

Crop diversification through groundnut cultivation for sustainable livelihood



Situation analysis

- ✚ Groundnut is a non-traditional crop not existed earlier and cultivated in the Roeing district of Arunachal Pradesh.
- ✚ Through PRA exercise conducted at 5 adopted villages namely Balek, Jia, Rukmo, Kangkong and Kebali identified the problems/production constraints like practicing of age old crops under traditional method, reluctant to adopt/change new food habit as still rely upon ethnic life style, unavailability of HYV of seeds for crop diversification, lack of awareness and knowledge on specific crops suitable for sandy loam area and its profitability and utility.
- ✚ Addition to this, during *kharif* season, most of the sandy loam area are left fallow as most of the farmers go for rice cultivation. Only during Rabi season fallow area is utilized for cultivation of mustard, pulses and vegetable crops.
- ✚ In order to address the prevailing situation, groundnut cultivation was initiated and promoted for earning extra income.



Technology, implementation and support

- ✚ Initially ICAR-DGR in collaboration with KVK, Lower Dibang Valley selected five progressive tribal farm women from active self-help groups under TSP component on exposure cum six days vocational training programme from 24-29 March 2012 at ICAR-Directorate of Groundnut Research, Junagadh, Gujarat.
- ✚ Another sponsored exposure visit programme under TSP component was also organized from 20 to 24.9.2015 for twenty five tribal progressive farmers selected from Balek, Newabali, Arango, Kebali, Aneli, Taloni, Bolung, Meka, Porbuk, Kangkong, New Elope, Chidu, Ezengo, Bhismaknagar, Dambuk, Remi and Jia villages.
- ✚ Later under on farm testing trained and interested farmers namely Mr. Tongmin Perme Jia village, Mr. Gogai Linggi, Simari village, Mr. Ere Saring, Balek village were provided with improved seeds (ICGS-76) procured from ICAR –Research Centre, Manipur.
- ✚ Addition to this capacity building programme was also organized for farmers at Krishi Vigyan Kendra.
- ✚ Followed by the training programme, critical inputs were distributed to 90 participated farmers. During 2017, wheel hoe and Groundnut Decorticator designed and developed by Division of Agriculture Engineering for distribution among 90 tribal farmers were distributed.
- ✚ Field Day was also organized on 5.1.2017 at successful farmers plot namely Mr. Tokmen Perme, Jia village, where 20 farmers participated and at Mr. Gogai Linggi, simari on 21.12.2016, where 18 farmers participated.



- ✚ During the programme ICAR-DGR scientists and KVK scientists provided technical inputs on possibilities of intercropping of pulses (black gram and field pea) in groundnut, use of haulm as animal feed and recycling of shelled husk for preparation of vermin compost.
- ✚ Exposure visit programmes were also organized to successful demonstration plots at Jia and Simari villages.
- ✚ Video film developed by Directorate of Groundnut Research, Junagadh, Gujarat covering aspects of farm mechanization in cultivation and processing was also shown to motivate farmers for large scale cultivation.
- ✚ During the year 2016-17 two varieties of groundnut namely P-11 (procured from ICAR-Barapani, Meghalaya) and ICGS-76 (procured from ICAR Research Centre, Manipur) were grown under on farm testing mandate of KVK.
- ✚ The trials were conducted to assess the suitability and adoptability of crop in the district. Five villages were selected for assessment viz. Jia, Simari, Kebali, Balek and Rukmo.
- ✚ The result supported higher yield record in ICGS-76 variety i.e 2.9 t/ha as compared to P-11 variety of 2 t/ha yield. Among the two varieties ICGS-76 recorded the highest benefit cost ratio (1.52) as compared to P-11 variety (0.8).
- ✚ Based on the parameters of yield and economic returns of the ICGS-76 variety; it is found suitable for the local agro climatic conditions of the district.

Economics and yield attributes of Groundnut varieties (P-11 & ICGS-76)

Groundnut Varieties	P-11	ICGS-76
Date of sowing	1 st week of July	1 st week of July
Days of maturation	120	125
Germination (%)	99	99
Plant height(cm)	110	16.5-18
No. of branches per plant	2-8	4-5
Yield (t/ha)	2	2.9
Shelling (%)	75	80
Total cost of cultivation(Rs/ha)	Rs15000/	Rs15000/
Gross return(Rs) (Groundnut sold @ Rs 1500/q)	30000	43500
Net return(Rs)	15000	28500
Cost benefit ratio C:B	0.8	1.52



Uptake spread and benefits:

- ✚ During the year 2012, for the first time in the district, activity of groundnut cultivation (variety: ICGS-76) was initiated in the fields of 5 members of active SHGs from Jia, Iphingo, Iduli and Kebali villages.
- ✚ During 2016, the technology was adopted by four farmers from villages namely Jia, Balek, Abali and Simari.
- ✚ The performance of the crop in terms of production and productivity was extremely good.
- ✚ After observing the success in terms of production and productivity, other interested fellow farmers from respective nearby villages also has shown interest to take up groundnut cultivation during the current year-2017.
- ✚ A total of 40 kgs of seeds has been procured from Mr. Tokmen Perme, a successful groundnut farmer and distributed to 14 farmers.
- ✚ During 2017-18, ground nut seeds of 15 kgs were distributed to progressive farmers namely Mr. Okili Linggi, Mr. Nako Pertin, bolung village, Mr. Ere saring, bolung village, Smti. Oimang Lego, Jia village and Mr. Rajen Mickrow, Horupahar village.

Social impact

- ✚ The success of groundnut cultivation brought members of different SHGs and progressive farmers of the area together with the common objective to improve their socio-economic status through groundnut cultivation.
- ✚ After the success of groundnut cultivation in the district, mostly farmers are now interested in utilizing their fallow areas as it has resulted in extra income generation.
- ✚ It is found that ground nut cultivation also improved the soil fertility and enhanced the production of succeeding crop (Potato, oilseeds, pulses etc.).
- ✚ Successful farmer utilized the income generated from ground nut cultivation for expansion of dairy enterprise (procurement of milking machine and milk cans from Coimbatore, Tamil Nadu).
- ✚ Moreover an active SHG group named Ledum from Jia village is keen to initiate entrepreneurship activity (producing value added products from groundnut) for self-sustenance of her group.
- ✚ There is immense scope and demand for promotion of groundnut cultivation in the district as climate and soil is suitable for boosting the production and improvement of socio-economic status of tribal farmers.

