

Redesigning European cropping systems based on species mixtures

Harvesting and separating crop mixtures yes we can!

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Laurent Bedoussac (INRAE France)

Elina Deschamps (ENSFEA, INRAE France)

Lisa Albouy (Université de Toulouse, INRAE France)

Patrick Bourrachot (Etablissements DENIS France)

Alastair Morrison (AGCO A/S Denmark)

Eric Justes (CIRAD France)



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A wide variety of species mixtures



Sown at
the same
time or
not



Harvested
at the
same time
or not



A sale
crop with
a service
plant



Grains
for food



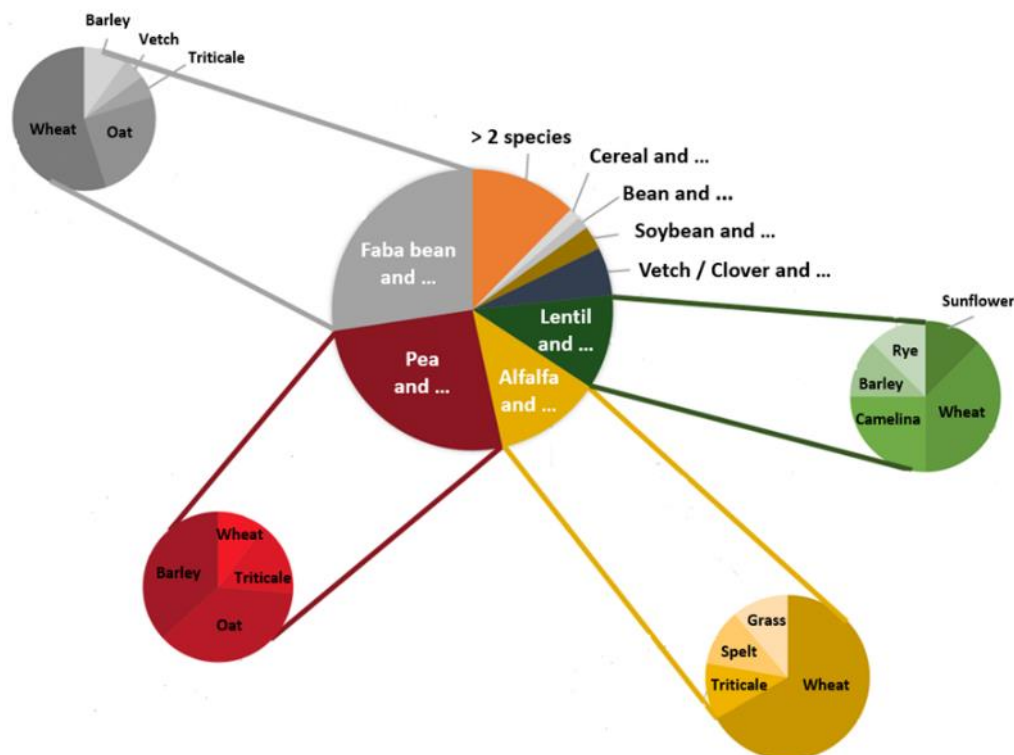
Grains
for feed



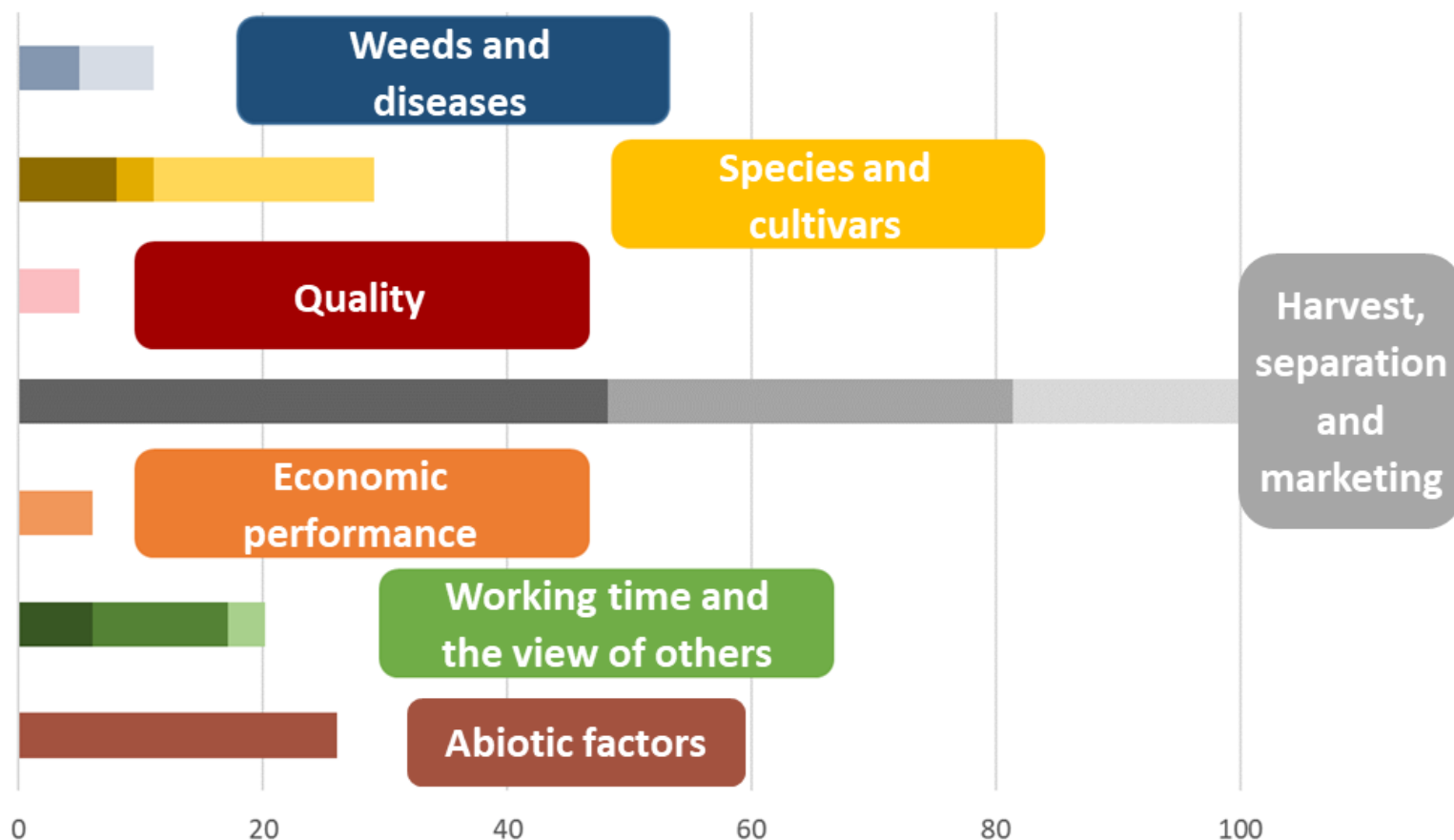
Fodder



Ecosystem
Services



Harvesting and sorting are the main obstacle for farmers (sowing to a lesser extent)



How to sow species mixtures? Marginal innovations but no real breakthrough

Mixing grains at sowing



Sowing in a developed crop



Structuring the stand



Sowing complex mixtures



How to harvest species mixtures?

All at once with low quality constraints



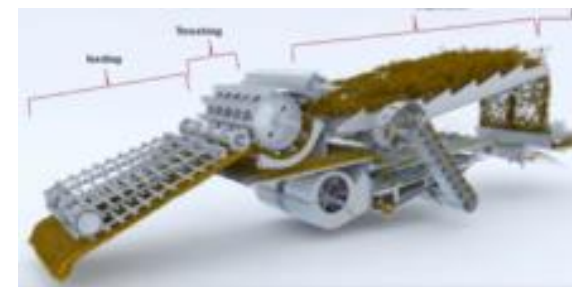
All at once with high quality constraints



In two stages



Adapting the existing
but not new machines



Low constraints and low added value



The diagram illustrates the DENIS SVO 100 machine, a large industrial shredder. It features a hopper at the top for grain input, a central processing unit with a red 'SVO 100' label, and a collection system at the bottom. The machine is equipped with a safety cage and a ladder. Red arrows indicate the flow of material from the input to the output streams.

