

# Commercial perspectives of intercropping peas and lentils

## Problem

Intercropping peas and lentils is challenged by the post-harvest costs of cleaning.

## Solution

In the post-harvest process, cleaning costs must be minimised and end products with an acceptable level of impurities developed, to keep pea-lentil intercropping economically sustainable.

## Benefits

The practice can result in more efficient resource use, lower costs, improved resilience, soil health and climate benefits, as both crops can fix atmospheric nitrogen. Peas typically grow more vigorously and can support lower-growing lentils.

## Practical recommendations

To reap the benefits of pea-lentil intercropping, the final product must be commercially acceptable. Due to the cleaning costs of harvested seeds, cross-contamination or grain impurities need to be accepted. Otherwise, costs can be in excess of what can be covered commercially.

- Minimise cleaning costs: Ensure **physical differences in grain shape or size between crops** to reduce cleaning costs— e.g., through varietal choice—thereby ensuring commercial viability.
- **Cross contamination** must be accepted at an agreed level within the value chain, as 100% clean end product is not commercially sustainable. The level of contamination depends on usage of the cleaned seeds and is specific for end use.
- Farmers need to explore and agree upon **commercial options** with wholesalers and millers to minimize sales risks. This includes options such as high protein flour that can be used for bread and for other use in bakeries.
- Ensure **physical differences in grain shape or size between crops** to reduce cleaning costs – i.e., wheat and peas – thereby ensuring commercial viability. Alternatively, the risk profile needs to be agreed upon among partners involved

## Applicability box

### Theme

Farm economics (agricultural economics); Production economics; Costs

### Keywords

Crop testing, commercial benefits

### Context

Denmark

## PRACTICE ABSTRACT N°12

Stage Raw				kg
<b>Mixed</b>				<b>3.500</b>
<b>Stage Cleaned</b>				
Lentils				192
Peas				2.088
<b>Total</b>				<b>2.280</b>
<b>Waste</b>		-		<b>1.220</b>
				<b>-35%</b>

Figure 1: Result of cleaning process with calculation of process loss. Source of data: Cleaning data from DLF Beet Seed A/S

				EUR
Seeds cost	Peas			1.724,83
	Lentils			335,57
Growing cost	Leasing of land (5 ha)			5.798,66
	Weeding			322,15
	Swath laying			368,46
	Machinery			833,29
Post harvest cost	Drying			658,12
	Cleaning			2.297,99
<b>Total</b>				<b>12.339,06</b>
Sales value	Peas	2088	1,61	3.363,22
	Lentils	192	2,82	541,21
<b>Total sales value</b>				<b>3.904,43</b>
<b>Net profit</b>				<b>- 8.434,63</b>

				Per HA
Seed cost				412,08
Land lease				1.159,73
Machinery etc.				304,78
<b>Total cost per HA</b>				<b>1.876,59</b>
Weighted avr. Value per kg			EUR/KG	1,71
Yeild value per HA split as in test			EUR	780,89
Cleaning and Drying per KG on cleaned stage			EUR	1,30
CM per kg cleaned seeds			EUR	0,42
<b>Yeild per ha (KG) in test</b>			<b>KG</b>	<b>456</b>
<b>Breakeven kg cleaned seeds per ha</b>			<b>KG/HA</b>	<b>4.512</b>

### Further information

#### Weblinks

- <https://www.remix-intercrops.eu/>
- Check the [Organic Farm Knowledge Platform](#) for more practical recommendations.

### About this practice abstract

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**IntercropVALUES** aims to exploit the benefits of intercropping to design and manage productive, diversified, resilient, profitable, environmentally friendly cropping systems acceptable to farmers and actors in the agri-food chain. As a multi-disciplinary and multi-actor project, it brings together scientists and local actors representing the food value chain. It includes 27 participants from 15 countries (3 continents) from a wide diversity of organizations and stakeholders. The project will run for four years and started in November 2022.

**Project website:** <https://intercropvalues.eu/>

# Kommercielle perspektiver ved samdyrkning af ærter og linser

## Problem

Samdyrkning af ærter og linser udfordres af omkostninger til rensning efter høst

## Løsning

I processen efter høst skal rensningsomkostninger minimeres, og der skal udvikles slutprodukter med et acceptabelt niveau af urenheder for at opretholde økonomisk bæredygtighed i samdyrkning af ærter og linser.

## Anvendelse

### Tema

Landbrugsøkonomi (agroøkonomi); Produktionsøkonomi; Omkostninger

### Keywords

Afgrøndeforsøg, kommercielle fordele

### Context

Denmark

## Fordele

Praksissen kan resultere i mere effektiv ressourceudnyttelse, lavere omkostninger, forbedret robusthed, bedre jordbundssundhed og klimafordele, da begge afgrøder kan fiksere atmosfærisk kvælstof. Ærter vokser typisk mere kraftigt og kan understøtte lavere voksende linser.

## Praktiske anbefalinger

- For at opnå fordelene ved samdyrkning af ærter og linser skal slutproduktet være kommercielt acceptabelt. På grund af rensningsomkostningerne for de høstede frø skal krydskontaminering eller urenheder accepteres.
- Minimér rensningsomkostninger: Sikr fysiske forskelle i afgrødens form eller -størrelse mellem afgrøderne for at reducere rensningsomkostninger – f.eks. gennem sortsvalg.
- Krydskontaminering skal accepteres på et aftalt niveau i værdikæden, da et 100 % rent slutprodukt ikke er kommercielt bæredygtigt.
- Landmænd bør undersøge og aftale kommercielle muligheder med grossister og møller for at minimere salgsrisici.
- Sikring af fysiske forskelle i kornstørrelse og -form kan reducere rensningsomkostningerne – eks. hvede og ærter – hvorved en kommerciel bæredygtighed kan opåes. Alternativt kan risikoprofilen aftales mellem værdikædens parter

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### Yderligere information

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- Se [Organic Farm Knowledge Platform](#) for flere praktiske informationer.

### Om dette practice abstract

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**IntercropVALUES** Sigter mod at udnytte fordelene ved intercropping til at designe og administrere produktive, diversificerede, robuste, profitable og miljøvenlige afgrødesystemer, som er acceptable for landmænd og aktører i agro-fødevarerekæden. Som et tværfagligt og multiaktørprojekt samler det forskere og lokale aktører, der repræsenterer fødevarerærdikæden. Den omfatter 27 deltagere fra 15 lande (3 kontinenter) fra en bred vifte af organisationer og interessenter. Projektet vil køre i fire år og startede i november 2022..

**Project website:** <https://intercropvalues.eu/>