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For growing maize soil management still does not get enough attention.

Maize-under-film deserves better

Eight years ago maize-under-film came from Ireland to the North of the Netherlands. A real breakthrough has yet to happen. "I have a different view", says Mark Wiersma from the Frisian village of Brantgum, as a contractor involved. "Against the trend of a decreasing maize acreage in the Netherlands, maize under film is still gaining ground."

Mark Wiersma is contractor in Brantgum. He is one of the contractors that got a machine from Ireland to be able to sow maize-under-film, besides traditional maize. Together with Leo Bil, working for N-xt Fertilizers and for Profyto-DSD, and Tom Crienen working for the maize-breeder Maisadour Semences Wiersma the last few years was responsible for some trial fields, to monitor and to optimize the growing of maize-under-film. The guys are telling about the evolution of the system. "Maize-under-film was introduced in the Netherlands to enable less of a 'harvest-risk' ", remembers Mr. Bil. "On the clay-soils in the north of the Netherlands a lot of farmers want to harvest early. But sufficient quality and yield are also desired or rather a necessity. In the meantime more varieties became available for growing maize-under-film to harvest early and realize high yields at the same time." Crienen adds: "With the regular maize in the open you cannot risk late varieties. Though those varieties you need for higher yields and a higher starch content. Because the film accelerates the process, farmers get more opportunities. You can really go for good yields with a high starch content", he says.

Blank Space

"Or purposely you choose to harvest a first cut of grass first, and then go for an acceptable maize-harvest. Maize-under-film creates space to manoeuvre and is a chance to apply different strategies to achieve a maximum yield per hectare." These advantages were claimed eight years ago as well. Practice did not always comply, the guys recognize. "But the knowledge of varieties fitting the strategy of the farmer - sowing early or late after a cut of grass - has greatly enhanced", says Wiersma. Also hampering the growth of the method were negative stories. According to the contractor film was sold on the market of a lesser quality, claiming it originated from the same importer. "Such issues create negative talk." That period of negative stories the men want to leave behind. Rather they concentrate on proper management of the soil. "Essential for each way of growing maize, but certainly so for maize-under-film", Wiersma says. "In the early years in the Netherlands of the system this was a deficiency, but too often still so. If the yield or the quality is than disappointing, the film gets blamed. That is not fair."

Who still has to plough now, is already too late

With proper soil management the contractor aims at a proper drainage of the plot and at the necessity of a fine seedbed, free of cloths. "Cloths tear the film, so the process of heating up is disturbed", he explains. "And as far as drainage is concerned: once the film is laid you cannot enter the field, a plot in the open traditionally sown, threatened by waterlogging, you can try to help with a ditch cutter, even though that is also not ideal", Wiersma continues. "The overall aim must be a well prepared plot before sowing. Ploughing in time is part of the deal. If you plough right now, you are already too late. November and December are the most suitable months. The soil then gets enough time to recover."

Trial field

The one growing maize-under-film and working with care, gets – on average – real higher yields. “This year in Holwerd we sowed maize-in-the-open and maize-under-film beside each other. The sowing date was May 12 and the harvest date was October 5”, Crienen says. “The maize under film contained 37 % dry matter with 994 VEM and 416 grams of starch. The traditional maize reached to 27 % dry matter with 809 VEM and 216 grams of starch. This example is extreme, but on average we measure a plus of 7 % dry matter.” Farmers lately have not massively changed to maize-under-film, which cannot be caused by a lack of potential. The investment in film - 300 to 350 € per hectare - is usually a threshold. “We are convinced you earn the investment back, but it takes time to convince people”, Crienen knows. Wiersma: “A lot of farmers say ‘we have always done it this way, so we will keep on doing so.’” Unfortunate, but we have no negative outlook. The total Dutch acreage of maize has decreased the last couple of years, but maize-under film did not. Last year somewhere around 650 hectares of maize-under-film was grown, so the acreage is still on the rise. Maize-under-film guarantees you 350 grams of starch, with an average between 380 and 420 gram. I expect this to be an incentive to try it for many people.”

To activate the soil

On the trial fields the parties monitor, they have also tries the soil-activator Explorer 20. This is a phosphate free additive, costing 67 € per hectare. “Maize-under-film as well as maize-in-the-open gave a 7 % higher yield when the additive was used, Leo Bil says. “The plant growth is noticeably influenced. The roots are more firm and the plant itself as well. This gives a better protection against the weather and the wind and the plants growths better.”