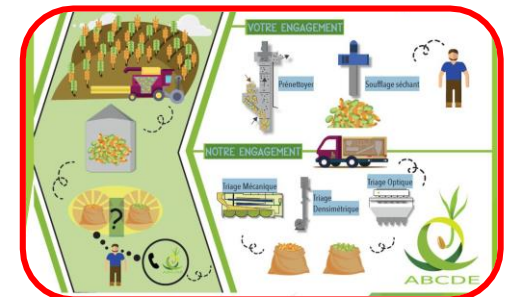
Entrée grain (Grain input)

Sortie bon grain (Good grain output)

Sortie déchets d'aspiration (Aspirated waste output)

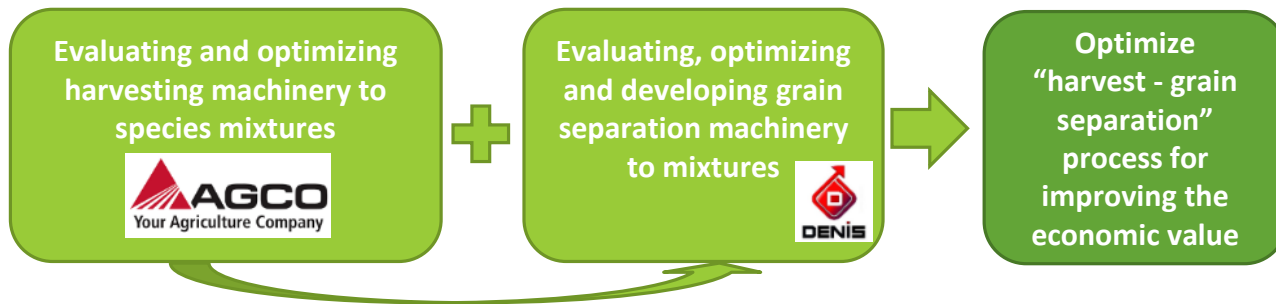
Sortie déchets de criblage (Sieve waste output)

Sortie déchets de emboilage / Réseaux produits finaux (Waste output from wrapping / Final products from networks)



6

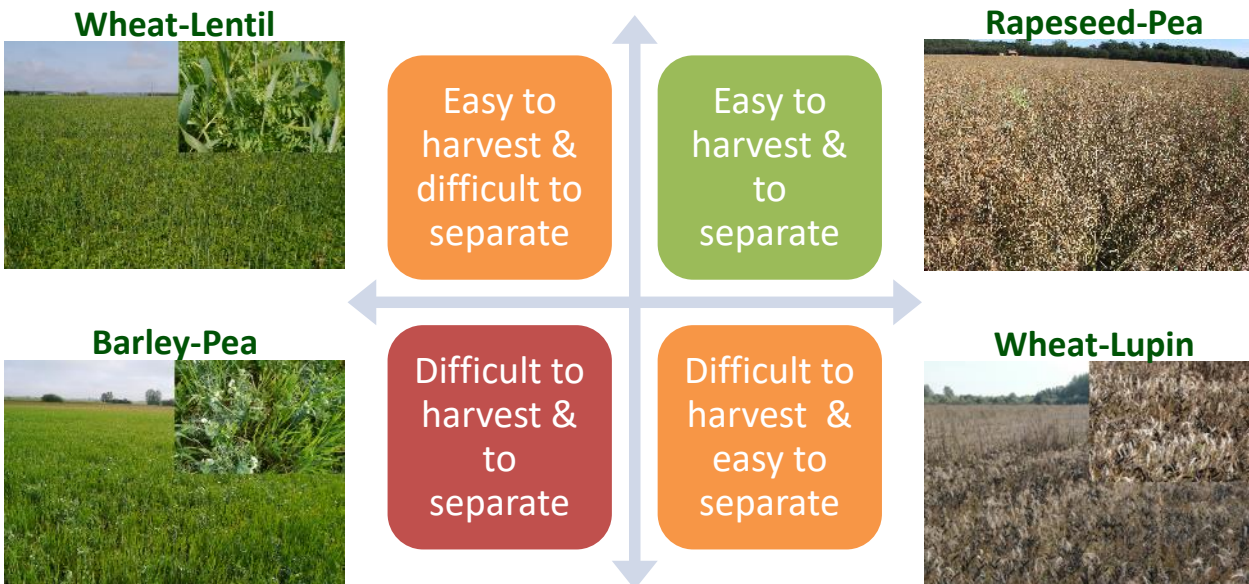
Test existing harvest and separation machinery to improve the value



