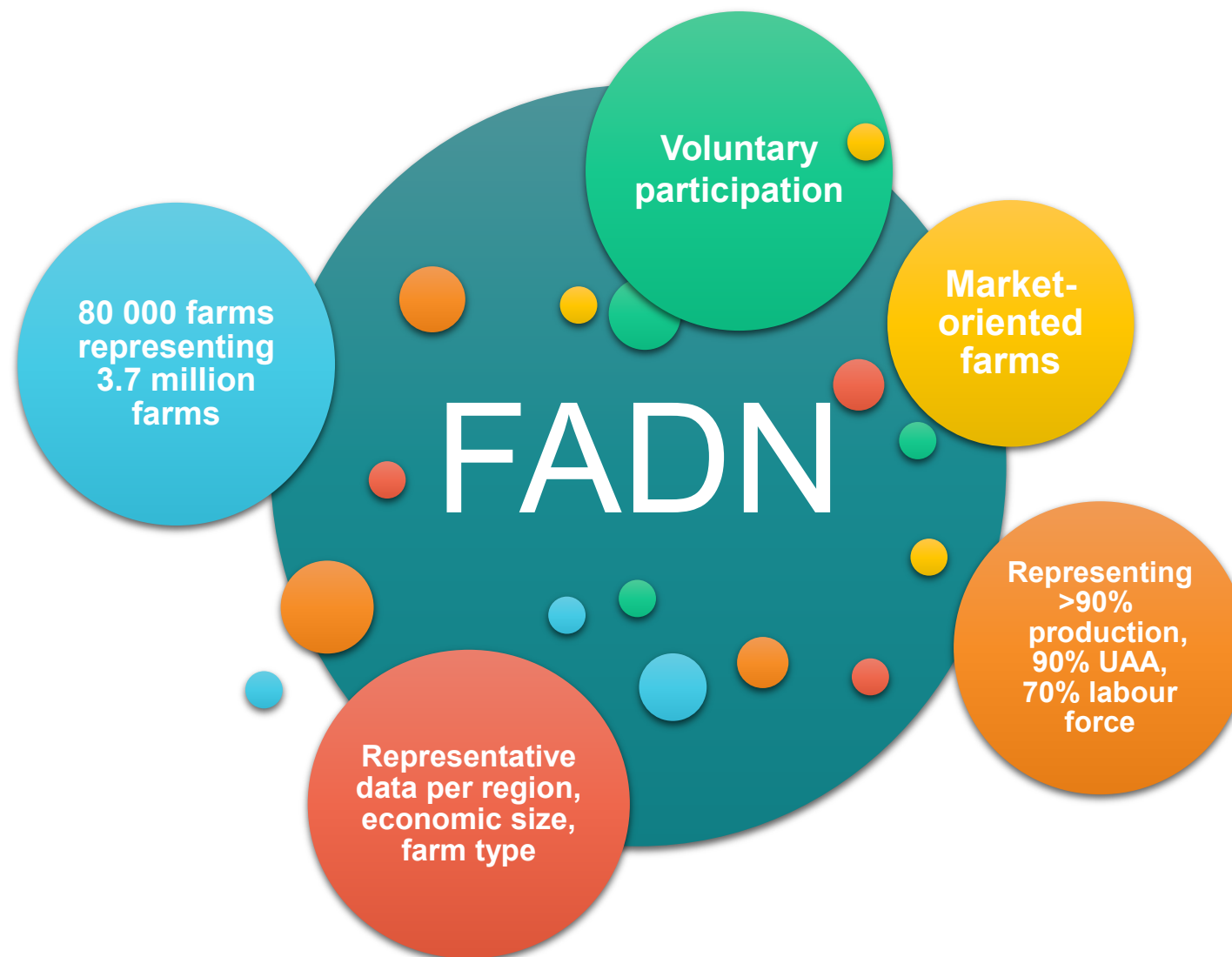
# Farm Sustainability Data Network

Update and next steps: how stakeholders can contribute

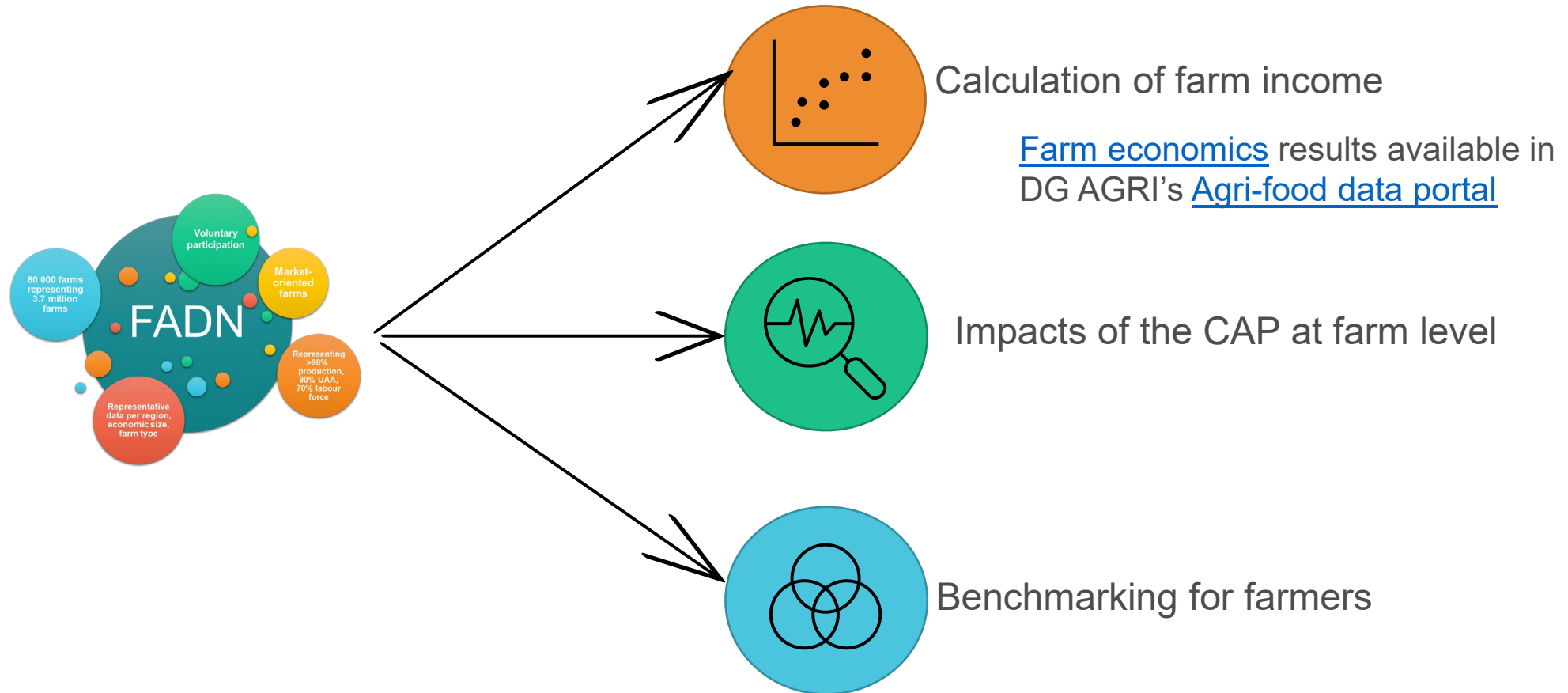
CIVIL DIALOGUE GROUP ON THE COMMON AGRICULTURAL POLICY

*DG AGRI A.2 Analysis and Outlook Unit, 23 November 2023*

For 60 years the Farm **Accountancy** Data Network has collected farm-level economic data on a sample of agricultural holdings



