

Hill Zone

- Intercropping of sorghum (recommended seed rate at 40 cm spaced rows) with cowpea (75% of recommended seed rate) was found to be 20.2% more productive than sole cropping.

North West Zone

- At Bikaner, sorghum intercropped with guar at 50 cm spacing recorded higher GFY (48.67t) and NMR (Rs.56650/ha) than sole sorghum (GFY 35.95t, NMR Rs.37900/ha).
- In Berseem, application of recommended NPK +10 t FYM + S @ 30 kg + 1 kg Mo + 4 kg Boron ha⁻¹ resulted in higher GFY (74.1t/ha) and CPY (2.2 t/ha) as compared to control (GFY 56.7t/ha and CPY 1.58t/ha).
- Application of 50% recommended N +100% PK through inorganic fertilizer + 50% N through FYM recorded higher green fodder equivalent yields (247.8 t/ha) and net return (Rs. 55,216 /ha) of paddy-berseem-maize + cowpea system at Pantnagar, sorghum – berseem at Hisar (1125 t and Rs. 31,068 /ha/year) and sorghum (fodder) + moth (grain) – barley (grain) + lucerne (fodder) at Bikaner (87.76 t/ha and Rs. 58,092 /ha).
- Application of Atrazine 0.75 kg a.i + Pendimethalin 0.75 kg a.i. ha⁻¹ gave effective weed control of *Acrachne racemosa* (WCE 82.2%) as well as higher GFY of sorghum (66.3t/ha) than control (46.0t/ha) at Ludhiana.

North East Zone

- Intensification of rice –fallow system with forage crop(s) resulted in higher total biomass equivalent yield with –lathyrus (relay/behind plough)- cowpea in Jharkhand and Orissa, rice-lathyrus (relay/behind plough) – rice bean in West Bengal and rice –lathyrus (relay) - cowpea in Assam.
- Perennial grass based forage production system provided higher total biomass equivalent yield with NB Hybrid (75 cm spacing) + (berseem -cowpea) in Jharkhand (175%), NB hybrid (100cm) + (ricebean – cowpea) in Orissa (25%) and congo signal grass (50 cm) + (ricebean – cowpea) in Assam (25%) over sole perennial grass alongwith higher net monetary return
- At Ranchi, Bhubaneswar, Kalyani, Jorhat and Faizabad, nutrient application through 50 % FYM N + 50 % NPK inorganic fertilizers in rice –berseem/oat + lathyrus system was more profitable than sole inorganic fertilizers.
- In NEZ conventional tillage recorded higher GFY and net return of oat without affecting rice yield. Further application of 100% Recommended dose of fertilizer+ Biofertilizer (*Azotobactor* + PSB) resulted in higher fodder productivity and net returns in rice-oat sequence.

Central Zone

- In scarcity zone of Maharashtra, Maize (F)-berseem-sorghum (F) realized 54% higher net return than most prevalent sequence *i.e.* soybean-wheat-cowpea (G). Similarly, in middle Gujarat zone, NB hybrid + cowpea/ Lucerne realized 150 % higher net return than most prevalent sequence of Maize (G) - potato- Pearl millet (F).
- Forage based crop sequence of maize + cowpea-berseem+mustard-sorghum +cowpea with recommended dose of fertilizers provided higher yield of green fodder (181.8 t/ha) as well as 45% higher net monetary returns (Rs. 57443/ha/year) under irrigated condition than prevalent food grain sequence (rice-wheat-green gram).
- On long term basis, FYM 25 % N + 75 % NPK through inorganic fertilizers in sorghum + cowpea – berseem/lucerne system was more beneficial than 100 % NPK through inorganic fertilizers in Jabalpur, Rahuri, Anand, Jhansi and Urulikanchan.

- Application of 20 Kg S through gypsum and 10 kg Zn/ha through ZnSO₄ every year to maize/pearl millet (grain) + cowpea (F) - berseem/barley(S) cropping system was superior to control at Jabalpur.
- At Rahuri, application of 25% of recommended N through FYM + 50% N & 100% PK through inorganic fertilizers + biofertilizers to sorghum + cowpea (fodder) +Lucerne cropping sequence resulted in higher green fodder equivalent yield of 187.98 t/ha with net return of Rs. 68,437/ha.
- Line sowing of lucerne with regular cutting for green fodder and leaving for seed production in second week of March realized the highest seed yield of 2.14 q/ha/year and net monetary returns of Rs. 1, 05,211/ha/year with benefit cost ratio of 2.59 at Rahuri and Urulikanchan.

South Zone

- Among different forage based cropping systems, maize + cowpea (f) - sunflower (seed) – finger millet (grain) was found most remunerative system (Rs 66447/ha) at Mandya.
- Intercropping of banana with NB hybrid was found more remunerative system (Rs 268989/ha/year) compared to sole banana (Rs 227678/ha/year), in Kerala.
- Application of FYM (10 t) + ZnSO₄ (20kg) + Gypsum (500kg /ha) along with RDF to fodder sorghum resulted in maximum green fodder productivity (25.3t/ha) than 100% RDF (GFY 12.5t) under saline sodic soil at Mandya.
- At Hyderabad, irrigation of paragrass with waste water supplemented with 100% RDF resulted in higher GFY (67.0t/ha) and net monetary return (Rs 33761/ha/year) than control (GFY 58.6t/ha and NMR Rs 22156/ha/year). At Coimbatore, growing of BN Hybrid with waste water supplemented with 100% RDF resulted in higher GFY (226.6 t/ha) and net monetary return (Rs 177393/ha/year) than control (GFY 177.7t/ha and NMR Rs 129515