



## Di Bella Produce and Farming

Ingham North QLD Australia

# Seed sales- tech sheet.

## Sunn hemp

Sunn Hemp is *Crotalaria juncea*, one of the fastest growing legumes known.

Sunn Hemp is called this because of its bright yellow flowers and that it can be a source of fibre (hemp). The flowers give off a slight perfume smell. It is an erect, branching, annual summer legume. It is a rapid, vigorous grower with a strong taproot and branching root system.

It reaches a height of over 1.2m in 60 days when grown under favourable conditions (hot and wet). It can attain a height of over 1.8m in approximately 90 days. Plants are usually unbranched from the ground to 2 ft (60 cm) and many branches develop above this height. It does not self-seed easily and is therefore a low weed risk.

Sunn Hemp is drought hardy, fast growing, a huge producer of nitrogen, not fussy with soil types, diseases, water, nutrition etc., and it kills/reduces CCN (Cereal Cyst nematode), RLN (Root Lesion Nematodes), rhizoctonia and take-all.

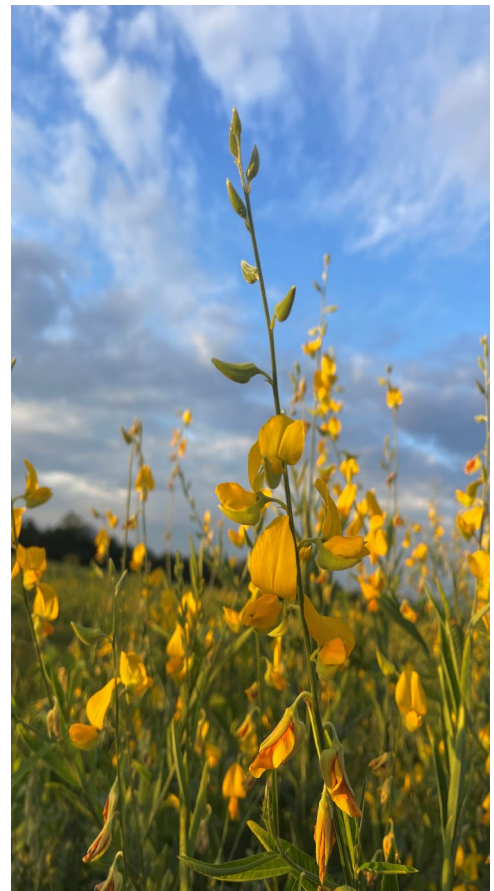


Photo taken by Di Bella Produce and Farming.

### Cultivar types

There are various “selections” of Sunn Hemp around the world based on its use as a source of hemp fibre or as a green manure (cover) crop. The main selection available in Australia is known as “Freyr”.

### **Seeding rates and planting depth**

Seed rate: For seed production attempts, 3-5kg/ha. For cover crop purposes, 5-10kg/ha. Use higher seed rates in cooler climates as it will not branch as much. Sow with no-till and press-wheels. Seed depth: 2-5cm depth is adequate with 2-3cm being the most ideal. However, it is a strong germinator and will come up from below 5cm depth if you need to place it deeper onto moisture. Row spacing: 30cm-1m rows. For anyone trying to bulk up seed, sow on the 1m row spacings. In hot conditions with reasonable moisture levels, at 1m row spacings it will soon cover the inter-row space with its branches. Overseas trials showed best yields occur at low seed rates and wide row spacings, making the plants branch more.



Photo above: A field of Sunn hemp in the Macknade area, North Queensland in flower. Photo taken by Di Bella Produce and Farming.

### **When to plant:**

There are no hard and fast measurements yet of what temperature it needs to germinate. Experience has shown that it has germinated quickly when average soil temperatures were 14C. However, once it emerged, it did not grow very much until the weather warmed up. It loves hot weather (30-40C days). Measuring the soil temperature at 9am at 3-5cm depth gives a close approximation to the average soil temperature for the day. It is best to sow when the temperature is on a rising trend. In southern Australia, the best sowing times will be August-December depending on where you are, but any time in summer will be fine as long as there is moisture to germinate it.

Soil types and pH: In northern Australia, you will be able to grow it at any time of the year. Soil types & pH: This is a robust species. It will grow happily from 5.0-8.5pH (in CaCl<sub>2</sub>) and on any soil type. Down as low as pH 4.5 should be OK. If anything, American experience has shown it does not like the very high pH (alkaline) soils as much as it does the acidic soils.

### **Inoculation:**

It “must” be inoculated with rhizobia for a successful crop growth otherwise it will not nodulate and will not thrive. It is recommended to use either Group M or I inoculants.

### **Fertilisers:**

Fertilisation of Sunn hemp is usually only considered when growing the crop for forage. It is not recommended to apply nitrogen fertiliser because it will reduce nodulation and the fixing of atmospheric nitrogen.

Sugarcane fallow cover crops are usually not fertilised; however, some micro-nutrients listed below should be considered.

Sunn Hemp is not fussy with nutrition as it grows well on low fertility soils. However, until you gain a few years’ experience growing it, apply ~10-20kg/P/ha with the seed and 5-10kg S/ha if needed. If potassium is marginal, add 50-80kg muriate of potash before sowing (top-dressed or drilled away from the seed). If the soil is fertile, you should not need any fertiliser.

Location, soil type and history of fertiliser application will determine fertiliser needs. The main nutrients that should be considered when growing Sunn hemp are phosphorus, potassium, cobalt, molybdenum, and zinc levels should be considered. Low levels of soil molybdenum can be experienced with soil pH levels below 5.5; in this situation it may be worth applying a cobalt and molybdenum foliar application early in the crop's growth or after water logging has occurred.

Consult your local agronomist for a specific nutrition program.

### **Herbicides and weed control.**

Most summer grasses (such as Summer grass, and Liver seed grass) can be controlled with pre-emergent herbicides like Pendimethalin, Trifluralin. S-Metolachlor or Metolachlor can also be used to control some grass and broadleaf species.

Sunn hemp is very sensitive to the phenoxy herbicides such as 2,4-D, M.C.P.A., 2,4-D-B, Tordon-50-D® and dicamba. Do **not** apply these herbicides to or near these crops, as severe damage will occur.

### **Nematodes**

Research undertaken by the University of Hawaii found that the plant puts out a chemical called Monocrotaline which controls nematodes (especially Root Rot and Root Lesion nematode species).

### **Sources:**

- [How to grow Sunn Hemp updated October 2014, pages \(agronomy.com.au\)](#)
- University of Hawaii



Photo above: Coral shaped nodules on the root system of a Sunn hemp plant. Photo taken by Di Bella Produce and Farming.



Above- A mix species cover crop with lablab, Sunn hemp, soybean, cowpea and sunflower in the Ingham area, North Queensland. Photo taken by Di Bella Produce and Farming.

### **Suitability in a mixed species cover crop.**

Sunn hemp is ideal in a mixed cover crop because it:

- Easy to establish.
- Can provide good cover to prevent soil erosion.
- Suppresses weeds.
- Captures nitrogen in its nodules.
- Reduces parasitic nematode levels in soil.
- Forages for residual nutrients in the soil and stores it in plant tissue.
- Has a high biomass.

### **Purchasing seed to plant.**



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