# FADN, a unique farm-level dataset to measure **economic** performance, for evidence-based policy-making



# Conversion of FADN to FSDN - objectives

Part of the May 2020 Farm to Fork Strategy

- To improve role of FADN for policy-making, research, evaluation and policy analysis
- To add topics and variables related to environmental and social dimensions: data needed at farm level
- To contribute to the provision of advisory services to farmers and benchmarking of farm sustainability performance
- To introduce innovative and modern data collection systems and practices to reduce administrative burden, including through better interoperability & data sharing with other data sources

# FSDN Basic Act legislative process – state of play

Political agreement,  
overwhelmingly  
approved by the  
European Parliament  
and Council:  
draft Basic Act

**Entry into force**  
of the Basic Act  
20 days after  
publication date

July  
2023

Nov  
2023

Dec  
2023

Regulation (EU)  
2023/2674  
Published in the  
EU Official Journal

# Key achievements of the political agreement on FSDN

- **Voluntary nature of farmer participation** reaffirmed, and Member States have to develop an incentive plan for farmers
- **Data protection** reinforced and clarified; data shall not be used for control or tax purposes
- **Maximising the use of data already collected**, by applying the principle “collect data once, re-use multiple times” (data sharing at Member State and EU level), **reducing the burden for participating farmers**, while improving the potential for analysis
- **EU financial contribution guaranteed** for setting-up and operating the FSDN, including a possible financial compensation for participating farmers
- Provision of feedback and **benchmarking** information to farmers on their **sustainability performance**
- **Topics to cover the three dimensions of sustainability** in an annex: 42 in FSDN compared to 13 in FADN

# List of 42 FSDN topics to be covered

In **bold**: 29 new topics added to current 13 in FADN

Economic	Environmental	Social
General information on the holding	<b>Farming practices</b>	Labour
Type of occupation	<b>Soil management</b>	<b>Education</b>
Assets and <b>investments</b>	<b>Nutrient use and management</b>	Gender balance
Quotas and other rights	<b>Carbon farming</b>	<b>Working conditions</b>
Debts/credits	<b>Greenhouse gas emissions and removals</b>	<b>Social inclusion</b>
Value added tax	<b>Air pollution</b>	<b>Social security</b>
Inputs	<b>Water use and management</b>	<b>Infrastructure and essential services</b>
<b>Land use</b> and crops	<b>Plant protection use</b>	<b>Generation renewal</b>
Livestock production	<b>Antimicrobial use</b>	
Animal products and services	<b>Animal welfare</b>	
<b>Market integration</b>	<b>Biodiversity</b>	
Quality products – Geographical indications	Organic farming	
<b>Membership in producer organisations</b>	<b>Certification schemes</b>	
<b>Risk management</b>	<b>Energy consumption and energy production</b>	
<b>Innovation and digitalisation</b>	<b>Food loss on primary production level</b>	
Other gainful activities related to the holding	<b>Waste management</b>	
Subsidies		
<b>Indicative share of off-farm income</b>		

# Next steps: getting ready for data collection

- Preparation of secondary legislation
  - Started in October 2023 in FADN Committee and Expert Group (GREX)
  - Planned to be finalised in Q1/Q2 2024
- FSDN data collection
  - First reporting year 2025
  - Data available at EU level in 2027, in time for the next CAP



# What to expect from FSDN?

- **For farmers**
  - **Voluntary** participation and full **confidentiality** of farm data guaranteed (data cannot be used for control or tax purposes)
  - Direct **financial compensation** to participate (depending on Member State choices)
  - Comprehensive **farm report** on sustainability performance, with benchmarking and feedback
  - Contribution to **policy-making** at regional, national and EU level: evidence on **positive farming management**
- **For stakeholders**
  - Overview of farm performance on range of topics, that can be used as common reference at EU and Member State levels
- **For policy makers**
  - Unique and powerful farm-level data source to address policy questions on sustainability

