

State of the 2023/24 EU sugar beet crop, crop protection and IPM



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2023/24 sugar beet growing season: a complicated one - extreme weather patterns become the new norm - but no major issues, except a low sugar content in many regions at the beginning of this processing campaign

Weather played with the nerves of growers:

- **Sowing was on average 2 weeks late** (it did not finish until late April/early May) and growing conditions were below average, with **dry conditions** in many countries up to mid-July.
 - Many parts of southern Europe experienced heatwave episodes in July before slight cooling in August.
 - Many parts of north-western, northern central and northern Europe experienced dry weather in May-June followed by **excess rain**, which was most pronounced in the last ten days of July and the first ten days of August.
 - In countries with a surplus of rain, **early beet test were disappointing in terms of sugar content**, but root weight was good.
 - With the return of sunshine and high daytime temperatures in the beginning of September in many north-western countries, it is hoped that beet could further catch up its delay and increase its sugar content further as the processing season is starting.
- We may see great **yield variability** (between early, normal and later beet deliveries) over the harvesting/processing season

2023/24 sugar beet growing season: most growers were lucky & escaped from gloomy pest (aphids) prediction models, but crop protection remains a big issue

- Dry weather in May-mid July **did not allow optimal weed control** in many regions
- Rainy weather in August in many regions favoured the **development of foliar diseases** (notably cercospora) which necessitated fungicide treatments
- Growers were particularly worried about possible infestation of **aphids** and spread of virus yellows (models). However, aphid infestations and virus yellows in France seem to be confined to an area south of Paris (with strong infestation in some fields); a major crisis at national level is not expected.
- In Austria, **weevil** infestations, difficult to control, led to 5 000 hectares lost of which 2 000 not resown.
- **Beet flea beetle** infestation was difficult to control in parts of Finland due to lack of neonic (NNI) seed treatment
- In Southern Germany, the **SBR (low sugar content syndrome)**, due to a pathogenic bacteria transmitted by Cixiidae, difficult to control (R&D ongoing), might cause significant sugar yield loss (still remains to be evaluated for this season).

2023/24 sugar beet growing season: growers are desperately looking for effective tools

- **Effective alternatives to NNI seed treatment are needed to ensure satisfactory control of various harmful organisms.** While virus yellows “tolerant” varieties based on the existing breeders’ pools are coming on the market, R&D and especially research on the genome is still ongoing to allow the development of varieties with better agronomic characteristics (incl. yield and sugar content)
- **Concerns are increasing over weed control / management of resistance** as a key active substance - **Triflusulfuron methyl** - will be banned shortly → CIBE calls on the Commission and Member States to allow for adapted timing (derogation under Article 4(7) of Regulation 1107/2009 being scientifically supported according to EFSA conclusion)

2023/24

Discussing this issue before the EP ComAGRI in spring 2023, DG-AGRI suggested wrongly that the two following a.s. are effective alternatives to NNI:

