

DEFYING THE EXTREMES BY USING UNCOMMON METHODS



Minimising soil disturbance in the drilling pass is key

Franz und Marita Grötschl run a dairy farm in the Austrian Burgenland along the Hungarian border. They farm a 65-head herd of dairy cows and their female offspring. Growing their forage on dry and sandy soils, the Grötschls apply rather uncommon methods that defy the extreme weather and soil conditions.

The Burgenland countryside is rather flat with some modest hills. The sandy soils are very prone to erosion," explains Franz. "We usually have very dry springs that are followed by relatively heavy rain in May so puddling and run-off is an issue here." In order to reduce erosion, he seeks to keep field surfaces covered all year round – a practice he has pursued for many years now, with strip tilling coming into the focus twelve years ago. Growing no cash crops but only fodder for his herd, he has consistently relied on strip till and no till schemes for several years now.

„TMR for the soil“

The Grötschls feed TMR (Total Mixed Ration) as this is also beneficial for the soil. "So, as for the cows, we know exactly what we need to add to the ration to provide them with optimal feed. And I want to have that for our soils as well," says Franz. An ideal soil-friendly mix is 60% grasses, 20% legumes and 20% herbs whereas 'grass' in this context means either maize, millet or cereals. Cereals are sown in a mix with five or six other crops, some of which are winter hardy. The seeds are sown directly into the harvested field that receives no tillage at all. Rye and triticale develop very quickly when sown right into the harvested field, so Franz makes a high cut in autumn to

„bring the grain to the right height“ and protect it against frost damage. "By the end of October rye stands usually 40-60cm tall and is then cut to 20cm so it is not killed by the frost. Yet some of the other species are killed then." In spring, he decides on how to use this mix – whether it will be threshed, chopped as GPS or used as a break or catch crop, depending on how the various species have developed by then. "Depending on the weather, the various crops develop differently every year; so the established mix looks different every year. I base my decision on how to use a stand on my instincts and also on the companion plants and their growth," explains Franz.



The mixes are tolerant to hot summer temperatures.

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Franz Grötschl

Spraying and fertilising on demand

Franz Grötschl also reduced the use of chemicals to a minimum on their farm: "I don't like applying chemicals to schedule. After all, at some point in the future, we will no longer be able to use any of the chemicals we are using today and will have to manage without them. I prefer looking for alternatives today to be prepared. Besides, chemicals have an impact on the soil organisms," is Franz convinced. Consequently, he doesn't apply chemicals unless it becomes really necessary. He also adapts his fertiliser regime to the crop and soil. „Getting the C/N ratio right is very important. That's basically the most important task. The roots of the individual mixes release many different exudates and hence nutrients into the soil. Consequently, I need more carbon in the soil." The slurry that is applied comes from his own animals and he also produces his own compost and adds trace elements. He chooses the timing according to the needs of the soil and soil life so the fertiliser is utilised in the most effective way. After the crop has established, he applies several small treatments with the dribble bar or injector. Before the cattle slurry is applied it is mixed with rock dust and coal to adjust the C/N ratio.

Trial and error

Franz Grötschl relies on his intuition in taking agronomic decisions. His approach to

tailoring arable farming methods to local conditions is based on his own trial and error or has evolved by chance, as he says. The fact that he doesn't market his crops gives him a lot of freedom. After all, the farm's productivity doesn't depend on whether the grain mix is threshed, chopped or even processed into compost. Franz Grötschl would like to pursue his ideas and experiments with more dedication but he lacks the time and methods to do so. So often he must rely simply on his intuition when judging what will be a success or failure and which adjustments could be made. For the future,

he is exploring systems such as strip drilling and developing more diverse cash crop schemes that ensure surfaces are covered all year round.

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DSV product manager Jan Hendrik Schulz (left) and farmer Franz Grötschl are discussing his approach.