# Hemp variety datasheet

**EU registered *Cannabis Sativa L.* variety**

**Ferimon 12 (FR)**

Hemp is naturally dioecious - the male and female flowers are not found on the same plant. Within dioecious varieties there are natural occurrences of monoecious plants, bearing flowers of both sexes. Monoecious hemp varieties are a result of long breeding efforts in France, Poland, Ukraine and Romania and are driven by the search of high seed/grain productivity.

| | Monoecious | Dioecious |
|---|---|---|
| Genotypic expression | ◉ | ○ |

Hemp is a rustic plant and grows in various conditions, however Europe has 3 distinctive climate types with significant difference in terms of temperature and precipitation.

| | Atlantic | Mediterranean | Continental |
|---|---|---|---|
| Climate adaptation | ◉ | ○ | ○ |

Vegetative cycle is key for the proper integration of hemp into the crop rotation cycle. Earlier maturity provides for less riskier harvesting of the grain and early cleaning of the fields for autumn crops. Late maturity favors the accumulation of cannabinoids, thus beneficial when growing for CBD, but also risky due to the positive co-relation between CBD and THC content.

| | Very early<br>< 110 days | Early<br>< 125 days | Medium<br>< 135 days | Late<br>< 145 days | Very late<br>< 160 days |
|---|---|---|---|---|---|
| Vegetative cycle | ○ | ◉ | ○ | ○ | ○ |

Height of the stand is very important when it comes to harvesting with standard farming equipment. Combine harvesters can hardly reach elevations of more than 250 cm so it is advisable to look for shorter varieties, especially when growing hemp for grain.

| | < 150 cm | 150 - 200 cm | 200 - 250 cm | 250 - 350 cm | > 350 cm |
|---|---|---|---|---|---|
| Height at maturity | ○ | ○ | ◉ | ○ | ○ |

## Grain/seed characteristics

Grain yield is dependant on a wide range of factors - climate conditions, soil type and available nutrients, sowing date and seeding rate, timing of the harvesting. Apart from the environmental factors, there are also important genetic differences in the grain productivity of the hemp varieties. Monoecious varieties for example can yield up to 70% more grain than the dioecious varieties.

| | > 1.2 t/ha | 1.0 - 1.2 t/ha | 0.8 - 1.0 t/ha | 0.5 - 0.8 t/ha | < 0.5 t/ha |
|---|---|---|---|---|---|
| Grain/seed yield | ○ | ○ | ◉ | ○ | ○ |

Oil is the main by-product of hemp seed and offers a rich composition of 80% Essential Fatty Acids. The proportion of extractable oil is an important factor that adds value to hemp varieties.

| | > 32% | 30 - 32% | 28 - 30% | 26 - 28% | < 26% |
|---|---|---|---|---|---|
| Oil content in seed | ○ | ◉ | ○ | ○ | ○ |

Size of the seeds/grain is particularly important for successful shelling/de-hulling of the seed in order to obtain the hemp nuts. Larger seeds are easier to de-hull and give better yield of hemp nuts.

| | > 20 gr. | 18 - 20 gr. | 16 - 18 gr. | 14 - 16 gr. | < 14 gr. |
|---|---|---|---|---|---|
| Size of seeds (TSW) | ○ | ○ | ◉ | ○ | ○ |

## Fiber/biomass characteristics

Biomass yield is important to measure the total productivity of the variety in terms of absolute yield of fibers and hurds. This yield is essential for hemp farmers who grow for the fiber processing industry as income is based on the tonnage of bales they provide to the factories.

| | > 15 t/ha | 12 - 15 t/ha | 10 - 12 t/ha | 8 - 10 t/ha | < 8 t/ha |
|---|---|---|---|---|---|
| Biomass yield (dry) | ○ | ○ | ○ | ○ | ◉ |

The content of fiber in the stems is essential when hemp is grown for textile or to be processed for short technical fibers destined for the automobile industry. Higher content means higher yields of clean fiber and a smaller proportion of hurds.

| | > 35% | 30 - 35% | 26 - 30% | 23 - 26% | < 23% |
|---|---|---|---|---|---|
| Fiber content in stem | ◉ | ○ | ○ | ○ | ○ |

## Cannabinoid profile

CBD (Cannabidiol) is the main legal active substance in industrial hemp and is found mainly in the inflorescence of the hemp plant with concentrations varying widely between 0% and 3%.

| | 2.0 - 3.0% | 1.5 - 2.0% | 1.0 - 1.5% | 0.5 - 1.0% | < 0.5% |
|---|---|---|---|---|---|
| CBD content | ○ | ○ | ◉ | ○ | ○ |

THC (delta-9 THC) is the main psychoactive substance in Cannabis Sativa plant and is found in very low but traceable quantities, which in general rarely exceed 0.20%. This is the legal limit for THC concentration in industrial hemp according to EU legislation.

| | < 0.02% | < 0.06% | < 0.12% | < 0.20% | < 0.30% |
|---|---|---|---|---|---|
| THC content | ○ | ◉ | ○ | ○ | ○ |

| | + + + + + | + + + + | + + + | + + | + |
|---|---|---|---|---|---|
| Earliness and ease of harvesting | ○ | ◉ | ○ | ○ | ○ |
| Grain/oil yields and ease of processing | ○ | ○ | ◉ | ○ | ○ |
| Biomass and fiber yields | ○ | ○ | ◉ | ○ | ○ |
| Cannabinoid profile (CBD vs. THC) | ○ | ◉ | ○ | ○ | ○ |

| | Grain | Grain/Fiber | CBD/Fiber | Grain/CBD/Fiber |
|---|---|---|---|---|
| Recommended use | ○ | ◉ | ○ | ○ |

** **Disclaimer***

*All information refers to the trial results obtained in the breeding region of each variety, using standard farming practices and equipment. There is no guarantee such results could be achieved in different pedoclimatic conditions and using different agricultural practices.*

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