



Video:

[Link](#)

2024

# St. Jynde vad forsøgsstation



## The experimental station in St. Jyndevad → timeline

- 1925-37 Various forces are working to establish an experimental station for agriculture on the sandy soils close to the German-Danish border.
- 1938 The land for the experimental station was bought from the German-minded farmer Andreas Nielsen, who later became gardener at the experimental station.
- 1939 The experimental station is built, and Frederik Heick is its first superintendent.
- 1945-59 The first irrigation trials - Jyndevad becomes the main station for irrigation trials.
- 1953 The experimental station gets its first actual laboratory in the barn building on Stadevej.
- 1959 Frederik Heick becomes director of Det Danske Hedeselskab, and Hardy Knudsen takes over as superintendent.
- 1960 Breeding pigs and use of horses stops.
- 1973 The stock of cattle is winding up and ongoing experiments with cattle are moved to Askov Experimental Station.
- 1984 Hardy Knudsen celebrates his 25th anniversary as superintendent and retires, he is replaced by Lorens Hansen, who is the last superintendent
- 1997-2020 The state's research activities are gathered in Foulum (now a part of Aarhus University). Experimental activities at Jyndevad experimental station are coordinated from there.
- 2014-20 Reduction of activities at the experimental station.
- 2021 Half of the experimental station's land and the buildings have been put up for sale.
- 2024 The buildings and half of the land are transferred to a new owner. Ongoing research activities are now managed from AU Askov.

### Activities at AU Jyndevad 2024:

Observation varieties .....	2
VAP Jyndevad: Monitoring area for pesticides .....	2
Vekselvirkningsforsøget (The interaction experiment) .....	2
Glacial flour.....	3
Dmi station.....	3
Lysimeter .....	3
Profile excavation .....	4

## Observation varieties

Observation of crop varieties planted with and without fungicide spraying to assess disease susceptibility, germination, ear emergence and lodging effects at parcel level.

2024 Winter seed	Parcels	2024 Spring seed	Parcels
Wheat	97	Wheat	16
Triticale	8	Oat	19
Winter barley	61	Spring barley	97
Rye	53		



## VAP Jyndevad: Monitoring area for pesticides

The experimental area in Jyndevad together with four other areas distributed around the country forms the basis of the multiannual project: PLAP. The project sheds light on whether approved pesticides or their degradation products leach into the groundwater when Danish farmers use them in accordance with the current rules. In addition to being an intensive monitoring system, the PLAP fields serve as a research platform for, among other things: a large number of PhD students. All results can be downloaded from the project website: <http://www.pesticidvarsling.dk/>



## The long-term field experiment on liming and P fertilization interactions



The field experiment was established at St. Jyndevad experimental station in the years 1942-1944. The experiment includes four liming levels and four phosphorus fertilizer levels in all combinations, i.e. a total of 16 trials. All treatments are carried out in triplicate in each of the four fields. One field was planted with trees in 1964, one has been set aside as grass fallow since 1994, and two fields are in normal rotation.

After 80 years of different treatment with lime and phosphorus, the experiment has developed marked gradients in soil pH, phosphorus content and other derived soil properties. The treatment effects have manifested themselves deep in the soil profiles (down to about 1 m).



## Glacial flour

The aim of the project is to test whether glacier flour can cover the entire plant's nutrient needs, except nitrogen material. University of Copenhagen LIFE leads the project. The project is a 3-year project where three different crops are grown. We will measure yields and texture analyses will be made of the different treatments.



## DMI station

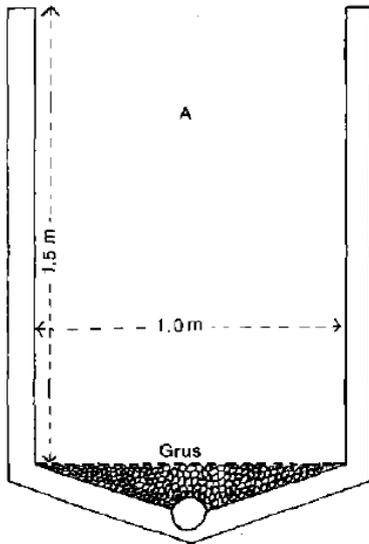


In 1872, the Danish Meteorological Institute (DMI) was established and is one of the oldest state institutions in Denmark. Today, DMI has a high-tech, 24-hour manned operation which, among other things, continuously monitors the risk of dangerous weather such as cloudbursts, blizzards and ice sheets, prepares weather forecasts and helps pilots flying Danish airspace and Danish airports.

DMI has had a measuring station in St. Jyndeved since 1920. Weather data from 1952 onwards can be found via the QR code.



## Lysimeter



The square tanks (1x1 m) are made of concrete and are 1.5 m deep. The bottom slopes from two of the sides towards the center, where the tubs can be tapped from the bottom. The vessels were treated with the U.P.C. masonry sealant. Suction cells are also inserted into the vessels, making it possible to extract water from specific soil layers.



## Profile description

Table 1: Moisture content, inaccessible and accessible water at various depths

Site	Depth	Volume % at pF 2.0	Unavailable water, mm	Available water, mm	Available water, mm	
					0-60cm	0-100cm
Jyndeved	0-22	19.4	10.6	32.1		
	22-31	26.1	6.5	17.0		
	31-75	13.6	33.4	26.4		
	75-100	7.6	7.6	15.2	66.6	90.7

Table 2: % by weight

Site	Depth cm	Clay, <0.002mm	Silt, 0.002-0.02mm	Fine sand, 0.02-0.2mm	Coarse sand, 0.2-2.0mm	Humus
Jyndeved	0-20	3.9	4.1	12.2	76.8	3.0
	20-25	3.9	3.6	10.9	77.8	3.2
	25-31	4.4	3.6	6.8	81.1	4.1
	31-75	4.0	2.9	4.7	85.8	2.6
	75-100	1.6	1.1	14.9	82.0	0.4



Pub: Types of soil at the Stat