# New service for farmers and stakeholders:

## *MyFSDN* portal

- Public portal planned for detailed and more advanced services for external users, with guaranteed **data protection** for FSDN participating farmers
- **Benchmarking**
  - Users: all farmers (both FSDN and non-FSDN holdings); advisors in extension services
  - Objective: to provide farm reports and compare with similar benchmarking information, in same sector, region, with national and EU averages
  - Some Member States already provide platforms dedicated to FADN holdings with different systems (online, by email, publishing aggregated results etc.), e.g. IT ([FADN farms](#), [all farms](#)) [NL](#), [PL](#), BE, IE, [AT](#), [FI](#), DK
- **Example of possible analysis: emission calculator**
  - Objective: to calculate emission balance at farm level
  - Based on new FSDN variables
  - Integrated in benchmarking platform

# Stakeholder inputs on FSDN legislation

- Delegated and Implementing Regulations will be subject later to the “*Have your say*” 4-week feedback mechanism
- Early contributions are welcome now:
  - Let us know your views on how to cover the FSDN topics, variables to add and how to foster farmers’ participation. Draft FSDN variables are explained in annex to this presentation: any variable to add, to improve, to rephrase?
  - Send your comments to [AGRI-FADN-FSDN@ec.europa.eu](mailto:AGRI-FADN-FSDN@ec.europa.eu) before 15 January 2024
  - Come and meet us, AGRI A.2 *Analysis and Outlook* Unit: bilateral meetings to further explain FSDN and how to contribute can be organised
  - Contact your national FADN/FSDN Liaison Agencies (details available upon request to same email address)

# Thank you!

Please send your contributions before 15 January 2024  
to AGRI A.2 *Analysis and Outlook* Unit:

[AGRI-FADN-FSDN@ec.europa.eu](mailto:AGRI-FADN-FSDN@ec.europa.eu)

[https://agriculture.ec.europa.eu/data-and-analysis\\_en](https://agriculture.ec.europa.eu/data-and-analysis_en)

Annex: draft FSDN variables  
in further detail, for comment

# FSDN variables - key principles

- The draft variables presented in these slides were shared with Member States in the FADN/FSDN Expert Group and are currently under discussion
- New variables could be either organised as new tables or as an addition/specification to existing FADN tables as included in [Implementing Regulation \(EU\) 220/2015](#)

# Economic variables

# Economic Topics from the Basic Act

Topics from the Basic Act	
General information on the holding	Animal products and services
Type of occupation	<b>Market integration</b>
Assets and <b>investments</b>	Quality products – Geographical indications
Quotas and other rights	<b>Membership in producer organisations</b>
Debts/credits	<b>Risk management</b>
Value added tax	<b>Innovation and digitalisation</b>
Inputs	Other gainful activities related to the holding
<b>Land use</b> and crops	Subsidies
Livestock production	<b>Indicative share of off-farm income</b>

Normal text: existing FADN topics/tables  
**Bold: new FSDN topics**



# General information on the holding

Policy questions and analytical needs

Need to know on **land related issues** (land market trends, assess land fragmentation and consolidation) and **organic farming** (trends in the organic market, performance between organic and conventional farms) added in existing tables.

New variables in existing table on general information on the returning holding:

- **Share of farming products sold as organic**
- **Time since starting the conversion to organic**
- **Holding fragmentation** (non contiguous land areas)
- **Distance between furthest parcels** [data possibly available in IACS]

New FSDN variables

# Debts/credits

Policy questions and analytical needs

**Need to know more on farmers' access to credit**, as the availability of adequate and timely credit is key to address financing needs of farming operations

New variables in existing table on debts/credits:

- **Envisaged loan application in the year (external financing need)** – estimated value of new external financing need of the holding, even if that need is not satisfied
- **Loan applications rejected** – value of loans applied for and not concluded due to the lack of agreement between the borrower and lender
- **Loan applications accepted** – value of loans taken by the holding

New FSDN variables

# Market integration

Policy questions and analytical needs

What is the level of market integration of the farms facing increasing risks linked to supply chains disruptions and market price volatility?

Do market integration enhance farms' resilience, long-term economic sustainability, and capacity to contribute to food security?

