

## Cold spring does not effect maize under film

# Maize under film has a huge advantage

Due to a cold spring almost all maize in The Netherlands did not develop for two weeks. Farmers who chose for growing maize under film were the 'lucky number' among all maize growers in the country, because maize under film *did* grow.

A thin layer of film creates a micro-climate in which air temperatures in April easily reach 30 degrees Celsius. "Whereas maize in the open measures ankle height, maize under film measures knee height on average. The difference lies somewhere in the region of 20 – 30 centimeters", says Hein-Willem Leeraar. He represents Samco, the supplier of film and machines, in The Netherlands.

The thin layer of bio-degradable film covers the seed bed. Groundwater, as in moist within the soil, evaporates, but cannot escape the film, through which a micro-climate is created under film. The temperature of the soil and the air under film are, therefore, higher than temperatures in the open. "When you put your hand under the film, it basically feels like you are sitting in a sauna: hot and very humid. A powerless sun in April already causes temperatures to rise above 30 degrees Celsius under the film", says Leeraar. The difference with temperatures in the open is approximately 10 – 15 degrees Celsius, which is an ideal situation for the seed, that, therefore, is able to germinate and develop quicker.

Farmers, that are growing maize under film, have witnessed this themselves during the spring. Due to extreme low temperatures in the open a huge difference in growth between maize under film and maize in the open occurred. Roelof de Jong from Sibrandabuorren, participant in Nieuwe Oogst Maïsmmeetnet (measuring average size of maize throughout the country), has experienced this himself. His maize measured 39 centimeters last Wednesday, whereas the maize plants in the open did not measure more than 16 centimeters. "We are experiencing a maize under film year", says De Jong. "We have a small field with maize in the open and our plants there measure 6 centimeters. That is what I call: poor green plants."

## Wet autumn

Regardless of the positive results of maize under film, the total amount of hectares is much lower than last year. Whereas in 2012, maize under film was grown on 1200 hectares, did year it isn't more than 500 hectares. That implies that growers of maize must have bad experiences with maize under film?

Leeraar: "The film is expensive, approximately € 250,- per hectare. We allege, that growers of maize under film can start sowing two weeks earlier than maize in the open. Besides that, the maize also germinates a week faster than maize in the open. Therefore, growers should be able to harvest maize under film three weeks earlier than maize in the open. But, with three wet autumns in a row, this did not succeed. Due to that people stop growing maize under film." He adds, that 2012 experienced an extremely wet spring. The machines, which sow the maize, lay a thin layer of film on the soil, are very heavy and, therefore, caused structure damage of the soil. That disappointed growers. Samco responded adequately to this problem by making its machines 500 – 600 kilograms lighter of weight.

"It was the same with the introduction of the automatic milking, which experienced infant-industry diseases in the beginning. There were many skeptical responses to the introduction, but nowadays automatic milking is an integral part of dairy farming."

Besides that, maize under film does not seem to show the same positive signs everywhere. Leeraar explains, that dairy farmers have to learn *howto* grow maize under film. If the correct pre-conditions are not met, the effect of the film will be mediocre. "We are experiencing that this year as well. Some dairy farmers did not manure their fields sufficiently and some did not prepare a sufficient seed bed. Along the way we see hunks of, for instance, clay of 3 centimeters, which is too big for growing maize under film. We also encounter fields with too much weed." Maize under film does, therefore, not deliver the results it should. The backlog of growth is too big, wherefore it possibly won't be able to completely mature in July and August. And that is essential for the yield of dry matter. More photosynthesis takes place in July and August than in August and September. More photosynthesis means more transformation of light into starch. Maize under film, that has been sown early on a well-prepared seed bed *and* has been able to develop fast, contains 15 percent more starch.