Agri-horti and Sivi-agriculture systems for Jammu region

Recommendation Domain


Existing Practice

Farmers generally grow seasonal crops like maize, sorghum, wheat, mustard etc, which encounter frequent droughts during the season leading to economic losses to farmers. At times, there is a total crop failure and only biomass can be harvested.

Improved Technology

Agri-horti system (aonla (NA-7)/guava (Lucknow-4) + gobi-sarson in rabi and fodder maize in kharif) and sili-agriculture systems (Leucaena leucocephala (K-63) + gobi-sarson in rabi and fodder maize in kharif) are recommended for stable income under rainfed conditions in Kandi area in Jammu region. The trees are grown at 5 x 5 m spacing. Gobi-sarson (GSL-1) is line sown as intercrop between aonla/guava saplings. During kharif, maize cv. Mansar local, is grown as intercrop only for fodder.

Performance

Growing of fodder maize in kharif and gobi-sarson in rabi in combination with aonla/guava gives maximum fruit, fuel and fodder yield even under drought conditions. In kharif, aonla (12 years old) + green fodder gave a net returns of Rs. 58,496/ha with B.C ratio of 14.6.

Impact and Up-scaling

Out of 1.70 lakh ha area under maize and oilseeds in kandi area, about 10-15 per cent of farmers have adopted the improved agri-horti and agro-forestry systems. There is a lot of scope to increase the area with supply of planting material of tree species and enhance the sustainability and profitability of systems in Kandi region. The department of agriculture can promote this technology further.

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Efficient Weeders for rainfed crops in Jammu region

Recommendation Domain


Existing Practice

Generally farmers do manual weeding and use khurpi in crops like maize, wheat, mustard, etc. It is time consuming, uneconomical and results in loss of available soil moisture and nutrients, thus resulting in poor crop yields.

Improved Technology

The dryland centre at Rakhi Dhiansar has evaluated and recommended efficient weeding equipments such as wheel hand hoe, V-blade hoe and medium cultivator. Weeding is done at 30 to 35 days after sowing. The field capacity of wheel hand hoe is 0.4 ha/day (8 hours/day) and takes 2.5 days/ha as compared to 25 mandays with manual weeding. The operational cost with dry land weeder is 50% of the manual weeding cost with khurpi besides this reduces in drudgery to the farmers.

Performance

With the use of this implement, the yields of both maize and wheat are improved by 5 and 15 per cent over farmers’ practice. The number of mandays for weeding are reduced from 25 to 15 and 50 to 40 in wheat and maize respectively. There is a saving of Rs. 2625/- by using wheel hand hoe as compared to manual weeding with khurpi.

Impact and Upscaling

This technology has spread to an extent of 45 per cent of the 1.52 lakh ha of maize and 1.62 lakh ha of wheat crops in Kandi area of Jammu region. With further efforts and promotion at block level manufacturing of the weeding implements, it can be further upscaled in the region.