

Azolla cultivation

Availability of quality fodder at a reasonable price is one of the challenges faced by our farming society. Azolla farming proves to be a successful alternative to this problem. Azolla is a free floating water fern consisting of a short, branched, floating stem, bearing roots which hang down in the water. It's kind of green fodder grown on water surface. Apart from this, it has nature of fixing nitrogen in rice crop field. This is the reason for which it is used as common bio fertilizer and green manure in rice fields. The blue - green algae grow in symbiotic association with this fern and are responsible for nitrogen fixation in rice crop. Though there are many species of Azolla, *Azolla pinnata* is popular among those.



Advantages of Azolla

- Azolla easily grows in wild environment and even can be grown under controlled environments like polyhouses
- Azolla can be grown in large quantities, requires and used as green manure in both Kharif and Rabi seasons
- Azolla can fix atmospheric CO₂ and nitrogen to form carbohydrates and ammonia respectively. After decomposition it adds available nitrogen to soil

- Azolla solubilizes Zinc, Iron and Manganese and make them available to the rice in the field
- Azolla helps in weed control and suppresses tender weeds such as *Chara* in rice fields
- In natural way, Azolla releases plant growth regulators and vitamins which are very much required to enhance the growth of paddy crop
- Azolla helps to increase the crop yield and quality
- Azolla reduces water evaporation rate from irrigated rice field
- When used as supplemental feed in dairy, it helped to increase the milk yield



Azolla grown in rice fields as green manure

Nutrition value in Azolla

Azolla is very rich in protein (25-35%), Calcium (67 mg/100g) and Iron (7.3mg/100g). The protein content in azolla is 6 times higher than that in hybrid Napier. It can produce 1000 MT per ha of biomass against 250 MT per ha in case of Hybrid Napier.