

# Barrel Medic (*Medicago Truncatula*)

## Information

For starters, Barrel Medic is an annual winter legume that turns into a flowering clover. The flowers tend to sprout in April and May. This species of clover is also able to grow to be about 16 in tall when fully grown. Barrel Medic also has a tap-root system that elongates very slowly.

To find this plant, travel to more Mediterranean regions, California, New South Wales and South Australia.

## Pests

Barrel Medic tends to attract Egyptian Alfalfa Weevils which are a pest for these plants and the farmers that take care of them. They are also able to attract blue-green weevil and larva.

## Farming

Farmers tend to use this low growing clover, as well as other types of clover, as a cover crop for their farms. Cover crops are used to help restore and keep nutrients for their more important crops such as corn, potatoes and carrots since each plant takes different nutrients.

When planting Barrel Medic, seeding should happen in fall and there should be about 15 to 20 lbs of seeds per acre. Seeds should also be planted at a depth of 1/2 to 3/4 in. This clover should be able to start flowering within 2 to 4 weeks.



## Uses

This clover is high in nutrients such as sulfur and phosphorous and proteins that are used for cover crops and animal feed. However, it can cause bloating in cattle.

## Temperature and Water

Barrel medic needs long, hot, dry summers and wet winters in order to survive, although, they are able to survive in areas with less than 20" of annual rain fall. Temperatures 18 degrees Fahrenheit and below can kill them.

## Seeds

Seeds of Barrel Medic are hairy, barrel shaped pods (burrs) that contain about 4-8 kidney shaped seeds. These seeds are a yellowish-brown color that can grow to be between 2.5 to 4 mm long and 1.5 to 2.5 mm wide.

## Plant

To identify this plant, take a look at the hairy stems and oval leaves. Barrel Medic is also identifiable by having green leaves with a possibility of purple-brown splotches. These spots are brighter during the winter but fade in spring and with maturity. 80% of the leaves however, have a light green splotched edge with brown on some of the leaflets while the other 20% have a brown spot on the mid-lower part of the leaflet. Both of which fade with maturity.

This type of clover can also grow 1 to 2 small yellow flowers while others can grow up to 4.

## Reserch From An Expert

Dr. Armando Bravo uses barrel medic as a model to study mutually beneficial plant-microbe interactions. More specifically, they investigate how some types of soil fungi, help plants obtain more nutrients from the soil. Since plants feed fungi with food they produce through photosynthesis, there is an exchange for additional nutrients that these fungi obtain from the soil. Dr. Bravo's aim is to use this interaction to increase crop production in a sustainable way, reducing dependence on chemical fertilizers.



## Questions

---What is something you found surprising about this species of clover?

---What was your favorite part about the 3-D model?

---What makes this clover different from other clovers?