PROTECT MOLECULES TO PROTECT CROPS

Product Stewardship is indispensable to foster the sustainability of available soil fumigants

Good Stewardship may preserve products from a regulatory and technical perspective, matching the best principles of Integrated Pest Management (IPM)... Read more

PROFESSIONALISM WINS

A successful derogation campaign 2015 for DMDS in Italy

When a job well done can open new possibilities for implementing innovation... Read more

IN THE SOIL, NOT IN THE AIR

TIF (Totally Impermeable Film): the plastic film for sustainable soil fumigation

Products must stay in the soil, not diffuse into the air. The right choice of plastic film makes the difference between success and failure... Read more

GUARDIANS OF NATURE

NEMGUARD a new Bio-nematicide for Certis

Integration of different tools, agronomic, chemical and natural, leads to best control of nematodes... Read more

PARTNERS IN EXCELLENCE

Certis interviews Forigo-Roter, producing machines suitable for soil treatment with machines for soil treatment

The best results come from the right combination of the right product with the right machine... Read more
As well as Certis’ in house expertise, these programmes also rely on the support and commitment from our whole distribution chain. Nevertheless, it must be emphasised that this change of paradigms cannot be achieved overnight but is a long term process. Certis Europe strongly believes that Product Stewardship is, alongside IPM, an important pillar for Sustainable use and essential to defending the position of crop protection products in general and soil fumigants in particular, now and in the future. 

Rob de Vries
Product Stewardship Manager
As this was the first time DMDS was used in Europe, a special monitoring programme was also put in place to check DMDS diffusion to air by application, plastic cut and final plastic removal. This programme, supported by Certis staff, involved three new product stewardship specialists, who have followed the applications closely in the field. There was also a close collaboration between Arkema and professional applicators, which lead to the last derogation campaign in Italy as part of the CleanStart strategy, offering new technical solutions, training for soil management, diagnostic support and partnership with key customers. Certis Italy today, with this new achievement, is a major player in the soil treatment market, considering its CleanStart portfolio including Basamid, DD Soil, Accolade 94EC, Jet 5, and Tusal, a new soil biofungicide.
Sustainable fumigation requires good stewardship practice to minimise gas emissions and the exposure of operators/bystanders. Therefore, use of plastic film that is impermeable to gases is the first technical choice. For instance, polyethylene films (low or high density) are highly permeable to fumigant gases, reducing both efficacy and safety for the environment and humans. So, no surprise that soil fumigants have been included in Annex I with the strict obligation of using gas tight film for application, which means Virtually Impermeable Film (VIF) or Totally Impermeable Film (TIF), ensuring a higher efficacy level and uniformity of result (Fig. 3). The former contains polyamide while the latter contains Ethylene Vinyl Alcohol Copolymer (EVOH).

VIF and TIF have been compared to PE in high humidity and temperature conditions, very common in the protected field (see graph). Data confirms that PE is permeable to gas, while VIF performance is strongly affected depending on the quality level. TIF proves to be the least affected, showing reliable performance in all conditions. Ongoing trials are also showing good solarisation capacities for TIF films. The advantages of TIF include:

- Recyclable with polyethylene (VIF is not).
- Fumigant vapour barrier superior to LDPE/HDPE or VIF.
- Improved safety for applicators and bystanders/residents.
- Consistent integrity of the layer even in high RH and T° conditions.
- Excellent flex-crack (mechanic) resistance.
GUARDIANS BY NATURE

NEMGUARD
a new Bio-nematicide for Certis

NEMguard is the new granular nematicide for open field crops, containing garlic extract (*Allium sativum*). Certis will launch it soon in Netherlands, Belgium and France, integrating it into its CleanStart programme for sustainable soil pest management. Garlic extract contains diallyl polysulfides which penetrate the cytosol of nematodes causing irreversible oxidative stress to thiols, causing death within the first 12-24 hours. Open field trials confirm NEMguard to be highly effective against several nematode species, so it may be used in combination with conventional nematicides or other biological and agronomic tools. A significant advantage of the product is that it has no MRL, and with multi-site activity, development of resistance is extremely unlikely.
What are the key markets of focus for Forigo (submarkets/countries)?
“Right from the beginning, Forigo key markets have been Italy, France, Spain and Germany due to their long tradition in horticulture. Recently, the strong need for mechanisation in emerging markets, such as Latin America, Russia, Eastern Europe and Africa, boosted the development of our range, which has been enriched with dedicated technologies”.

What is the importance of soil fumigation in the Forigo business?
“Fumigation is the most strategic link between modern techniques of soil cultivation combined with distribution of controlled fumigants, totally safe for the operator”.

Which are the drivers to develop new technologies for soil fumigant application?
“Modern and innovative machines are developed following highly specific guidelines about operator safety, accuracy and homogeneity of distribution. This in close collaboration both with manufacturers of fumigants and farmers”.

Which are the main innovations for applying Basamid and DMDS?
“Major innovations around Basamid have been born from the combination of dedicated machines and proper distribution systems, which ensure constant homogeneity of mixing soil and product throughout the working depth. Concerning DMDS, the real revolution came from a new distribution system, based on new specific materials that allow the distribution of any dose at different depths, all managed by automatic electronic systems, that guarantee operator’s safety”.

How do machinery manufacturers see the stewardship requirements for the future?
“Since the beginning Forigo paid considerable attention to safety issues so distribution systems have been greatly simplified to avoid operator mistakes, whilst maintaining a high level of technology. Moreover, new control systems and safety devices have been developed to prevent the leakage of product into the atmosphere. We believe that professional machines with high standards of safety, and well-educated workers, can be the key asset for the future of chemicals in agriculture”.