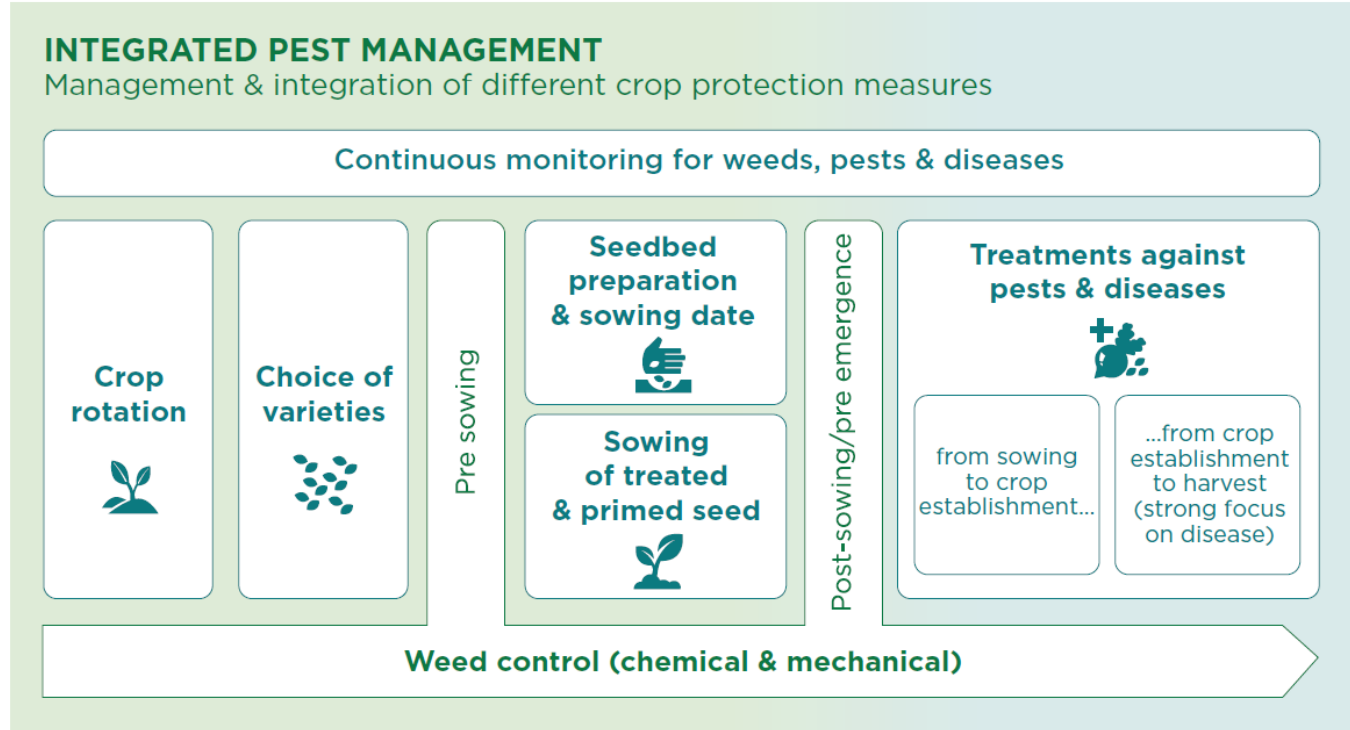
- **Spirotetramat** – DG-AGRI omitted to mention that its approval will expire on 30 April 2024 - it will not be renewed (applicant has decided not to seek renewal of approval). In any case, it is not effective under high pest pressure (see 2020)
- **Flonicamid**: widely authorised already but ineffective when pest pressure is heavy (see 2020).

Furthermore, another possible a. s. which would be used in beet seed treatment is also under investigation and might not be renewed in 2025 (not to speak about its current non-availability in certain MSs)...

- **Alternative to NNI** – “tolerant” varieties based on research on the genome is ongoing to allow the use of varieties with specific characteristics (incl. yield and sugar content)
- **Concerns are increasing over weed control / management of resistance** as a key active substance - **Triflurosulfuron methyl** - will be banned shortly → **CIBE calls on the Commission and Member States to allow for adapted timing** (derogation under Article 4(7) of Regulation 1107/2009 being scientifically supported according to EFSA conclusion)

2023/24 sugar beet crop

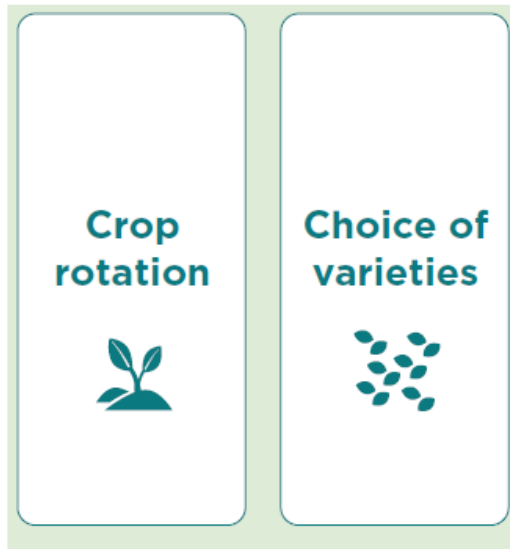
- At EU level, as it stands, a correct/average 2023/24 crop is expected.
- **Costs of production have increased significantly (25% to 35%) and are expected** to remain high despite the decrease of prices of some inputs.
- Growers are walking on a tightrope to maintain their productivity due to **persistent difficulties in crop protection** & for many it's like playing "Russian roulette".
- Current prices mitigate these difficulties, but in such a context a **market downturn** would be extremely detrimental: it must be anticipated, incl. at institutional level (safety net, risk management).



