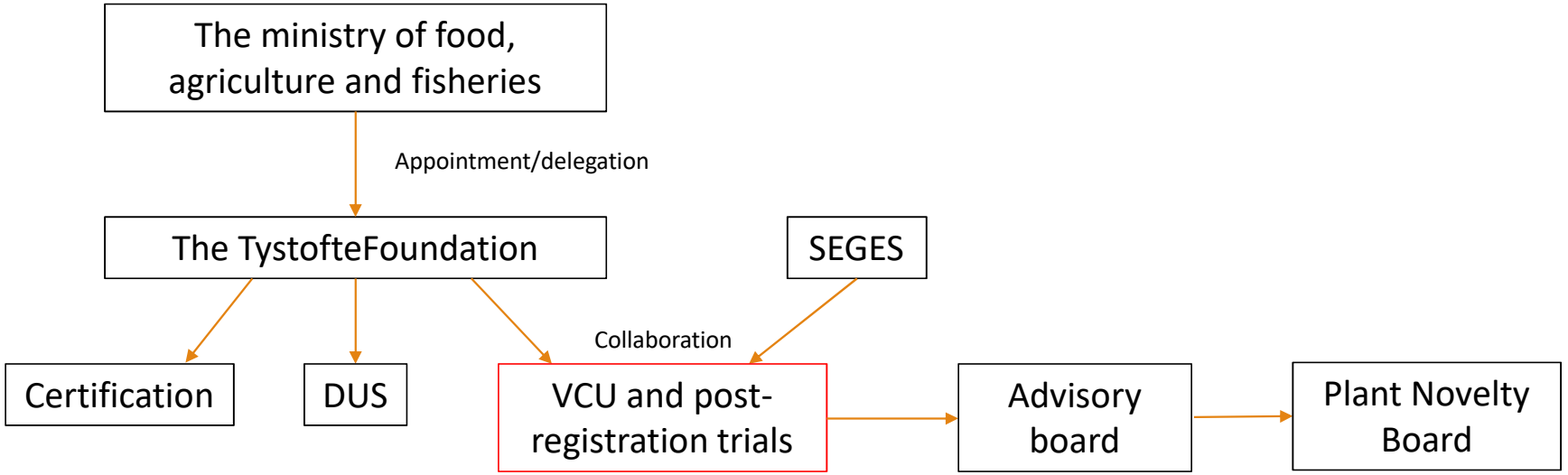
Organisation of the Danish VCU



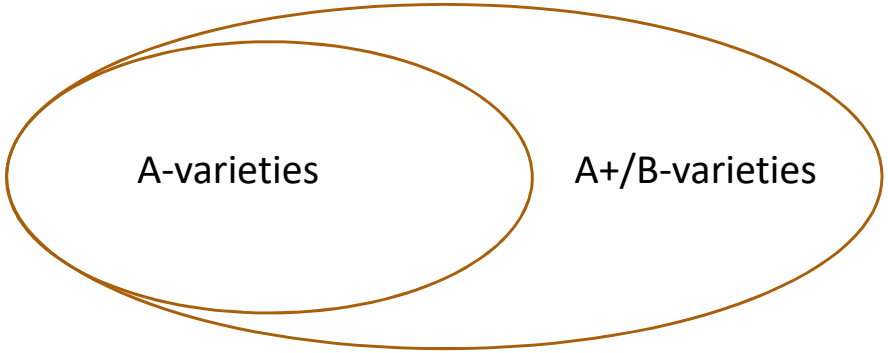
VCU applications, 2024

Crop	No. of applications	Crop size (Kha)
Winter Oilseed Rape	49	210
Winter Wheat	32	461
Spring Barley	32	504
Sugar Beets	30	30
Winter Barley	23	57
Silage Maize	21	180
Winter Rye	16	108
Perennial Ryegrass	13	176
Clovers and Alfalfa	8	176
Field Beans	5	23
Oats	4	55
Potatoes	4	61
Field Peas	3	18
Spring Wheat	2	11
Winter Triticale	1	4
Fodder Beets	1	4

Occasional crops
Lupins
Winter field beans
Field peas for silage
Spring triticale
Maize for grain and cobs
Various forage grass species

Mandatory to test under organic conditions upon request from the applicant. Presently listed:
One winter wheat
Two spring barley

Integrated trial system



A:
- Yield potential under moderate farmer's practice regarding fungicides
- Agronomic character traits
- Diseases
- Quality

A+/B:
- Yield response to fungicide OR additional trials
- Agronomic character traits
- Diseases

Crop	A	A+/B
Winter Wheat	5	11
Winter Barley	5	10
Winter Rye	5	10
Winter Triticale	5	10
Spring Barley	5	10
Spring Wheat	4	7
Spring Oats	4	8
Field Peas	6	12
Field Beans	6	12
WOSR	4	8
Silage Maize	3	7

TystofteFonden

VCU – A-varieties

- Offered by the TystofteFoundation holding an appointment from the ministry
- Varieties for national listing
- Sites at plant breeders and research stations
- 2 years of testing
- Yield, quality, diseases, abiotic stress
- Annual results
- Final report for decision making
- Descriptive variety list – translation into 1-9 scale

