

grow



Satellite Images to Determine the Optimum Harvest Time

About

This case study features a 60+ farmer from the Braunschweig region who has been using satellite technology since 2023 to monitor 20 hectares of corn crops. By combining satellite images with digital sowing maps, he can assess crop ripeness across soils of varying quality (sand and moor) and under shifting climatic conditions. The corn is primarily used as silage to feed cows, and this method helps optimize harvest timing, minimize yield losses, and improve planning reliability.



The Challenge

Corn harvested too early can lead to reduced feed quality and lower yields. The farmer faced several issues:

- Unreliable tools:** Results from forecasts of TS content initially used were not optimal.
- Equipment access:** Forage harvesters are often booked first by large biogas plants, leaving smaller farms at a disadvantage.
- Weather dependency:** Cloud cover in autumn can prevent timely satellite images.

These challenges mattered because precise timing is crucial for silage quality and consistent farm productivity.



THE SOLUTION

The farmer combined multiple approaches:

- Early booking of harvesting technology to secure equipment despite lower priority compared to large farms.
- Satellite monitoring to track crop ripeness through plant coloration.
- Digital sowing maps to supplement satellite data, reducing dependence on weather conditions and providing reliable planning tools.

IMPACT AND RESULTS

The use of digital technology has led to several benefits:

- Better harvest timing through improved planning and monitoring.
- More uniform crop ripening, resulting in higher silage quality.
- Stable and predictable yields, even if direct increases are not yet measurable.
- No additional costs for the farmer, as services are provided by the seed producer and contractor.
- Ecological benefits from more efficient land and resource use over the long term.

The farmer's experience shows that combining satellite images with digital sowing maps offers the greatest advantage, increasing planning security and ensuring more consistent yields in the future.

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