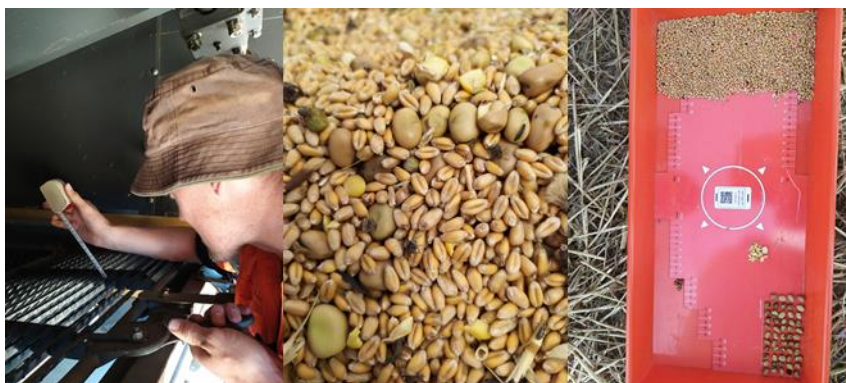
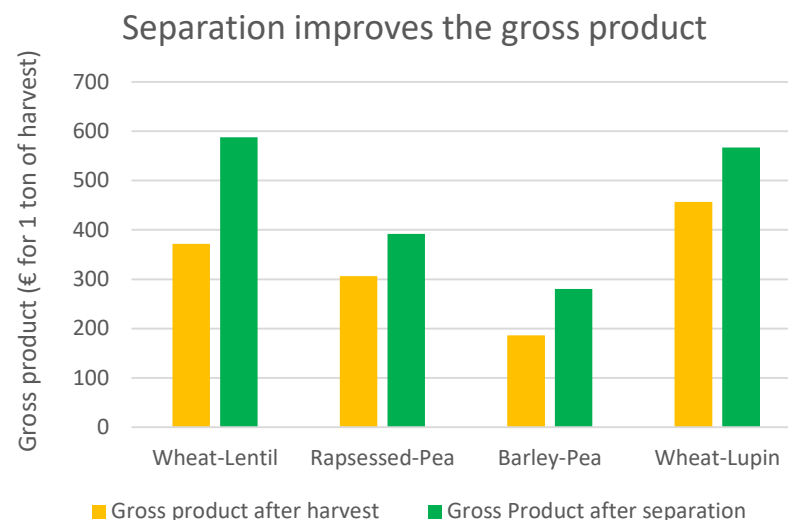
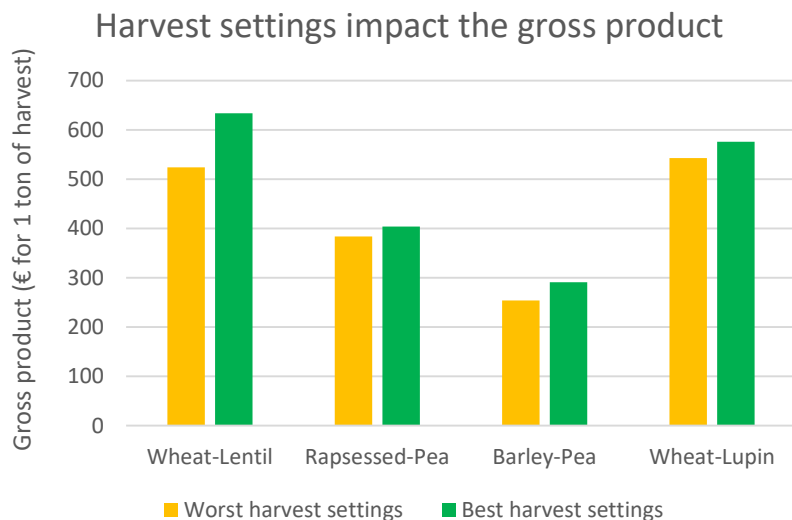
Make the separation easier

"What is easy to separate is often hard to harvest"

Need for a compromise



Optimizing harvest and separation improve the economic value



Policy recommendations

- **No need for an immediate revolution**
 - Training farmers for a better use of these machines
 - Support development and purchase of grain separators
 - small-scale size for use at the farm
 - large-scale for grain buyers
- **Need for a multi-actor approach**
 - Support farmer's collective
 - Support collectors to reorganising their logistic
 - Redesign agrifoodchain and requirements for “purity”





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PARTNERS IN ReMIX

