

An aerial photograph of a winter farm landscape in South Finland. The scene is dominated by snow-covered fields and rolling hills. In the background, a small farmstead with several buildings is visible. The sun is low on the horizon, casting long, soft shadows across the snow. The sky is a pale, hazy yellow. The overall atmosphere is peaceful and serene.

My Farm Stor-Tötter Gård in South Finland

*Max Schulman
Arable Farmer from Finland*

Technology in use on my farm → on field level

1989, wide, low pressure tires for the field tractor → 800 mm, 0,35 bar

- **To be used for tillage and soil preparation**
- **Less compaction → better soil condition**

1992, Direct seeder → Combined seeder with cover crop application

1995, all seeding applications directly into the stubbles

Soil mapping as standard → 3-5 year intervals

Farm data collection done first manually later through the machines → seeder, tractor, combine → to be used in planning of the work

GPS positioning and section control → in spraying and seeding

Yield mapping, variable rate application on fertilizer, section control on seeding

In the office → supports field applications



Farm management data system including map programs

Drone pictures during the growing season and outside it

Satellite pictures / crop maps / yield maps

Soil analyze data

Grain Sense hand held protein meter → segregation

Viljatori, www.viljatori.fi grain trade platform

*Electronic Grain Passport for traceability purposes
→ in the future a possibility to better price ...*

What got me to start to use technology

Time saving when working on the fields → more time for

Less compaction by minimizing double/triple driving → soil quality

Fuel/cost saving already direct seeding saves fuel 25 l/ha → 2500 l/total

Less fertilizer and seed use when section control is applied → cost saving around 4-5 €/ha on inputs → less lodging, quality and yield loss

Split application → high quality + savings on fertilizer during difficult years

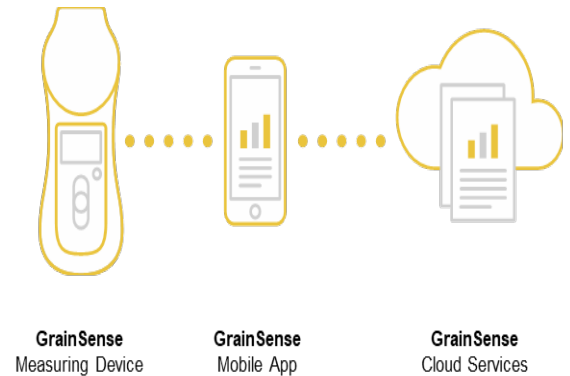
Less spray overlap and also cost savings around 2 - 4 €/ha per time

Applications can be from 1 – 3 depending on the year and crop

On a 100 ha farm only this will bring in a saving of 1.000 – 1.600 €/y and on the fuel 2.500 €/y

Better yield and quality → higher prize from the market ex. +20 €/t quality

Challenges



Base infrastructure not in place all over

Better inter connectability needed → big challenge to use data

All equipment can not be changed at the same time → cost issue

Older, “stupid” equipment not possible (yet) to get connected

Field boundaries changes from year to year on the official maps

*Still a debate on the data ownership even if a Code of Conduct on agricultural data sharing exists today → from **My data to Big Data** and through this into smart Farming that includes precision farming.*

More applied R&D is needed → on Farm level / MS level / EU level

To get the most out from the technology we need a comprehensive toolbox to accompany it →

Farming is an old profession
but not old fashioned !

Thank You for your attention

