

# PRODUCT DATA SHEET

## Chia

<b>Botanical name</b>	Salvia hispanica
<b>Seeding rate</b>	Grain production: 100 grains/m <sup>2</sup> (1.5-2.5 kg/ha) Production as catch crop/ flowering plat: 450 grains/m <sup>2</sup> (= 6-7 kg/ha)
<b>Distance between rows</b>	30-50 cm
<b>Sowing period</b>	late May onwards
<b>Sowing depth</b>	1 cm



### Botany

- Origin: Central America
- Family: Mint (Lamiaceae)
- Genus: Sage (Salvia)

### Morphology

- Annual herbaceous plant with growth height of up to 180 cm
- Upright growing plant with angular, slightly hairy and sparsely branched stalks
- Opposite foliage leaves that grow in bunches
- Inflorescence: fine haired false whorl of up to 20 cm in length
- Flower colour: blue
- Flowering period: late July to early September

### Varieties and seeds

- Varieties are differentiated based on intended usage
  - High grain yielding varieties: human consumption, bird feed
  - High leaf yielding varieties: as greening plant in seed mixtures
- Both white and black seed varieties are available; however, there are no major differences between the two in terms of their agronomic and nutritional properties

### Climate requirements

- Prefers warm to semi-arid climate
- No tolerance of frost
- Germination temperature: from air temperature of 20°C
- Optimum temperature lies between 16-26°C

### Soil requirements

- Not very demanding in general
- Prefers nutrient-poor silty, sandy and sandy loam soil with possible soil reaction range between 5-8.5 pH
- Waterlogged soils are not suitable

Chia was mistakenly given the botanical name *Salvia hispanica* (the Spanish term for 'sage'), as the plant was already being successfully cultivated in Spain at the time of its botanical classification. In fact, the plant had been introduced in Spain by colonial traders from Central America and is actually native to Central Mexico. Chia should not be confused with the indigenous Spanish sage (*Salvia lavandulifolia*). The Spanish word 'chia' roughly translates to 'oily'.



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## Crop rotation

- Chia is considered a low-N-input neutral plant, as it is not related to any local agricultural plants
- It can be easily cultivated at extensive farming locations
- It has no specific requirements in terms of the preceding crop

## Soil preparation

- The objective is to have a weed-free, well-distributed, evenly crumbled, fine seedbed:

Objective	Sowing
Measures	<b>Soil preparation (primary preparation)</b> with a plough for neat cultivation. <b>Secondary processing</b> using a mill or rotary harrow for a fine, well distributed seedbed.



## Sowing

- Target stand: 85,000 plants/ha
- Rule of thumb for sowing: well-prepared seedbed takes priority over sowing period
- Sowing should follow only when the risk of night frost has been averted

## Crop protection

- So far, chia is categorised as an extremely robust, undemanding and healthy species in terms of resistance to both diseases and pests
  - It is prone to leaf blight under conditions of prolonged leaf wetness or constant heavy rainfall
  - Along with broad row spacing, the occasional mechanical removal of weeds using a pickaxe is recommended



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## Fertilisation

- Fertilisation should follow taking into account the nutrient removal based on soil testing (the German Fertiliser Ordinance [Düngeverordnung] must be observed!)
- Nutrient administration per year in kg/ha:

	Total N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
<b>Total</b>	20	40	90

## Cultivation, harvesting, constituents and usage

- High leaf yielding varieties: Mulching or rolling after the greening phase as part of regenerative agriculture, to promote tilth and humus formation in the surface rot
- High grain yielding varieties: Threshing approximately 3-3.5 months after sowing
- The seeds can be consumed raw, dried or ground to a fine flour (extremely healthy super food)
- Valuable source of omega-3 fatty acids, antioxidants, vitamins (vitamin A, niacin, thiamine, riboflavin) and minerals (mainly calcium, phosphorous, potassium, zinc and copper); low in sodium
- Contains up to 38% chia oil and 18-23% valuable plant protein
- When soaked in water the seeds form an extremely valuable polysaccharide layer similar to flaxseed → Protects the intestinal mucosa and aids in digestion



**If you have questions,** please feel free to contact us!

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