



Notes of the international workshop on vegetative propagating material September 10, 2020

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About the report

This report has been produced in the framework of the Horizon 2020-funded project LIVESEED.¹ The main aim of LIVESEED is to boost the production and use of organic seeds and plant breeding for organic agriculture across Europe. It is co-ordinated by IFOAM EU, and its scientific coordinator is FIBL-CH.

Work Package 01 of LIVESEED explores EU Member States in terms of their implementation and best practices connected to the EU Organic Regulations, in the contexts of national regulatory and policy frameworks, specifically regarding the production, use, and transparency of organic seed.

As part of this Work Package, Bionext, in cooperation with IFOAM OE, ECO-PB, BEJO and FIBL organised a workshop for North Western European countries to discuss possibilities for improvements regarding the production and the use of organic seeds at the national and regional level. During the workshop, several stakeholder groups were present from each country (competent authorities, seed database managers, seed companies, research institutions, organic farmers, seed associations, organic certifiers).

The presentations and the main outcomes of the workshops are summarized in this report, while the presentations in detail can be found on the LIVESEED website, under results for WP1.

This report is recommended for national policymakers, and all stakeholders involved in the production and use of organic seed: national authorities, farmers, certifiers, producers, retailers, plant breeders, seed authorities, and the general public.

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¹ <http://liveseed.eu>



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Summary

Vegetative propagation material such as seed potatoes, rootstocks and cuttings were in the spotlight of a LIVESEED workshop on 10 September 2020. This type of plant propagating material is used for the production of crops, like apples, grapes and potatoes. Since all vegetative propagating material is going to be included in the category of 'plant reproductive material (PRM)' in the New Organic Regulation it is an important part of the strategy to work towards 100% organic PRM. The workshop was the first of its kind in the context of the LIVESEED project.

The workshop started off with a presentation on seed potatoes, a product for which already a solid supply is available on the market in organic quality. According to Maaïke Raaijmakers (Bionext) a key success factor for the use of organic seed potatoes in the Netherlands was the introduction of a pre-ordering rule. This means that a derogation (to use non-organic seed potatoes) can only be requested if 1) there is a shortage in supply and 2) the producer showed they ordered the organic material in time. This measure is effective against fraud and prevents a degradation in the quality of the supply due to long storage times.

This example also demonstrates the crucial role of the national seed databases, where seed potato supplies are listed. With the entry into force of the new EU Organic Regulation, supplies of all other vegetative propagation material will have to be inserted into the database as well. In this context, one participant in the workshop raised the point that a great amount of sales deals are sealed directly between the supplier and the customer. In this well-established business practice, the database is not used as a marketplace, but suppliers still have to make sure to insert their offers also in the database to act in compliance with the Organic Regulation. This is important because the supply in the database is the basis on which national authorities decide whether a derogation request is granted or not.

While organic seed potatoes are widely used, the situation is different for other crops like hard fruit (apples, pears), soft fruit (berries) and grapevines. Even though organic apple breeding is ongoing in Germany and Switzerland, for example, mostly non-organic propagation material is used, as explained by Freya Schaefer (FiBL DE). The production of (organic) fruit trees takes a long time and is quite costly. Since trees cannot be stored for a longer period they are mainly produced on order. Fruit tree producers are able to offer most (not all) varieties in organic quality if ordering takes place with sufficient time (a year and a half) before planting.

A bottleneck for the production of organic PRM for soft fruit (berries) is the fact that the production process includes an in-vitro stage (without soil), which does not align with the definition of 'organic plant reproductive material' in the EU Organic Regulation. At the same time it was emphasized that the in-vitro stage is crucial to ensure that growers receive healthy starting material. The participants agreed, however, that progress can be made by producing the following stage (long/short canes, rooted cuttings) under organic conditions. In that case at least the starting material for the farmers is organic. After that, the next step would be to produce organic mother plants as well.

The situation is unique for organic grapevine material, as highlighted by an organic winemaker. Due to the limited options for plant protection in organic systems, growing organic propagation material for grapevines is a challenge in North/Western Europe mainly due to fungal diseases. At the same time, consumers and retailers still demand the classic (conventional) varieties such as Chardonnay, Riesling etc. which is why breeding varieties that are suitable for organic input conditions are currently not economically viable. A possible solution to this problem is research on innovative production techniques that manage the fungus problem. One project on this topic is currently financed by the German Ministry of Agriculture.

It is evident that for many vegetative crops, progress should be made and measured in small steps, as it is not in all cases an easy undertaking to produce organic starting material. The participants of the LIVESEED workshop agreed that National and EU-wide roadmaps per individual species and an EU expert group on vegetative material could be a decisive factor to gradually increase the percentage of organic vegetative propagating material.



