

## DENMARK

### PEDO-CLIMATIC CONDITIONS:

A typical coastal climate, relatively warm, with mean annual temperatures of between 7-9 °C and annual precipitation of 640–770 mm. Temperatures are lowest from December to April (0-5.7°C) and warmest from June and August (14-16°C). The predominant soil type in Denmark is sandy, followed by loam and clay.

### CROP: Chickpeas

Chickpeas are a new crop for Denmark, and offer interesting potential for food production and side-streams products. Preliminary tests have been done with Canadian genotypes in order to test their performance, which were compared with an Italian cultivar (Sultano).

Year	Cultivar/Line	Yield (kg ha <sup>-1</sup> )			TSW (g)			Protein (%)			Protein Yield (kg ha <sup>-1</sup> )		
		Est	s.e.	sign.	Est	s.e.	sign.	Est	s.e.	sign.	Est	s.e.	sign.
2021	CDC CONSUL	2786	183	d	342	31.4	bd	16.8	1.72	b	466	33	a
	ELMO	2336	183	cd	313	31.4	bd	17.5	1.72	b	409	33	a
	ANALISTO	2047	183	cd	360	31.4	bd	18.2	1.72	b	377	33	a
	CDC ORION	1559	183	bc	430	31.4	d	13.1	1.72	b	204	33	bc
	CDC LEADER	1468	183	bc	399	31.4	cd	14.4	1.72	b	215	33	b
	SULTANO	781	183	ab	251	31.4	bc	14.8	1.72	b	117	33	bcd
Cultivar*Year		***			***			***			***		

CDCs Consul (Desi), Orion (Kabuli), Leader (Kabuli) and Elmo (Desi): cultivars from Canada; Sultano (Kabuli): cultivar from Italy

Table 1: Seed yield, thousand seed weight (TSW) and protein content from two years screening of 6/12 chickpeas cultivars validated in Taastrup, Denmark (2020/2021)



Picture 1: Chickpeas sown in rows, Taastrup, Denmark, 2021



Picture 2: Chickpeas in grain formation, Taastrup, Denmark, 2021

## BEST AGRICULTURAL PRACTICES:

- **Organic regenerative practices applied:**

- Crop-stubble leftovers from the previous season were incorporated into the soil.
- The use of mechanical harrowing as soon as weeds emerge, ensuring that the crop is not damaged in the process.

- **Best practices for sowing:**

- Selection of cultivars with good performance in northern latitudes and tolerant to diseases (e.g. ascochyta leach scorch).
- As a new crop in Denmark, inoculation with rhizobia is recommended for proper root nodulation.
- A sowing depth of 3-7cm, depending on seed size.
- Density of 50 plants per square metre<sup>2</sup>.
- Row spacing of 50 cm in order to allow for mechanical weed control.

- **Best practices for managing the chosen crops:**

- Early preparation of the soil, allowing weeds to emerge, and the application of a subsequent harrowing (false seed bed) before sowing.
- Adequate soil-bed preparation in well-drained soil.

- **Best practices for harvesting the crops chosen:**

- Chickpeas are best harvested when the pods are fully dry. A mechanical harvester needs to be adapted to similar conditions to those of pea crops.