Source: EUBSSP Report on Crop Protection

*“For some crops such as fruit, tomato, **sugar beet**, pepper, cereals, and oilseed the degree of cooperation and sharing of information is higher compared to other sectors. In these sectors, the strategies for the reduction of pesticides and the application of IPM practices for these crops is consolidated and already in place.”*

Farmer’s Toolbox for Integrated Pest Management, EU Commission Final report, November 2022
<https://op.europa.eu/en/publication-detail/-/publication/d85592e9-b71b-11ed-8912-01aa75ed71a1/language-en/format-PDF/source-search>



- **Systematically grown in rotation with other crops** which helps to **prevent build-up** of **host-specific pests** and of pathogens causing **diseases** (sugar beet being grown in the same field every 4 to 7 years)
- Resistant/tolerant varieties are **well-established in all beet growing countries of the EU**: 100% of beet varieties grown in the EU are resistant/tolerant to at least 1 disease (rhizomania), with **double resistant/tolerant varieties** gaining ground (between 30 and 100% of beet varieties on offer), in some countries all beet varieties are double-tolerant/resistant, either rhizomania/rhizoctonia, rhizomania/nematodes or rhizomania/cercospora
- Breeding progress continues with **triple resistant/tolerant varieties coming on-stream**, at least one triple tolerant/resistant (rhizomania/rhizoctonia/nematodes) and **at least one quadruple tolerant/resistant** (rhizomania/rhizoctonia/nematodes/cercospora) variety on the market.



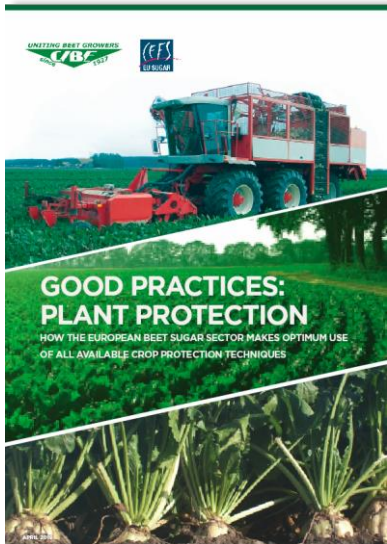
- Seed treatment is a good plant protection practice, part of IPM, because **young beet are highly susceptible to pests & diseases**. It allows treatment with **low doses** of fungicide/insecticide:
 - **protects** the young beet **against pests & diseases present** in the field during the first 60-90 days after sowing;
 - **avoids** 2 to 3 (sometimes 4) fungicide/insecticide **applications later on** in the crop season;
 - **limits risks to non-targets (incl. beneficial insects)**, e.g. by reduced doses, by reduced application frequency or partial applications
- **Precision agriculture** is widely used for sugar beet seed drilling

Treatments against pests & diseases



from sowing to crop establishment...

...from crop establishment to harvest (strong focus on disease)



- **Good Practices implementation**, the **evolution in active substances**, the use of **“Decision-support-tools”** have allowed during the past decades to reduce the use of fungicides and insecticides, with relative stability in recent years
- **Innovative tools** (precision spraying) are emerging
- Some indicators put in place in some countries to monitor such trends

But...