**Output (farm level): new table and variables**

- *Share of total value* of goods or products sold and *number of days* for **direct sale**
- *Share of total value* of goods or products sold, and *contract duration* for participation in **cooperative/producer organisation**
- *Share of total value* of goods or products sold, *contract duration*, and *contract type* by channel:
  - **Retailer**
  - **Food processor**
  - **Wholesaler**
  - **Other**

New FSDN variables

**Input (by product\*): new variables in existing inputs table**

- *Value purchased*, *contract duration*, and *contract type* by channel:
  - **Own production**
  - **Cooperative/producer organisation**
  - **Other holding**
  - **Directly from input producer**
  - **Retailer**
  - **Intermediary/wholesaler**
  - **Other**

*\*Motor fuels and lubricants*

*Purchased feedstuffs (with current farm return breakdown)*

*Purchased seeds and seedlings*

*Fertilisers and soil improvers*

*Crop protection products*

# Ownership of machinery

Policy questions and analytical needs

Need to know better whether the farmer mostly **owns** or **rents machinery**, or **makes use of contract work** for operations carried out by machinery, or is involved in collaborative participation with fellow farmers for **sharing the use of machinery** among them.

**New table on type of ownership** (own, rent, shared ownership, contract work) of machinery used for...

- Tillage operations
- Seeding
- Fertilisation and manure spreading
- Pesticides spreading
- Weeding
- Harvesting
- Pruning
- Other machinery

New FSDN variables

# Risk management

Need to learn more on the **farmers' risk management strategies and practices** to mitigate the financial impact of adverse conditions on their agricultural operations.

Policy questions and analytical needs

## New tables on risk management:

- Does the farmer **invest** (expenditure on purchases, major repairs and the production of fixed assets, including grants and subsidies) in fences, frost protection, bird scarers (or other)?
- Does the farmer make use of **farm inputs** relevant to risk management strategies and practices (nets, traps, etc.)?
- What is the **value of damages caused by adverse events** (extreme climatic events like droughts, heavy precipitations of rain, snow, and hail, flooding, landslides, avalanches and other natural events) on crop and livestock production, and on physical assets?
  - Complementary information on **damages caused by animals** under biodiversity.
- Does the farmer participate in **mutual funds** to have access to financial reserves, built up through participants' contributions, in the event of severe income losses?

New FSDN variables

# Innovation

Policy questions and analytical needs

**Innovation is a key driver of transition, sustainability and resilience, and can help address challenges, create new market opportunities and increase productivity.**

**New table on innovation** to address the following questions:

## ***Innovation on the farm***

- Has the holding adopted **any innovation in the last year?**
- **In which areas** has the farm introduced an innovation? (e.g., animal husbandry, soil and nutrients, water, energy, social innovation)

## ***Innovation projects and networks***

- Has the farm participated in **any innovation project or network?**
- If yes, in **which ones?** (e.g., research project, European Innovation Partnership (EIP) operational group, demonstration farm, local farmers network)

New FSDN variables

**More details on subsidies for knowledge and innovation**

# Digitalisation

Policy  
questions  
and  
analytical  
needs

Farm digitalisation is a key element to enhance **farm competitiveness** and to help farmers facing challenges by promoting **efficient and sustainable solutions**.

**New table on digitalisation** to address the following questions:

- Does the farm use **digital technology and services**?
  - **robotics** (such as for harvesting or milking)
  - **variable rate techniques** (such as for fertilisation or weeding)
  - **precision monitoring of crops** (such as digital mapping or yield monitoring)
  - **welfare and health monitoring of animals** (such as automatic regulation of barn climate or feeding systems)
  - **other**
- Under which **type of ownership**? (own; rent; shared ownership; contract work)
- How much is the **investment** (expenditure on purchases, major repairs and the production of fixed assets) on the given technology or asset?

New FSDN  
variables

# Indicative share of off-farm income

Policy questions and analytical needs

Need to learn more on the **income situation of the farming community**: what **sources of income** contribute to the **welfare of the farm household** and represent a **safety net for the farming activity**? How much farm activities rely on income from off-farm sources?