Session 1

Moderator: Eric Gall (IFOAM EU)

Notetaker: Katharina Meyer (FIBL DE)

Introduction

Martin Sommer (IFOAM organics Europe) gives a short overview of the rules on vegetative propagating material in the new organic regulation. (*see also [presentation](#)*).

In the current organic regulation, the focus is on seed and seed potatoes. This changes with the new organic regulation, which has set the aim to come to 100% organic plant reproductive material (PRM). This includes both seeds and all vegetative propagating material. When conventional vegetative propagating material is used, this shall not be treated after harvest with chemical plant protection products. With the entry into force of the new organic regulation, all organic and in-conversion vegetative propagating material shall be placed on the national databases for organic seed/PRM.

Potatoes

Maaik Raaijmakers (Bionext) presents the status quo in different countries on the availability and use of organic seed potatoes and smart practices in regulation. (*see also [presentation](#)*).

A key success factor to increase the use of organic seed potatoes is the obligation for farmers to order on time. This means that a derogation (to use non-organic seed potatoes) can only be requested if the producer showed they ordered the organic material before a certain date.

Without this deadline, you risk organic farmers will order at the last minute when no organic seed potatoes are available anymore. Seed potatoes cannot be stored until the next season. Therefore, if there is insufficient demand, growers sell their organic seed potatoes on the conventional market to avoid deterioration in quality. In the Netherlands, organic seed potatoes have been on category 1 (no derogation) since 2004. Since the obligation to order on time has been included in 2006, there is no longer any shortage in supply. In France seed potatoes are on category 1 since 2020.

Discussion:

Remark: The producers of organic seed potatoes mention that they are active in many countries but they do not put their offer on all the different databases. They have several reasons for that. First of all they do not need to use the database since they have local representatives in every country. Those representatives are in direct contact with the farmers. Secondly they do not think it is useful to put offer on a database as long as farmers have the possibility to use cheaper conventional seed potatoes.

Answer: For the competent authorities it is decisive what is available on the national seed database. For varieties on the database no derogation will be granted. For varieties that are not on the database derogation can be granted even if there are organic seed potatoes on the market.

By looking at the derogation reports seed potato companies can see what are the main varieties used by organic farmers in the different countries. If they offer (some of) the demanded varieties on the database, derogations for these varieties will not be granted anymore.

Remark : One of the companies mentions the fact that the local sales people receive a sales bonus for the seed potatoes they sell. They fear that when using the database, they cannot use the sales bonus structure anymore; that the database and their sales bonus structure are incompatible.

Answer: The sales do need not go through the database. The offered varieties (together with the company name and a contact number) just need to be listed there to prevent unjustified derogations. So if a farmer asks for a derogation the control body can say; no you do not get a derogation because



there is still organic offer from this variety. So please get in touch with the company selling this variety. Then the farmer will contact his sales contact.

Hard Fruit (apples, pears)

Freya Schäfer (FIBL DE) presents the status quo in different countries on the availability and use of organic fruit trees and rootstocks, and smart practices in regulation (*see also [presentation](#)*). The production of (organic) fruit trees takes a long time and is quite costly. Since trees cannot be stored for a longer period they are mainly produced on order. Fruit tree producers are able to offer most (not all) varieties in organic quality if ordering takes place with sufficient time before planting. Therefore in several countries farmers are obligated to order their trees at least a year (Germany) or a year and a half (The Netherlands) before the planned planting date. In Italy in 2013 a special database was introduced where fruit and vine nursery stock producers list available organic material. Organic farmers can only receive a derogation if they can prove they have searched this database, in the year before planting. In Switzerland the price difference between conventional and organic trees is put in a fund to improve the offer of organic fruit trees and berries.

Discussion

Question: The diversity to work with the regulation and its interpretation is impressive. On what basis is it allowed to use conventional propagating material? The wording in the EU regulation is not clear. My interpretation is that it is only allowed for mother plants. The present regulation does not leave room for granting derogations for whole plants. The shoot or runners of strawberries yes, but not whole plants.

Answer: You are right that in practice not only conventional propagating material is used but also conventional planting material which should, according to the EU regulation, always be organic. There are several reasons for this. First of all it is not always clear for the control bodies what is the actual propagating material and what is coming from the next stage of production. There are different ways of interpretation. Control bodies might think that the starting material for the farmer is the same as the propagating material.