- Since 2018, the **loss of many (around 30) chemical active substances** is putting at risk the progress achieved so far because the shrinking toolbox + less efficient active substances + issue of resistance → should not allow to continue this trend
- **Biological products** are not effective solutions on the short and medium-term and can currently only be used effectively in combination with chemical PPPs
- **Mechanical/chemical weeding** between crop rows and within crop rows has developed but, except for organic beet, it can **only be used in combination with chemical PPPs**
- Innovative tools (digital, robotics) are still not accessible on a large scale: they necessitate **heavy investments**
- **Science, new knowledge and innovation are still needed!**

- The new EU [Database on IPM best practices](#) only lists a grand total of 6 (from 4 MS) with regards to sugar beet, to wit:
 1. Decision support tool for optimizing aphicide treatments against aphids vectors of beet yellowing virus (FR);
 2. Decision support tools to optimize fungicide treatments in vegetation against the main leaf diseases of beet (FR);
 3. PPP selection: The use of chemical synthetic pesticides is needed. If diseases and pests cannot be controlled, certain crops can no longer be cultivated because the pests cannot be controlled with biological methods (AT);
 4. Use of varieties tolerant to foliar diseases of sugar beet (FR);
 5. Consult aphid monitoring system for sugar beet cultivation (DE);
 6. Use of mulch in the cultivation of e.g. sugar beet (PL).
- However, this only provides a **very superficial glance of the IPM practices in sugar beet** and is misleading as to the widespread extent of their adoption in agricultural practice.

IPM and sugar beet: some comments on EU project **Farmer's Toolbox for Integrated Pest Management**



- The EU [crop/sector specific guidelines inventory](#) lists a grand total of 3 (from 2 MS) with regards to sugar beet, to wit:
 1. Guidelines for IPM for sugar beet cultivation (DE)
 2. Methodology of integrated sugar beet and fodder beet protection for advisers (PL)
 3. Methodology of integrated sugar beet and fodder beet protection for producers (PL)

- This only provides a **very superficial glance of the beet growers' guidelines** and is misleading as to their widespread implementation among beet growers, be it via certification schemes (e.g. Standard Vegaplan in BE, QS in DE, NYKR in HU, VVAK or Global G.A.P. in NL, ÖPUL in AT) and/or beet growers' guidelines which are part of the IPA, e.g. Guidelines for sustainable sugar beet cultivation in DE, Code(s) of Good Practice in Agriculture/Production of Sugar Beet in PL, Growers' Guidelines/Codes of Good Practice in DK, FI, LT, SE), covering crop rotation, variety & seed treatment choice; soil management (seedbed preparation, biodiversity); nutrient management; **plant protection**; harvest & storage; health & safety; field-specific record-keeping; legal compliance (product quality, traceability, safety, sustainability)

IPM and sugar beet: a long and ongoing story



INTEGRATED PEST MANAGEMENT

has been widely practiced by sugar beet growers for decades

CROP ROTATION

Sugar beet is generally grown in the same field only every 1 to 3 to 5 to 8 years. It is grown in rotation with cereals, potatoes and other crops. Crop rotation, which has been practiced for centuries, naturally helps prevent the build up of host-specific pests and disease-causing pathogens.

CHOICE OF VARIETIES

So far, around 50% of yield progress has come from improved varieties. 2023 sugar beet varieties grown in the EU is resistant/tolerant to at least one major disease, the number of double tolerant varieties is increasing. Research continues to develop varieties resistant to virus yellows while at least maintaining yield. NGT can contribute to obtain even better performing varieties.

WEED CONTROL

Sugar beet are very sensitive to competition from weeds for nutrients, light, water and space during the beginning of the crop season. This can cause huge yield losses. The sooner weeds are controlled, the better. Mechanical weeding is used when feasible. Farmers constantly try to reduce doses, also to prevent resistance build-up.

MONITORING

Constant observations in the field as well as through regional pest and disease monitoring systems are very well established in sugar beet growing. For harmful organisms forecasts, threshold levels defined for the region, specific areas, crops and climatic conditions are taken into account before treatments, where feasible. Unnecessary spraying is avoided.