- Where a measure of farm household's off-farm income is available, it shows that many farm households derive **significant shares** of their overall income from sources other than agriculture
- The Court of Auditors' special reports No 14/2003 and No 1/2016 highlighted the limitations of the existing measurements to assess farm income

**Off-farm income of farm household** = household members' incomes from sources other than farm work and OGA directly related to the farm (salaries, rents, social transfers, etc.)

**Household** = people sharing resources and consumption

Information are asked by 4 percentage bands and category of sources

New FSDN variables



# Environmental variables

# Environmental Topics from the Basic Act

Topics from the Basic Act	
Farming practices	Antimicrobial use
Soil management	Animal welfare
Nutrient use and management	Biodiversity
Carbon farming	Organic farming
Greenhouse gas emissions and removals	Certification schemes
Air pollution	Energy consumption and production
Water use and management	Food loss on primary production level
Use of Plant Protection Products	Waste management

Normal text: existing FADN topics/tables  
**Bold: new FSDN topics**

# Data collection granularity

- **Farm level:** most of the information
- **Crop level:** to answer policy questions e.g., on inputs
- **Plot level:**
  - Optional on inputs information (left empty if not available)
  - Basic information on parcels: data sharing with IACS
  - Opportunities to evolve in case farmers use Farm Management Information Systems

# Assets - current Table D

Policy questions and analytical needs

Need to know more about **irrigation and water management practices** and costs incurred for **restoration after natural events** (fires, floods, landslides etc.), **assess climate change impacts**.

New variables in existing tables on **Assets**:

- New sub-categories under:
  - “Land Improvements” – **Irrigation and drainage**
    - “Machinery” – **Irrigation**
- New sub-categories under:
  - “Forest land including standing timber” - **restoration and improvement of forestry potential**

New Table on Assets - New variables on investments in:

- **Production of renewable energy**
- **Energy-saving technologies**
- **Emission reductions in animal housing**
- **Animal welfare**
- **Other Gainful Activities**

New FSDN variables

# Farming Practices and soil management

Policy questions and analytical needs

**New Table on Farming Practices** - Need to learn more about the application of **environmentally friendly farming practices and soil management techniques** (area on which the practice is applied).  
Also relevant for **GHG emission/removals** and **Carbon Farming**

New variable on **farming practices and soil management** related to the following practices/techniques:

- Conservation Tillage/No Tillage,
- Use of cover crops,
- Crop rotation
- Organic fertilisation
- Biological control
- Grassland management
- Application of lime
- Presence of specific land use systems (Agroforestry, Paludiculture)

New FSDN variables

# Nutrient use and management

Policy questions and analytical needs

Need to have more detailed variables allowing to calculate **Nutrient balances'** non-CO2 **GHG emissions** and **Air pollution (NH<sub>3</sub>)**

- **Table I (Inputs)** – quantity of N, P, K in mineral fertilisers detailed at crop level (optional: parcel level)
- **New table - Nutrient use and Management.** New variables on:
  - Share of produced manure used on farm
  - Manure Storage Capacity
  - Manure application techniques
  - Feed intake per type of animal and type of feed

New FSDN variables

# Water Use and Management

Policy questions and analytical needs

It is an identified knowledge gap, it is needed to know more about **water consumption** and improve water use simulation in models (linked to yield estimations)

New FSDN variables

- **Table I (Inputs)** – quantity of water used for irrigation at crop level (optional: parcel level)
- **New Table on Water Management.** New variables on
  - Water source
  - Water distribution networks
  - Water payment arrangements

# Use of plant protection products

Policy questions and analytical needs

Need to know more on **the use of plant protection products** and the economic performance of farms

## New Table - Use of Plant Protection Products

Quantity of used active substance at crop level (Optional: at parcel level)

Active substances are taken from the EU Pesticide database

National tables linking commercial names with active substances can be used by data collectors/liaison agencies if the quantity of commercial product is collected by farmers