Secondly there is still a great lack of supply of the organic planting material from vegetative crops. So if the rules are interpreted very strict the consequence would be that farmers can no longer grow organic fruits. To solve this shortage it must become obligatory for farmers to order on time so companies can produce the right organic trees for them. You cannot expect companies to keep thousands of organic trees from all the different apple varieties on stock, hoping for clients. So pre-ordering rules are needed to increase the supply.

Question: In Belgium most apple trees are in-conversion and not organic. Companies must put new land (where no apples were cultivated before) in conversion every year to prevent 'Apple Replant Disease'. Are there in-conversion trees in other countries as well?

Answer: We are aware of the "replant disease" and therefore producers use new land in conversion every time. But I think in general apple tree producers harvest the trees in the third year after they have reached the organic status.



Session 2

Moderator: Maaïke Raaijmakers, Bionext

Notetaker: Niels Heining, Bionext

Raspberries

Sam Neefs from Proefcentrum Pamel in Belgium explains how propagating material for raspberries is produced. (see also [presentation](#)) In practice there is a difference between floricanes and primocane raspberry varieties. Floricanes are usually sold to the farmers as long canes, and primocanes as short canes. It takes around a year to grow a rooted cutting into a long cane. If a farmer plants long canes he can harvest the first raspberries approximately 10 weeks later. Farmers using short canes, plant them in their fields to grow new shoots. Those new shoots (plants) will produce raspberries the same year.

Starting with a new variety, the multiplication of raspberries is always done in vitro. After that the mother plants are grown in pots. The actual propagating material are the cuttings from the mother plants. For organic PRM the mother plant must be produced under organic conditions. There is still discussion whether organic mother plants can be produced off-ground as well. In practice however not only conventional cuttings are used by organic farmers but also conventional short canes and long canes. So a first step would be to produce organic short and long canes.

situation in Belgium

In Belgium, under the current regulation, it is allowed to multiply in pots under organic conditions. From the moment the plants start to produce, they must grow in the soil. At the moment there is no organic raspberry PRM available in Belgium. Organic farmers can get a derogation for conventional long canes but only if they are bare root. Also for short canes or for rooted cuttings they can receive a derogation.

Last year the Centre in Pamel bought conventional cuttings, grew them organically into long canes and divided them among different farmers in Flanders. This is not organic PRM yet, as the mother plant was not organic. The next step is to produce organic mother plants. Therefore they try to motivate companies involved in raspberry plants to produce organic mother plants.

Discussion

Question: is it possible to propagate all varieties organically?

Answer: Technically yes but for some varieties you need a license. If companies don't have the license to grow specific varieties, they can't reproduce them. We work only with non-licensed varieties, these are often old. Therefore we aim for existing companies to start producing organic mother plants.

Question: I heard from France that a problem is that the production of mother plants is always done in vitro and therefore can't be organic. How do you deal with that?

Answer: Starting with a new variety, you always pass an in vitro stage. But after that the plants are usually grown for 1 or 2 years in a lice-free glasshouse. There they can grow under organic conditions.

Question: What's the problem with conventional grown in vitro mother plants? Start the organic cycle with healthy material is important.

Answer: Yes but we also want to start with organic propagating material. If you want to have organic propagating material, you need organic mother plants. They cannot be produced in vitro.



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The next step in the production cycle are the organic short- and long canes. This is the starting material for the farmers and according to the regulation this should always be organic. In practice this is not the case yet so we should start there.

Question: Are there already organic long canes on the market?

Answer: Yes we are doing it in Belgium and in the Netherlands Genson started with organic long canes. We know all the companies that are active in organic material. We use the databases to find new companies and contact them.

Remark: the raspberry growers in Holland are very professional, they need professional material to plant. A solution I've seen is that farmers buy a conventional cutting and grow the long cane themselves in a pot. Quality of the long canes really must be very high.

Answer: I agree, the problem of bare roots is that they are more susceptible to failure than long canes in pots, that's problematic. We need more research to find out how we can grow organic planting material of high quality.

Strawberries

In strawberry production there is a difference between single-bearing varieties with a short harvest period and everbearing varieties that produce strawberries for as long as the temperature allows it. Farmers can use different types of plants as starting material; rooted cuttings, fresh plants, frigo plants, tray plants, misted tip plants and waiting bed plants.

Like with raspberries, the propagation always starts with a conventional produced mother plant to avoid viruses and quarantine diseases. After that the plants can be grown both in the soil (on propagation fields) and in pots.

There are already producers of organic strawberry plants. For instance the Dutch company The Kemp. They produce organic waiting bed plants, frigo- and misted tip plants from several single-bearing varieties. For the everbearing varieties the variety owners often do not give permission to produce organic plants. The mother plant production is not done under organic conditions yet so their actual propagating material is still conventional.