Post-reg. trial – A+ and B-varieties

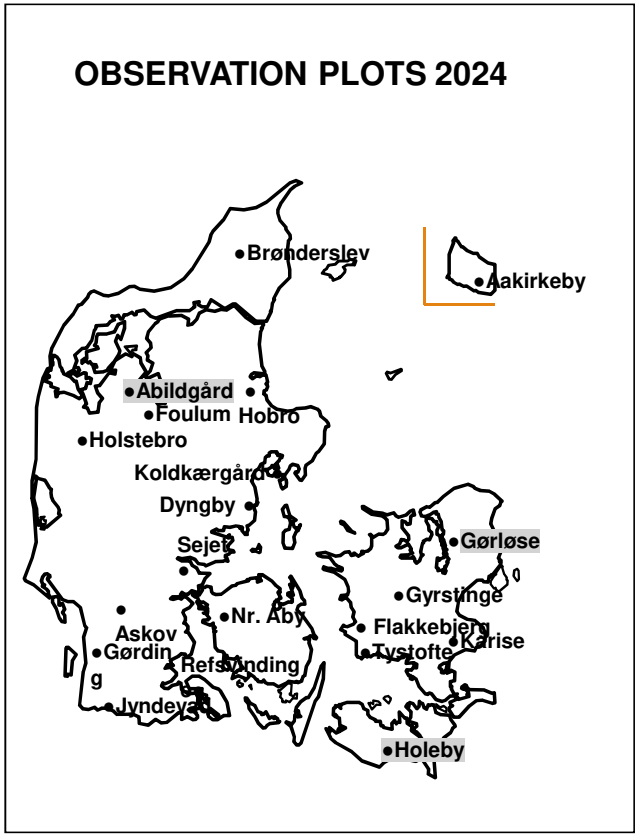
- Offered by SEGES and operated by the Danish Technological Institute
- Varieties accepted on or being tested for EU-listing
- Sites at local farmer's unions
- Annual test
- Varieties applied throughout their lifespan on the market
- Disseminated via sortinfo.dk

- Physically same trials
- Collaboration on planning, designing and validating trials
- Different paths concerning compilation, dissemination and use of data

LS-Means prediction of yield based on alpha-design
Results validated and published continuously

Disease observation plots

- Winter and spring grown cereals
- Pre- and post-registration varieties – 301 varieties excl. checks (2024)
- 20 Un-replicated trials
- No PGR, one half sprayed with fungicides
- Susceptible check varieties maintained by the TystofteFoundation
- All evaluations done by the same person
- Evaluation of percentage leaf cover
- Registration of agronomic traits
- Continuous publication during growing season
- Collaborative validation. TystofteFoundation, SEGES, Aarhus University
- Puiblication of validated data in variety list and on sortinfo.dk
- VCU, variety selection, decision making tool for fungicide treatment



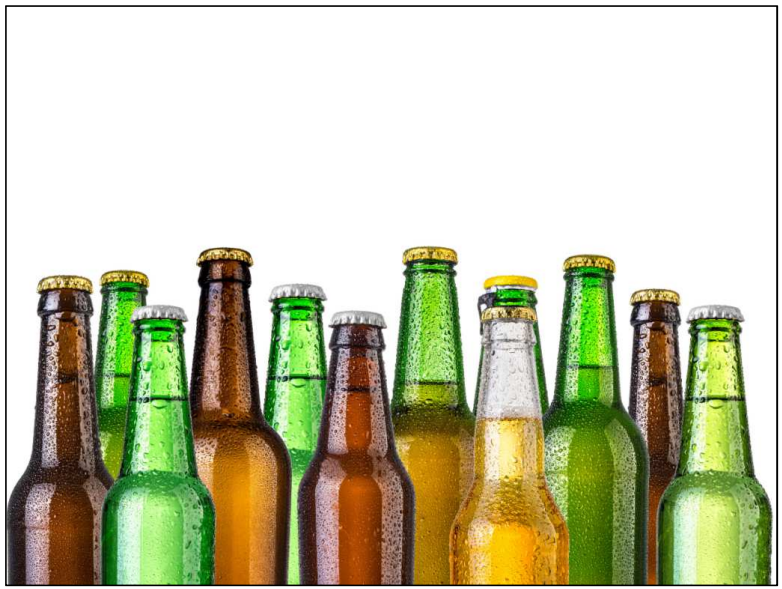
TystofteFonden

Cereal cyst nematodes

- Part of VCU and optional for EU-varieties
- Spring grown cereals
- One year of testing, 3 seeds by 4 rep.
- Based on inoculation under semi-field conditions
- Scored as suspectible/non-susceptible
- Reported in Variety list, annual results and sortinfo.dk

Micro-malting

- Optional test for winter and spring barley
- Carried out by VLB
- Selection of three most suited trials
- Complimentary data for VCU dicision-making
- Requirement for entering Danish Preferred https://www.danishpreferred.dk/



TystofteFonden

Bread wheat

- Winter wheat
- Approval according to Danish law regarding N-application to winter wheat for bread (additonal 40 kg N/ha)
- 6 locations, no replication
- Quality proxies (protein, specific weight, Falling Number)
- Baking test (flour yield, farinograph analysis, baking)
- Reported in annual results

Special characters

Simple character traits for which markers exist, which can be traced by pedigree or for which certificate from foreign examination office exist, are accepted based on information from the applicant. Traits are published by resistance gene or pathotype specificity. Eg.
Resistance to TuYV, Phoma, BYDV, OBDM, pod shattering, clubroot, soil-borne virus, barley mosaic virus, eyespot

Character traits that are polygenic or known to vary in expression are analyzed routinely or upon request. Eg.
Fatty acid profile and glucosinolate content (WOSR), vicin conent of field beans, ergot, cereal cyst nematodes

Tour of trials and facilities

Two groups based on tables

Two tours of 45 min. each

1. VCU, DUS and control field (1.5 km) – stay with Gerhard
2. Disease observation plots and (machinery) (2 km) – follow Anders

Possible to see indoor facilities and machinery during or after dinner.

Change at the machine shed

19:00 Dinner in the canteen or outside

21:30 Return to Musholm