New FSDN variables

## Food Safety

Home | Food ▾ | Animals ▾ | Plants ▾ | Horizontal topics ▾

Home > Plants > Pesticides > EU Pesticides Database

## EU Pesticides Database

The EU Pesticides Database allows users to search for information on active substances used in plant protection products, Maximum Residue Levels (MRLs) in food products, and emergency authorisations of plant protection products in Member States. Users can use the following search options to find information:

- **[Active substances](#)**  
The database contains information on active substances (including those that are low-risk or candidates for substitution) and basic substances, either approved or non-approved in the EU. Some safeners and synergists are also listed but these have not yet been assessed at EU level.  
You can [find the latest updates related to active substances here](#).



# Animal welfare - Antimicrobial use

Policy questions and analytical needs

Animal welfare is a key component of the F2F strategy. A careful evaluation of **what is already in place** is needed to identify specific targeted areas that may need improvement.

## New Table – Antimicrobial Use

New FSDN variables

- Average duration of treatment by active substance and animal categories
- Number of animals treated by active substance and animal categories

Needed for subsequent estimation of the quantity of active substances used, by applying a pre-defined standard daily dose, per animal type.

# Biodiversity (1/2)

Linked to CAP Specific Objective 6, F2F, EU Biodiversity strategy...

Policy questions and analytical needs

**New Table on Area of Landscape Features** present on farm. List of landscape features:

- Terraces
- Hedgerows, individual or group of trees, trees rows
- Field margins, patches or buffer strips
- Ditches
- Streams
- Small ponds
- Small wetlands
- Stonewalls
- Cairns
- Cultural features

Detailed definition of landscape features is provided, the list coincides with list of GAEC 8 (Table M, subsidies)

New FSDN variables

# Biodiversity (2/2)

**In the Subsidy table**, new items added on the share of subsidies received for Eco-Schemes and Agri-environmental climate measures devoted to biodiversity

New FSDN  
variables

**New table on Damages (monetary value) caused by wild fauna** - wolves, bears, deer, wild boars, other wild animals (not pests)

- Damage by wild fauna to crops and grasslands
- Damage by wild fauna to livestock
- Damage by wild fauna to physical assets (buildings, equipment)

# Organic farming

Policy questions and analytical needs

The Farm to Fork and EU Biodiversity strategies put **organic farming** at the heart of the transition to sustainable food systems.

New FSDN variables

- New groups of information included in existing tables
  - Table I – area of organic production (fully, in conversion) by crops
  - Table J – average number of livestock reared in organic farming by livestock categories.

# Certification Schemes

Policy questions and analytical needs

**Environmental certification schemes refer to certification programs to assess and recognize environmentally sustainable practices and products**

## **New table – Environmental certification schemes**

New FSDN variables

- Certification status by category of certification schemes
- Years since certification obtained by category of certification schemes
- Sectors which are covered by environmental certification schemes, including the EU Carbon Farming Certification

# Energy consumption and production

Policy questions and analytical needs

Need to learn more about **on-farm production of and investment on renewable energy**

**New Table – Energy** - New variables on the use and on-farm production :

- Cost of energy (more detailed categories of energy sources)
- Energy consumption (quantities, for different energy sources)
- On farm production of renewable energy (quantities, for different sources, e.g. Solar, wind, biomass)

New FSDN variables

Information on investments in renewable energy production are provided in **New Table D1 – Assets**

# Food loss on primary production level

Policy questions and analytical needs

The F2F strategy outlines measures aimed at increasing the sustainability of food production including **reducing food losses on primary production level**, to achieve the sustainable development goal of halving food waste by 2030.

