Adopting new approaches to crop protection

Ian Matts, Brixworth Farming
Agenda

• Introductions
• Challenges
• Potential solutions:
  - Cover cropping
  - Catch cropping
  - Living Mulches
  - Companion cropping
  - Nutrition / Biostimulants
Farm Details

- Joint Venture in Northamptonshire
- 6 Farms – 4 Shareholders & 2 Crop Pool
- 2,000ha
  - 1,550ha combinable cropping
  - 450ha Stewardship
- Hanslope & Denchworth clay
- LENS funding – Nestle, AW & Pepsico
- ClieN Farms
Challenges

- Increased reliance on herbicides
- Loss of active ingredients
- Reduction in efficacy – resistance
- Weather
- Increased pest pressure
- Increased grassweed pressure
- Increased costs
- Reduced margins
- Labour shortages
Cover crops
Catch Crops
Living Mulch
Nutrition for Plant Health

Ian Matts, Yara

Nutrition

- Nitrogen Use Efficiency
- Potash
- Calcium
- Silicon
- Micronutrients
Nitrogen & Potash

- From over 200 literature reports on the role of potassium on plant diseases, 70% improved plant health.
- The uptake of nitrogen can increase susceptibility to disease and pest, due to the rapid growth response, the changes in tissue colour and increase in sugars.
The interaction of trace elements within a reduced fungicide and nitrogen programme in WW
Nutrition

- Biostimulants
- Endophytes
- N fixing bacteria
NuelloiiN & BlueN

- **NuelloiiN** - Endophytes enabling crops to fix N, sequester P, K & Zn, and better withstand drought stress

- **BlueN** - a nutrient efficiency biostimulant containing bacteria that fix nitrogen from the air, converting it for the plant
Future considerations

• Regen Farming...
• Premium opportunities
• Costs
• Efficacy / Resistance / Product availability
• Sustainability
• NUE
• Carbon (footprint & sequestration)
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