

Destined at diversification through efficient land management by introducing Ground Nut in irrigated Medium Land situation

Howrah district is characterized by Sandy loam to Silty loam soil in Up/Medium land , Silty Clay soil in low land with average annual precipitation of 1200-1600 mm (80% of rainfall received during June-September) and range of temperature from 14-40 °C. The soil status leads to poor to medium N, P, K and organic matter. Water retention capacity of soil is average and pH varies from 5.5-7. The area is dominated by cultivation of *boro* rice in rabi-summer and *aman* rice in kharif season.

A large tract of Howrah district comes under such situation where the cropping system is gradually turning into paddy-Mustard-fallow. The farmers badly needed a viable option to substantiate the loss due to decrease in area/non availability of irrigation facility under *boro* rice cultivation. A group of farmers from three villages namely Blichak, Sahachak and Dhurkhali of Amta block of Howrah District approached KVK during 2010-11 to find an alternate crop for this area which would provide assured return in terms of productivity and marketability. Realizing the magnitude of the problem, the KVK opted for agro-ecosystem analysis through PRA in the villages to characterize the present agricultural situation and identify the opportunity to introduce a new crop as per the need of the practicing farmers. Finally, the KVK decided to introduce 'groundnut' in the selected villages as an alternate crop for that area.

In the initial years, the KVK assessed the performance of two varieties of groundnut namely, TAG-24, AK-12/24 in a number of locations of those villages during summer to find out the best suited variety for this identified agro-climatic condition. Varietal evaluation followed the finding of measures against seed borne diseases and pest control. Finally the KVK came up with the recommendation of cultivation of TAG-24 variety for following positive features:

Have profuse branching

Average number of pods/plant is 22-24

Mature within 115-120 days.

KVK has also intervened following features as a part of cultural practices:

Seed rate 150 kg/ha (with shell)

Seed treatment with *Trichoderma viridae* @ 4 gm/kg seed at least 7 days before seed inoculation of *Rhizobium* culture

Fertiliser @ 30:60:80 kg N, P, K/ha and 225 kg Gypsum/ha

Control of Aphid with alternate spraying of Endosulfan and Neem formulation

The intervention was translated into action by KVK through conducting front line demonstrations in 6 hectares area involving 42 numbers of farmers during summer season with TAG-24 variety. The farmers harvested 32 q/ha average yield with net return of Rs. 80, 000/- per hectare with cost

benefit ratio of 3.25:1. There is an increasing of yield to a tune of 26% over check varieties viz. AK12/24. Farmers of Amta block is quite convinced about the increase of per capita income through induction of Ground Nut in summer season where scope of cultivation of Boro rice is meager due to inadequate irrigation facility. The success prompted the KVK to conduct FLD next three years and 100 ha of land could be brought under groundnut cultivation.

Groundnut has a good market in Howrah as well as neighboring districts also which enables the farmers to get instant return and encouragement for groundnut cultivation. The present cropping pattern has been changed into paddy-mustard-groundnut in Amta block.