

Depending on the soil, you need 30 KG of Alfalfa per Hectare.

The average yield of Alfalfa is 20–35 tons per hectare if proper soil care is done and fertilizers are used.

Soil Testing

According to Michigan State University, Alfalfa does well on well-drained soil rather than wet, heavy clay soils and requires a suitable pH of 6.5 to 7.0. If your soil pH is lower than 6.5, symbiotic nitrogen fixation may not function properly. Thus, liming will be required to raise low soil pH to its optimum level and improve nutrient uptake.

Soil PH

Soil PH is a measure of the acidity or Alkalinity of the soil. If the soil PH is lower than 6.0, it is unsuitable for Alfalfa planting. Liming before planting is highly recommended for low-PH soils.

All soils should be tested as deep as 1.8–3.0 CM.

Before planting, every farmer should test the soil for Salt and Nitrogen levels.

Fertilizers

phosphate (P₂O₅), potash (K₂O), and sulphate-sulphur (S) should be used on the soil.

Soil

According to UC Davis research, Alfalfa can be successfully produced on various soil textures, but sandy loam, silt loam, and clay loam soils are generally preferred.

Weed control

For spring seeding, weed control is essential to prevent seeding failure from severe weed pressure. For conventional planting, pre-emergence herbicide should be used before planting Alfalfa.

Seed planting

Alfalfa roots extend 8–12 feet (1.8–3.6 Cm) deep and sometimes, grows up to 15 meters (49 feet) to reach ground-water. The planting area should be dug at least 3 feet (0.9 Meters) deep to allow Alfalfa roots to grow. If not, the soil will not be suitable for Alfalfa production.

Alfalfa grows to a height of up to 1 meter (3 feet 3 inches).

Salinity & sodium in the soil

Significant salts (saline soils) and sodium (sodic soils) can and will affect Alfalfa growth and lower production, and the leaves will not look normal and look burned. Also, high salt levels affect water availability to the plant and the root of Alfalfa. It would help if you had an electrical Conductivity (EC) test of the soil to measure the level of salinity in the soil. An EC level of more than 2.0 millimhos per centimeter (mho/cm) will affect Alfalfa's growth and production. Levels above 5.0 are considered not suitable for Alfalfa production.

How to lower salt levels in the soil? Soil leaching or water draining the salt from the soil is a good solution but will be very costly.

We advise not to plant Alfalfa in areas with high salt levels in the water and the soil. We advise testing the soil and the water by a professional company before planting.

No Alfalfa seed can resist and grow in areas with high salt. Only moderate levels of salt can be acceptable, but not high. All Alfalfa seeds in America and Australia are for low to medium salt levels in the soil and water but not high levels in the soil and water.

CROP ROTATION

To avoid damage to the soil and the growth of pests and bacteria and to kill weeds, It is recommended to do crop rotation of Alfalfa every three years. **DO NOT PLANT ALFALFA ON THIS SAME SOIL AND AREA FOR MORE THAN 3 YEARS.** After Alfalfa, plant sorghum or corn, then go back to Alfalfa.

The best rotational crops following Alfalfa are cereal crops and annual forage grasses. Small grains can benefit from nitrogen released after Alfalfa is plowed. Corn and sorghum are good examples.