



## Vicia faba

Family name: Leguminosae

Common name: Leguminosae

Local name: (فول مصري) Fool masry



### Cultivated



#### Role in Biodiversity

Faba beans are characterized by their high ability and efficiency in fixing nitrogen in the soil, which increases its fertility and raises the productivity of the next crop in the cycle. They are also grown as a cover crop to prevent erosion



#### Environment and Growing

Faba bean is a winter crop that grows better under cool and moist conditions. It is grown in soils with high salinity, as well as in clay soil. However, it prefers rich loams. It withstands harsh and cold climates

Growth requirement:

- PH range 6.5–9.
- Maximum temperature for podset 23.7–26.1°C.
- Minimum temperature for podset 3.2–3.8 °C.
- Average daily temperature for podset 12.7–13.9 °C.
- Annual rainfall range 700–1000 mm.



#### Reproduction and Communication

The reproductive system of faba bean is a mixture of cross- and self-pollination. Cross-pollination is mediated by a number of bee species, but self-pollination may also require bee visitation in order to 'trip' the flower.

Fragrant flowers are visited by a variety of pollinator species and are especially attractive to bumble bees (*Bombus* spp.). The extra-flora nectaries provide additional nectar resources to pollinators and beneficial insects including lacewings, ants and ichneumonid (parasitic) wasp.



#### Life span

It is grown as a winter annual which usually takes 135 to 180 days to be harvested



#### Size

Faba bean can grow up to a length of 1.5–2 m



#### Parts



Stems are square, hollow, single or several, and branching from the base to form a bushy habit.

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The root system is shallow. It consists several lateral roots in addition to the main root.



Leaves are dark green, compound, 4–7 inches long with 3-7 leaflets.



Flowers are in clusters on short stalks in the axils of the leaves, petals range from white to purple with black, dark brown or purple blotches.



The fruits are smooth, green, and cylindrical pods with a woolly coated interior that can contain up to 10 seeds.



Seeds are oblong-oval and have a distinctive hilum on their short side

### INTRODUCTION

#### Herb

*Vicia faba*, faba bean or broad bean, is a species of legume that characterized by the production of flat seeds in large and thick pods. It is among the most ancient plants cultivated for its edible seeds. Fava beans originated in the Middle-East and are now widely distributed around the world.

In Sudan, faba beans are one of the primary grown and consumed legume crops. It is cultivated mainly as a winter crop in River Nile State, Northern State, Al Rahad District, Khartoum State, and Gezira State. It is consumed as a daily breakfast and dinner for many people in both rural and urban areas.

### LIVELIHOODS / CULTURE

#### Cultivation

**Preparing of the land:** Plowing, breaking blocks, saraba should be at a distance of 60cm.

**Seeds sowing:** Early planting in the first week of November.

On both sides of the saraba, holes are made with dimensions of 20cm.

Placing 2 seeds in each hole, it is also possible to plant by seed scattering and then by seeding, but the land must be well leveled and the amount of seeds increased to ensure a high germination rate that enables the highest productivity to be obtained.

**Watering:** The land is usually irrigated before planting because of its effect in increasing production and getting rid of weeds.

The irrigation periods during the season are every 10 days from germination until flowering, and every 7 days after flowering and during the fruit filling stage.

**Weeding:** Cleaning and removing weeds is an important process for crop growth because if left they can reduce yield. Weeds are removed once or twice by hoeing during the vegetative growth of the crop (3-6 weeks).

**Harvesting:** Maturity occurs about 110-120 days after planting, that is, when the crop reaches 80-90% of yellowing. The crop must be harvested when it matures so that delaying or early harvesting does not lead to a decrease in production. Harvesting is usually done using Mingals or knives to collect the whole plant aside in the field.

**Storage:** The crop is usually stored in burlap sacks.

**Waste:** Other plant parts are used as fodder.

Faba beans harvesting in Northern state:  
<https://youtu.be/bx5gbAzV1Lc>

#### Cultural Value

Faba bean are a common staple food in Sudan, usually eaten for breakfast and dinner. In Northern Sudan it is eaten while still young and tender. Stewed faba bean (Fuel Musalah), deep fried cotyledon paste with some vegetables and spices (Taamia or Falafel), and faba bean soup with bread and cheese whey (Fata) are the common food recipes in many parts of Sudan.

Fava bean makes excellent forage, the plants may be grazed in the field after harvesting or dried for use as fodder.

Information not available.

#### Cultural Expressions

حصاد الفول المصري في الولاية الشمالية

### THREATS

- The crop growing season for faba bean is short as it is limited by high temperatures and disease stress at both the beginning and the end. Also, the high day temperatures during the season tend to set an upper limit to potential maximum yields.
- Parasites: *Orobanche crenata* (carnation-scented broomrape) can cause severe impacts on fields of broad beans, devastating their yields.
- Fungal diseases: faba beans are attacked by the fungus *Botrytis fabae*, the chocolate spot fungus, which can have a severe impact on yield. It is one of the worst diseases in fava beans, as it results in foliar damage.
- Insect pests such as *Aphis fabae*
- Viral diseases such as Faba bean necrotic yellows virus
- Bacterial diseases such as *Xanthomonas* spp.

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