

Flexiseeder Help Group

Development of plot drills 2001-2014

A co-operation between Sweden-Norway-New Zealand



Using plot drills – facing new problems

1. Using reduced tillage or direct seeding in field trials: *Plot drills are small and light and you often need to drive slowly. Residues/straw problems.*
2. Combined fertilizing: *Mainly used in the Nordic countries, but could be something to export?*
3. Using extension/protection seed rows (required when trial treatments affect neighbour plots): *How can set it up easily?*
4. The need to use 3 feeders simultaneously in some trial plans: *How can you easily connect each seed meter to selected fertilizer/seed coulters*
5. Air transport and distribution is flexible but less researched for plot drill (but common on farm drills): *Can it work good enough on plot drills?*
6. Flexible drivelines incl. digital system and GPS control: *Digital drives that take input from land wheels and/or GPS signals*
7. Spare parts and modules (plot drills often used for 20 years or more): *Use of farm components, re-used of modules for many purposes.*

Why going to the other side of the world?

1. New Zealand and Australia (NZ-AU) has many climate zones, various soils. They have summer during our winter in Europe (commonly utilized by breeders)
2. NZ-AU has long experience in reduced tillage, using many disc types as well as knives and harrow tines. Besides that, knowhow on GPS.
3. Development is very time consuming. Man labour costs are much lower in NZ-AU, still the countries are highly developed as in Europe.
4. On the NZ South Island, in Christchurch area, Lincoln University is very active with international projects and operates a Seed Centre.
5. Many breeders and research stations exists in this NZ area - a good base for testing developed ideas in practise.

2001-2006

Ideas of co-operation SLU Fältforsk-Semec (IAMFE, 2000)

2004-2006: HS Konsult, Sweden - New Zealand farm drill frames (Taege, Duncan) used for plot seeders



2007

Plot drill, Apelsvoll, Norway

Air system for distribution and transport of seed. Standard fertilizer bin and 2 portion cone feeders. Mechanical seed system drive. Knife/harrow S-tyne coulters



2008

HS Halland. Plot drills on MacTrac tool carrier

Test of digital seed drive. Mistral continous feeder/cell wheel. Amazone Rotec single seed discs, S-tines knives for fertilizing



2009 & 2012

SLU Lanna field station 2009 - 2011

Rebuilt and sold to Romerike försöksring, Norway 2012

Light frame, digital seed drive, 2 portion seed feeders and standard bin for fertilizing. Kongskilde DR double discs, S-tyne knife tips for combined fertilizing.



2009 (Switzerland)

Farm drill from New Zealand for direct seeding with S-tyne knives in four rows (no fertilization)



2010 & 2013

HS Malmöhus. Heavier frame + extension for seeding protection rows. Tested 2010. Rebuilt, used as demonstration drills Heavy double discs for fertilizing, light Flexiseeder+Accord CX discs for seeding Flexi LD Accord double seeding discs. (owner SLU Fältforsk, for sale)

