

भारतीय चरागाह एवं चारा अनुसंधान संस्थान, झाँसी

#### Handling fodder issues during drought

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### Indian Grassland and Fodder Research Institute Jhansi

## Contribution to the income of farmers in Jhansi

Category of household	Contribution of crops	Contribution of livestock
Landless Labour	Labour mainly	Minor contribution
Marginal farmers	60 %	35 %
Small farmers	67 %	26 %
Medium farmers	77 %	20 %
Large farmers	84 %	12 %

#### Fodder issues during drought

- Poor germination and growth of fodder crops
- Lesser availability of fodder
- Shortage of other crops's byproducts used as fodder
- Less availability of weeds used as fodder supplements
- Higher cost of Concentrate
- More uncontrolled grazing (Anna pratha)
- Crop harvesting with combine to save cost/labour
- Less income from Livestock

# How to manage the fodder/feed during drought

- Keep space for Perennial fodder grasses
- Grow dual purpose grain crops
- Efficient use of irrigation methods
- Adopt Fodder conservation practices as Silage and hay making
- Grow azolla as concentrate replacement to certain extent
- Field protection from uncontrolled grazing
- Rely on small ruminants
- Crop harvesting with reaper/hand operated machines to save byproducts
- Grow fodder trees on bunds

#### **Keep space for Perennial fodder grasses**









#### Grow the crops near water bodies, unused lands



### Hybrid napier grass on strips



#### Grow the crops on unused bunds in fields



### Hybrid napier grass on bunds





## Growing the crops on bunds/channels to save water





#### Growing the crops on bunds/channels to save water



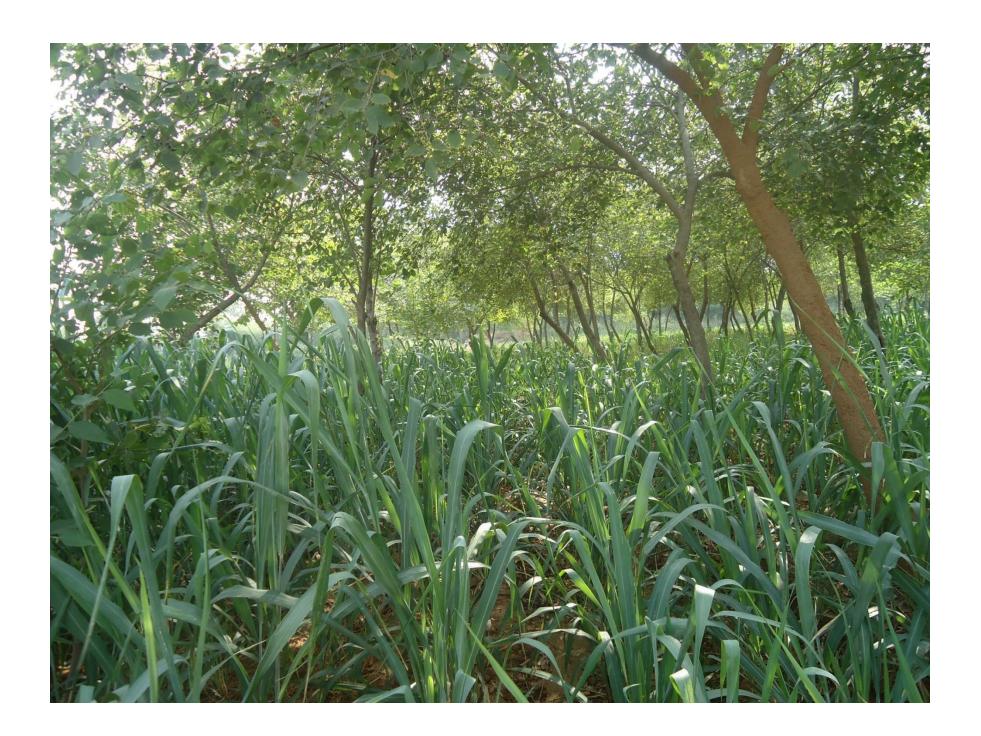
#### Draught resistant- anjan grass



## Sowing of Shade tolerant- Guinea grass in orchard







#### Fodder production from Orchard



## Farm pond is must for lifesaving irrigation and utilise the available water efficiently



### Fodder conservation for lean period-Silage





Less water requiring Oat seed/grain production: a profitable enterprise

#### **Economics of seed production, Oat (JHO822) in Jhansi**

Parameters	Values
Total cost, Rs	47202
Total, pure seed, Quintal	1816
Straw, q	32.42
Total Return, Rs	59182
Net Return, Rs	11970
C:B Ratio	1:1.25
Cost of production of seed (Rs/kg) (When both seed and fodder are considered)	18.41