New groups of information included in existing tables

- Table I – quantity of products lost on crop level
- Table J – number of deaths, number of emergency killings by livestock categories
- Table K – quantity of products lost on animal product level

New FSDN variables

# Waste management

Policy questions and analytical needs

Waste management represents a high priority in European policymaking on **circularity in agroecosystems**

New table – Waste production and management

New FSDN variables

- Waste production ( quantity of waste by waste categories referred to in Commission Decision 2014/955/EU)
- Wastewater management (production, storage capacity, reuse)
- Biomass management (production, storage capacity, reuse)



# Social variables

# Social Topics from the Basic Act

## Topics from the Basic Act

Labour

**Education**

Gender balance

**Working conditions**

**Social inclusion**

**Social security**

**Infrastructure and essential services**

**Generation renewal**

Normal text: existing FADN topics/tables

**Bold: new FSDN topics**

# Labour: main changes to current table C

Policy questions and analytical needs

Need to know more **about the social conditions of farmers and farm workers**

## New groups of information included in the existing table

- Citizenship: same MS / other EU MS / non-EU country.
- Farmers and workers well being
  - Days of overtime
  - Days of leave
  - (of which) days of leave for leisure
- Wage
  - Per year (for Regular paid labour)
  - Per day (for Non-regular paid labour)
- Social security schemes paid by the holding
- Work carried out by contract workers, expressed in total number of persons/days.

New FSDN variables

# Training and advice

Policy questions and analytical needs

- Vocational training can increase private returns by improving technical efficiency while improving sustainable performance. Training events facilitate interaction with experts and can lead to changes in values and attitudes towards new practices.
- Tailored advisory services provide feedback and guidance to farmers which can improve their sustainability and income.

## New table – Training and advice

### Training

- How many hours of vocational training did the people working on the farm have in one year?
- How many hours of vocational training were received by type of training provider?

### Advice

- How many days of advice did the holding receive during the year, by type of advice provider?

New FSDN variables

# Facilities and safety

Policy questions and analytical needs

**Good working conditions are a fundamental human right.** They relate to the physical, social and economic factors that affect the health, safety and well-being of people working on a farm.

## New Table – Facilities and safety

### Services on a holding:

- How many workers benefit from services (meals, accommodation, transport) provided by the holding in one year?
- What are the costs for the holding in one year?
- How much does the farm charge workers per day for these services?
- How many square metres (on average) does a worker have?

### Safety:

- Does the farm have a safety plan?
- How many serious working accidents did people on the farm have in one year?
- How many days was the person off work due to work accident?

New FSDN variables

# Social inclusion

Policy questions and analytical needs

**Social activities on farms** can benefit wellbeing and development. Farms can also provide work for people with **disabilities**. The CAP promotes social inclusion (8<sup>th</sup> specific objective).

## New table – Social inclusion

### Social farming

- Did the farm have any social farming activities during the year?
- How many people benefit from these activities?

### Disabilities

- Do people with disabilities work on the farm?
- How many?

New FSDN variables

# Services

Policy  
questions  
and  
analytical  
needs

Having **access to good services and infrastructure** can have an impact on the attractiveness of rural areas and farming, on the adoption of digital technologies and also on economic performances.

## New table – Services accessible to farmers

- Internet connection by speed (fixed and mobile)
- Distance of farm from services
  - Health
  - Education
  - Shops
  - Stations
  - Leisure and culture

New FSDN  
variables

# Generational renewal

Policy questions and analytical needs

**Supporting generational renewal** is a key objective of the CAP. It is the basis for the EU's food security and supply independence.

## New table – Generational renewal

Need to learn more about **farm transmission**:

- When was the farm created?
- Is it run by the same family?
- When did the current manager take over?
- Does any farm manager or regular worker benefit from a pension?
- Has the farm identified a successor? (for farms with managers above 50 year old)
- Is the identified successor
  - already working on the farm?
  - from the same family?
  - below 40 year old?
- What is the gender of the identified successor?

New FSDN variables



# Thank you!

Contributions welcome, before 15 January 2024  
to AGRI A.2 *Analysis and Outlook* Unit:

**[AGRI-FADN-FSDN@ec.europa.eu](mailto:AGRI-FADN-FSDN@ec.europa.eu)**