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*Shaping Lives...
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Center for Smart Agriculture Organic Farming



Module 2: Preparation and application of organic inputs
Session 11: Azolla and BGA culture and its application



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Use of Blue Green Algae (BGA)

- **Algal culture is applied as dried flakes at 10 kg/ha over the standing water in field rice.**
- **This is done two days after transplanting in loamy soils and six days after planting in clayey soils.**
- **The field is kept water logged for few days immediately after algal application.**
- **The biofertilizer is to be applied for 3-4 consecutive seasons in the same field.**



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Requirements of Blue Green Algae (BGA)

- Standing water of 2-10 cm in field is a pre-requisite for the growth of BGA
- It grows well in a temperature of 25-45 degree Celsius
- Bright sunshine improves growth rate while, cloudiness slows it
- It grows well in a pH range of 7-8 and soil with high organic matter



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Use of Azolla

- **Green manure:** Azolla is applied @ $0.6-1.0 \text{ kg/m}^2$ ($6.25-10.0 \text{ t/ha}$) and incorporated before transplanting of rice.
- **Dual crop:** Azolla is applied @ of 100 g/m^2 (1.25t/ha), one to three days after transplanting of rice and allowed to multiply for 25-30 days. Azolla fronds can be incorporated into the soil at the time of first weeding.



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Requirement of Azolla

- Unlike BGA, it thrives well under low temperature
- Normal growth occurs at 20-30 degree Celsius
- Grows better with frequent rains and cloudiness
- Suitable soil pH is 5.5 to 7



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Benefits of Azolla and BGA application

- Adds Nitrogen to soil
- Improves physical, chemical and biological properties of soil
- Improves organic matter content of soil
- Improves crop yield
- Improves sustainability



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THANK YOU