The same crops, such as corn, sorghum, maize, wheat, cereals, and oilseed crops, are grown in rotation with sugar beet. This helps to reduce the risk of pest and disease build-up. The higher the diversity of crops in the rotation, the more effective the pest management practices for these crops are consolidated and already in place.

IC: Farmer's toolbox for integrated pest management 9.2022

INTEGRATED PEST MANAGEMENT

good results, always challenged by new regulatory and climatic conditions

Active substances lost for use in sugar beet since 2018 in the EU



One cannot reasonably expect massive future additional benefits from IPM. As the toolbox of growers continues to shrink drastically without any effective alternatives coming on stream.

IPM helps reducing PPP use, which remains nonetheless indispensable. However, sugar beet growers in the EU have lost over 20 active substances since 2018. Farmers are becoming increasingly deprived of effective tools to protect sugar beet against harmful organisms (weeds, pests and diseases.)

Evolution of fungicide and insecticide use in sugar beet in France since 1997 (in g of active substance/ha)



For decades, seed treatment has allowed reduced PPP use after sowing

A FEASIBLE SUR ON IPM SHOULD TAKE INTO ACCOUNT:

- The need for flexible and dynamic guidelines instead of unrealistic binding rules and inflexible and penalizing provisions
- The positive contribution of seed treatment to PPP use reduction
- The decreasing availability of effective crop protection tools
- The need for innovation and access to effective alternative products and technologies, such as NGTs, to be accelerated and financed to help ensure EU food sovereignty
- The need to avoid additional burdens and costs for growers
- The need for targeted support to technical beet institutes in their research and advice to growers

- Widely practiced by sugar beet growers for decades as reported by the EU Commission
- Constant investments by the sector have allowed for the development of new varieties tolerant to various diseases as well as of various “decision-support-tools” which have supported a more targeted use and thus a reduced use of inputs (PPPs and fertilizers) during past decades
- Seed treatments remain a key tool in IPM
- Further decrease of inputs is reaching its limits:
 - as the toolbox is emptying without any new effective tools coming in
 - as climate change encourages the proliferation of harmful organisms
 - new digital/smart tools (incl. robotics) are extremely expensive and not yet ready for use in practice
- **Even maintaining the level of inputs is challenging without effective alternatives tools, improved new varieties (including NGT varieties), significant investments in research and development and appropriate timing**

As it stands, the key question is HOW AND AT WHAT REALISTIC PACE sugar beet growers could further improve their sustainability (incl. economic sustainability)

- The **Commission proposal for a SUR** would not allow it: it is not in touch with the realities, unrealistic and not feasible as such and **should be amended profoundly** with the aim :
 - To remove legally binding targets,
 - To remove unrealistic provisions for sensitive areas,
 - To avoid unnecessary & counterproductive rigid mandatory provisions on IPM (putting in danger seed treatment for example) which ignore know-how and skills of farmers as well as variability of farming conditions and development of techniques and science and which would put farmers in a legal nightmare
 - To provide sufficient funding
 - To make it consistent with the EU agrifood Trade policy (“mirror measures”)
- Strong **incentivizing provisions** should replace the punitive provisions in the SUR proposal
- The **proposal for an appropriate regulatory framework for NGTs is also crucial**: NGTs are important additional tools but will not replace plant protection products. The Commission proposal on NGTs is a first step which should be adapted in a proportionate way to allow a rapid development of such innovation for the benefit of farmers, climate change mitigation and protection of the environment

- Where are the responses/commitments by the EU institutions to our repeated calls vis-à-vis harmful decisions on PPPs ?
- Where is the consistency with other EU policies (EU Trade policy)?
- Where is the link/planification between research for this “transition” with investments (timing & funding)?
- There is an urgent need to review the current course:
 - to take full account of all sustainability aspects and
 - to review the method and change it from top down to a bottom up
- #SOTEU: finally, it seems that the EU Commission is taking stock of the situation faced by many farmers!
- CIBE welcomes this move and is ready to take an active part in this strategic dialogue which should urgently lead to concrete results



Thank you for your attention!



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