

# Cover crops in Denmark

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# SEGES

- Consultants service, creating knowledge for farmers and local consultants.
- Ensure that the latest knowledge and technology is deployed by Danish farmers on their farms as quickly and efficiently as possible.
- SEGES make around 1000 field trials every year.

# Cover crops in Denmark

- All farms with a turnover above 50.000 kr. must have catch crops.
- There are 5 different rule sets and plenty of dates involved in the legislations.
- Most farms should have 14% of their area covered by catch crops.
- The Danish government will control the covering of the soils, and there are different limits depending on the date.
- Consequences of breaking the rules is less fertilizer available or not getting full support/funding.

# Opportunities to fit catch crops in the crop rotation

1. Catch crop is laid out in spring barley and spring barley are sown after the catch crop.
2. The catch crop is sown before or after harvest of winter wheat and spring barley are sown after the catch crop.
3. Sow grass in the winter wheat or maize in spring.

# SEGES recommendation with approved species

Soil type	Crop rotation	Proposal to species
Sandy soil	No oil seed rape	Fodder radish + rye, Fodder radish + phacelia
	Minimum 4 oil seed rape free years	Fodder radish + rye, Fodder radish + phacelia
	3 oil seed rape free years or less	phacelia + rye, spring barley + rye
Clay soil	No oil seed rape	Yellow mustard+ spring barley, Fodder radish + spring barley, Fodder radish + phacelia
	Minimum 4 oil seed rape free years	Fodder radish + spring barley, Fodder radish + phacelia
	3 oil seed rape free years or less	Phacelia+ spring barley
	+ beet	Yellow mustard+ spring barley, fodder radish + spring barley



**Photo.** Club root in oil radish, Dec. 2016, by Ghita Cordsen Nielsen.

# Conclusion from trials with alternative species

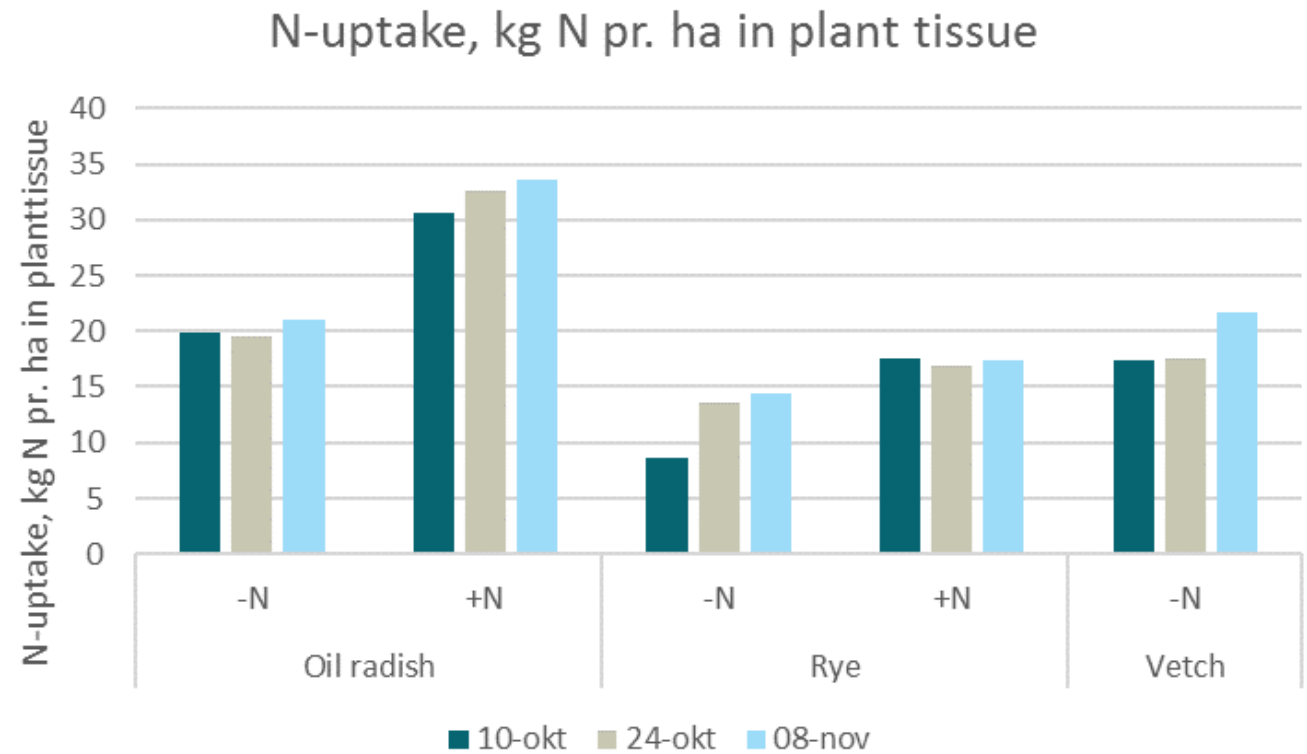
- Sun flower was poor
- *Malva* was poor
- Viper's bugloss and blueweed, seed did not germinate
- Oil radish was the best
- **Oat** (black oat and regular oat) performed well
- **Common corn-cockle** (danish: klinte)



**Corn-cockle** 8. oktober 2017 trial  
070111717-017, Ringsted. By Nanna  
Hellum Kristensen, SEGES.

# Trials with nitrogen application

	N-uptake, kg N pr. ha in plant tissue					N-min (0-25 cm), kg N pr. ha in august
	Radish		Rye		Vetch	
	-N	+N	-N	+N	-N	
001	27	52	15	28	18	41
002	20	23	18	10	20	96
003	2	6	1	5	6	40
004	12	22	8	14	15	32



## Grass in maize -alternative to spreading the seeds above ground.



Thyregod A/S developed the new technique, which can be attached to a hoe. The seeds are sown in three lines with pressure from wheels. *Photo: Henning Sjørsløv Lyngvig, SEGES.*  
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**Billede 2.** Specific machine stations are developing equipment for sowing grass in maize using pressure from the wheel. *Photo: Henning Sjørsløv Lyngvig, SEGES.*



# Thank you



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