Question: Is strawberry considered a perennial? The mother plants often don't stay in the soil for two years.

Answer: According to the organic regulation they are considered perennials, but in practice that is no longer the case. Farmers buy new plants at least every two years and often every year. This issue should be raised in Brussels to solve it at the EU level.

Grape vines

Uli Zerger, director of Stiftung Ökologie & Landbau explains that there are around 10.000 ha of organic grape vines in Germany for the production of organic wine. Currently there is no organic grape vine material planted. All wine producers are using conventional produced grape vines. In Austria it is a bit different. There organic plant material is available for wine producers. According to the farmers there are no organic plants available due to the limited options for plant protection in organic production. As long as potassium phosphate is not allowed it's really difficult to grow organic grape vines from the varieties that are currently used. Therefore research is necessary. The production line must change and the sector needs a roadmap to come to organic propagating material. In 5 or 10 years we might be at a point that organic material is available.



Klaus Rummel is organic farmer and wine producer in Germany. He grows 30 different varieties of grapevines. He explains that with conventional varieties it's really hard to grow grapevines without copper. Nurseries concluded 5 years ago that's impossible to start production with max 5 kg copper/ha. A farmer that tried using organic plants, had 20% plant loss. Nurseries must give farmers a guarantee and this makes it very expensive for them. The only solution that Klaus sees is changing to new varieties that have a fungus resistance. On his farm he grows 70% new varieties, that makes it easier for the nursery. But as long as the organic customer wants Chardonnay, Riesling etc, it's economically not feasible to have an organic nursery. The risk and therefore the price will be too high. Changing to new varieties will make life easier according to Klaus. Research stations they try out new techniques to make organic production possible.

See also the interview with Klaus Rummel in the LIVESEED booklet Success stories on organic seed production & breeding.

Discussion

Remark: Uli Zerger points out that the situation in southern Europe is different. Diseases are different there and therefore situation is also different, but the need for resistances is similar.

Question: Could a covenant be an option for wine to introduce new varieties to the market?

Answer: In Germany we already have a project with the ministry of agriculture, they spend a lot of money on organic wine production. (see <https://www.hs-geisenheim.de/vitifit/>) Also on the market introduction of new varieties. We went from 1 to 10 percent organic production and they want to go to 20 percent. There is also money available for research.

Question: It is clear what is needed: breeding research and organic nursery research, a roadmap. The question is who should take the lead?

Answer: the organic sector doesn't have enough time and knowledge to create a roadmap, but we should be involved.

Question: to make road maps is a good idea. Could LIVESEED make templates for this? Species by species and country specific.

Answer: We will definitely look further into the possibilities to create road maps to increase availability of organic propagating material within LIVESEED. Maybe this can be part of a follow-up project. We will also report this suggestion to the European Commission. Maybe this can be integrated in the national action plans as part of Farm to Fork?

Ornamentals

Andrea Frankenberg leads a project on organic ornamentals (Bio Zierpflanzen) at Bioland. She explains that the current situation is not easy (see also [presentation](#)). Growers of organic ornamentals are pioneers. It's a very young market. Producing propagating material for ornamental plants is also not easy. Cuttings come mainly from North-Africa. Breeders are there for climatic reasons. The new organic regulation is not working for balcony plants. Perennials in pots are in a better position. Farms that are growing organically for a long time sometimes have their own mother plants. But there are no organic breeders yet.

The problems with in vitro in the ornamental sector is the same as with raspberries. Humboldt university in Germany is doing research on this.

Flower bulbs can be sold both as an end product (to grow flowers out of them) or as propagating material for other bulb producers. There are no nurseries focussing on the production of organic propagating material. Usually farmers save some of their bulbs (the smaller sizes) and re-use them the next year.

Regarding trees there are some organic nurseries for Christmas trees in Germany and Denmark but the quality of the trees is very bad.



Conclusions and follow up

The question is what future actions are needed and how can we create more cooperation between the people working on this topic? The following solutions that were mentioned during this workshop:

1. National expert groups on vegetative material
2. Clarifying rules on vegetative propagating material in the new organic regulation
3. Install a pre-ordering deadline for ordering vegetative material
4. Develop roadmaps per species
5. Capacity building for breeders, supported by the value chain

With an online poll the participants were asked to choose the most important action point.

It was concluded that although solution 1 and 2 were most important according to the participants, all action points are needed to increase the production and use of organic vegetative propagating material. The LIVESEED team will present them at the European workshop in November and suggest to the Commission to integrate the roadmaps into the organic action plans.

