Mixing It Up – Improving Diversity

Stephen Briggs
Agricultural challenges ahead…..

High input monoculture
- *is it yesterday's approach?*

Inputs more expensive & less available?

Increase productivity?

Better resource use (esp sunlight)?

Protect & enhance biodiversity?
soil carbon & sunlight drive production
SORT OUT YOUR SOIL

Green crop mixes are set to become a bigger part of crop rotations. They offer massive improvements to soil fertility.

Think Above & Below

MONOCULTURE vs MIXTURES

Monoculture competing for soil nutrients, moisture and sunlight
- Prone to disease and pests
- Uniform root depth and structure

Range of leaf shapes and sizes creating maximum photosynthesis
- Less susceptible to pests and diseases
- Varied rooting depth, different shapes improving soil structure
- Mixing early and late species extends the growing season
- Increasing diversity of pollen and nectar sources offers more choice for pollinators

...give 50% more yield
Tried enterprise diversity – risky!!!!
How about ecological diversity
For my Cambs farm?
Agroforestry system established 2008

85 trees /ha
27m rows
4500 fruit trees
edible windbreaks
c.4t/yr above ground carbon in trees (+below ground)
SOM/SOC loss from wind erosion reductions
3m wide Nectar & Wild flower strip Under tree rows
52ha of Agroforestry at my own farm in Cambridgeshire
Robocrop
Controlled traffic farming
Introduced
40,000 livestock
Controlled Traffic Farming
Conventional traffic v. CTF

http://www.controlledtrafficfarming.com/
Companion planting

New approaches
Companion planting, Relay cropping & precision Ag
Concluding thoughts
Benefits

Monoculture vs Diversity

Risk management (market & climate)

Perennial & Annual crops

Harvesting more sunlight

Building carbon all year round

Above & Below ground

Marking the farm bigger & more productive
Challenges

Monoculture vs Diversity
Mechanisation
New skills
Traditional views (risks)
Policy (BPS /CAP)
Tenancy issues
Sometimes the thing that is holding you back...

...is all in your head.
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