Plantum

CROP HEALTH

03/2024

Strong and healthy starter material is the basis

With strong and resilient seed and plant material, Dutch breeding and propagation companies worldwide form the basis for good harvests and healthy products. As such, they also contribute to resilient cultivation and the protection of the environment. After all, growers with strong and healthy starter material do not have to intervene as quickly.

For example, resistance to diseases and pests contributes to sustainable crop protection with lower use of chemical plant protection products. Resilient starter material is also less susceptible to abiotic stress factors such as drought or extreme rainfall, and produces a stable and reliable yield.

Dutch companies can only (continue to) play this role with the help of research and development. Knowledge of the plant and its environment contributes to the rapid development of new resistances and new methods to prevent diseases and pests. In addition, companies must also be given sufficient opportunities to produce 'resiliently' themselves. This also requires the use of plant protection products, with Plantum advocating simple authorisation procedures and sufficient options for starter material.

SEEDS AND YOUNG PLANTS FORM THE BASIS OF SUSTAINABLE CROP HEALTH

Plantum supports the wish of European and national policymakers and politicians to achieve more sustainable cultivation systems, with sustainable use of plant protection products and with less negative impact on people and planet. We also see an important role for propagation material. It is not without reason that Plantum is affiliated with the Dutch Implementation Programme for the Vision for the Future of Plant Protection 2030.[1]

The Netherlands not only supplies starter material for Dutch growers, but also exports approximately 4 billion euros worth of seeds and young plants every year. Healthy starter material forms the basis for a good start to healthy cultivation. Starter material must be clean, resilient, free from diseases and pests, and strong. Dutch breeding companies are very successful in developing resistances. In potato cultivation, for instance, nematode-resistant varieties are an important weapon against potato cyst nematodes. And in lettuce and onions, breeding contributes to controlling downy mildew.

These types of breakthroughs are only possible thanks to continuous plant research. Plantum advocates bigger investments in the fundamental research that forms the basis for resistance breeding. In addition, new and innovative breeding methods, such as CRISPR-Cas, can significantly shorten the development time of new resilient varieties. It is therefore important that clear and practical rules for these methods are introduced at European level very quickly. The promising long-term CropXR programme for breeding against abiotic stress factors started in 2023.

RESILIENT CULTIVATION AND IPM

In the Implementation Programme for the Vision for the Future of Plant Protection 2030 we pursue resilient plant and cultivation systems. Crop health is extensively taken into account, including, for instance, cultivation methods, soil, fertilisation, variety choice and cultivation measures. With regard to crop protection, the principles of Integrated Pest Management (IPM) are followed.

[1] By 2030, agriculture and horticulture in the Netherlands will have adopted sustainable production methods, with resilient plants and cultivation systems, so that diseases and pests have far less chance of taking hold, and the use of plant protection products is reduced to a minimum. Where plant production products are used, this is done in accordance with the principles of integrated pest management, with near-zero environmental emissions and near-zero residues. This assures the agriculture and horticulture sector of continuing, good economic prospects.

In addition to breeding resilient varieties, Dutch starter material companies are also successful in the development of non-chemical and targeted crop protection methods. About 15 years ago, for instance, strawberry cultivation companies developed an environmentally friendly method for combating strawberry mites in strawberry mother plants, the CATT method (Controlled Atmosphere Temperature Treatment). In outdoor vegetableplant cultivation and in grass seed cultivation, the possibilities of mechanical weed control are again being examined more intensively. Seed companies apply biological and/or chemical plant protection products to seeds using seed treatment technologies, which protect seeds against diseases and pests during germination and initial growth of the plant. This application of products is very targeted, requires only small amounts of products and greatly limits emissions to the environment and potential exposure of users and the environment.

A good IPM strategy requires effective alternatives to harmful chemical crop protection, such as biological and low-risk solutions. Unfortunately, these alternatives are limited and their practical application still requires more research. Plantum advocates regulatory adjustments and support for research to improve the availability of alternatives. At the same time, existing plant protection products should be retained until suitable alternatives are widely available.

SPECIFIC NEEDS

Under stricter European requirements, many active substances used in plant protection products lose their approval, which poses challenges for breeding and propagation companies. The current package of permitted plant protection products often does not meet the unique circumstances of these companies. For instance, carrots for consumption grow outdoors, while the seed-producing (flowering) carrot plants are grown in greenhouses with other diseases and pests. Because the needed plant protection uses, often involve small quantities, crop protection industry rarely apply for authorisations due to time and cost issues. This hampers the sector in supplying high-quality varieties, plants and seeds, as effective disease and pest control is essential.

ADJUSTING PROCEDURES

Plantum is calling for a simplification of the authorisation procedures for ‘minor uses’ and also advocates further European harmonisation. Plantum itself plays an active role in this through initiatives such as Euroseeds and the EU Minor Uses Coordination Facility. In addition, we emphasise the need for simplified and accelerated procedures for the approval of basic substances and low-risk substances. We also advocate a system approach (looking at the entire production chain) with sufficient options for starter material, because diseases and pests can be tackled in a much more targeted and limited manner and many problems in cultivation can be prevented.

IPM IS MORE THAN PLANT PROTECTION PRODUCTS

An effective package of plant protection products and crop protection measures also includes sufficient products for hygiene (prevention), corrective products and clarity about the options for using biostimulants against abiotic stress. There must also be more tools, as well as knowledge and knowledge dissemination and policy space for soil improvement and soil improvement measures.

Lastly, phytosanitary requirements are a concern with regard to IPM: many countries outside the EU apply a zero-tolerance policy for the presence of diseases/pests/weeds on plant products and sometimes also for ‘living organisms’. However, with IPM-grown products there is a chance that ‘organisms’ are still present to a small or low extent. As the export of plant products outside the EU is very important for Europe, exceptions to the rules for breeding and production of starter material may be required. That will always involve limited areas.