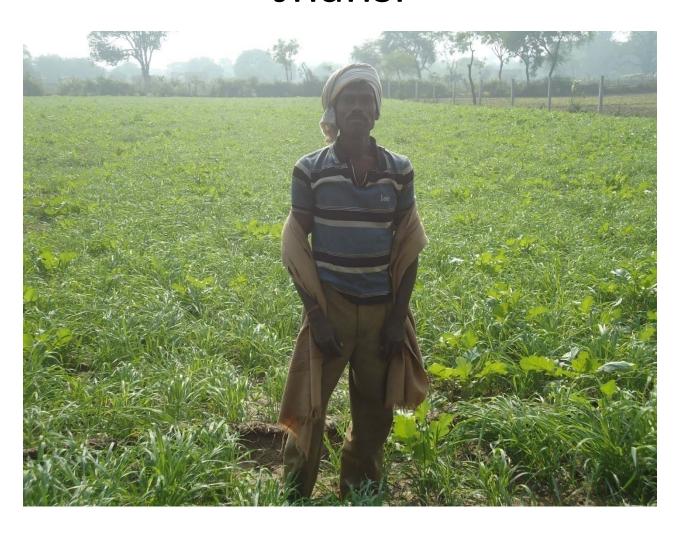
Oat seed crop cv JHO 822 seed crop in Aonla orchard in Badagaun Jhansi, Rabi 2014-15



### 0.5 ha Oat seed crop cv JHO 822 seed crop in Richhore Jhansi, Rabi 2014-15



# Oat, JHO-822 seed crop in badagaun, Jhansi



## Berseem seed production in Mustard fields for additional income



## Grow less water requiring sorghum crop in place of maize



# Seasonal Dinanath grass fodder/seed for less fertile/rainfed soils



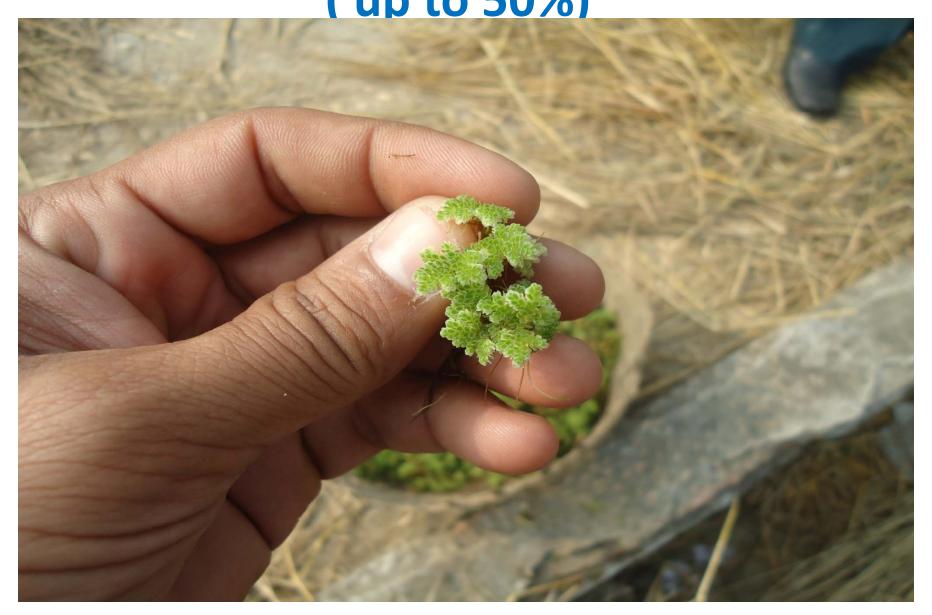


### **Dinanath grass tollerance**





Azolla as concentrate replacement (up to 50%)



### Azolla production method



### **Other ways**



### धन्यवाद

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