

THE NETHERLANDS

PEDO-CLIMATIC CONDITIONS:

Maritime climate, with moderate winters and summers, and rainfall spread throughout the year.

CROP: Faba beans

Faba beans are a legume crop that can be grown in regions with cool seasons. It is sensitive to some fungal diseases.

The table below shows yields (kg/ha) at 86% dry-matter content without chemical control of diseases (NOT) and with fungicides (FUN).

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Picture 1: Biological control: Lady birds eating aphids

Year: Fungicide: Location:	2020 NOT Lelystad	2021 NOT Lelystad	2021 NOT Zeewolde	2022 NOT Zeewolde	2022 FUN Zeewolde
ALEXIA		2960			
ALLISON			4300	4800	7900
FANFARE		2767			
FUEGO	1874c	2839	4100	4000	8000
GL EMILIA		2352			
LG BANQUISE			2600		
LG CARTOUCHE			4000	5100	7800
LG VIPER			4200	5100	7900
LYNX		2025			
MACHO			4400	4400	7900
TAIFUN		2601			
TAIFUN			3000		
TIFFANY	1677 b	3004	3200	4500	7400
TRUMPET			2600		
VICTUS			3100		

BEST AGRICULTURAL PRACTICES:

● Organic regenerative practices applied:

- Use of organic manure.
- Mechanical weed control – starting early, before crop emergence, with a harrow, in order to control the already-germinating weeds and make sure that the field was free of weeds when the crop emerged. After crop emergence, a combination of harrowing and hoeing was used for weed control. As the Faba plants got bigger, small ridges were made in order to cover weeds.
- Support the presence of ladybirds and other natural enemies of aphids. Aphids can cause severe damage to crop growth, and can also transmit viruses to the plants. Planting adjacent field strips with an appropriate plant species is considered a best practice.
- Use of bumblebees for crop pollination. Bumblebees and wild bees are active earlier in the season than honey bees and will help to pollinate the earliest flowers.
- Honey bees can help to pollinate the flowers, leading to larger numbers of pods, especially in periods when wild bees are not present in large numbers.

● Best practices for sowing :

- Faba beans can be sown in late winter/early spring, as soon as the soil is dry enough – usually from the end of February till the end of April. It's best to use a precision seeder with a sowing depth of 2-5 cm, a density of 50 germinating seeds per square metre, and row spacing of 25-50 cm.



Picture 2: Fava beans flowering

● Best practices for managing the chosen crops:

- Row spacing at a distance that allows for mechanical weed control.
- Choice of organic manure with relatively high phosphorus and potassium content and low nitrogen content. Legume crops produce their own nitrogen with the help of rhizobium bacteria, so there is no need to apply a lot of nitrogen fertiliser.
- Good seedbed preparation is needed for optimal crop emergence.
- Ensure good soil structure, since legume crops are vulnerable to bad soil structure – the root system will not develop properly, leading to poor crop development.
- Choose varieties that are resistant to rust and chocolate disease. These diseases can cause severe damage to the crop. There are significant differences between varieties.

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

- The crop can be combine-harvested when the seeds are sufficiently dry – about 16-18% water content. Drying –e.g. in aerated boxes – is necessary to achieve a dryness level of 12-14%.



Picture 3: Faba beans drying



Picture 4: A rust attack in faba beans



Picture 5: Detail of faba-bean pods



Picture 6: Determination of faba-bean floral stages

CONTACT

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