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Backyard Poultry
A source of sustainable
income among rural farm women

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In the North West hilly areas of Jammu region agriculture is the main occupation and way of life for the poor farmers. Decreasing size of land holdings per family (77.97 per cent of farmers have less than 1 hectare of land) and increasing intensity of drought situations for the last few years has resulted in crop failures putting enormous economic pressure on these small farmers. So there is a need of alternative approach for sustainable development in these hilly areas. One of the best option seems to be revival of backyard poultry farming specially with improved breeds like vanraja, RIR. Total number of Laying Birds (Hens +Ducks) of the State was 35.161 lakhs out of which 83.23% (29.264 lakhs) are of desi category while as 16.77% (5.897 lakhs) are of improved stock as per ISS estimates for the year 2010-11. Estimated total egg production of the



State for the year 2010-11 was 6209.333 lakhs out of which 5874.271 lakhs (94.60%) were laid by Hens and 335.062 lakhs (5.40%) by Ducks as per the latest Integrated Sample Survey Report (ISS), 2010-11. Total estimated meat production of State was worked out to be 308.986 lakh Kg consisting of 80.30% of (248.105 lakh Kg) red meat and 19.70% (60.881 lakh Kg) of white meat. The Jammu region accounted for 51.45% (158.978 lakh Kg), Kashmir region accounted for 41.55% (128.368 lakh Kg) while as Ladakh Region accounted for 7.00% (21.641 lakh Kg) of total

meat production. Total eggs availability per person was worked out to be 53 (number) per year for the State as a whole as per the ISS report 2010-11. Growth in this sector has been mainly driven by large-scale commercial farms while small and landless farmers have been neglected.

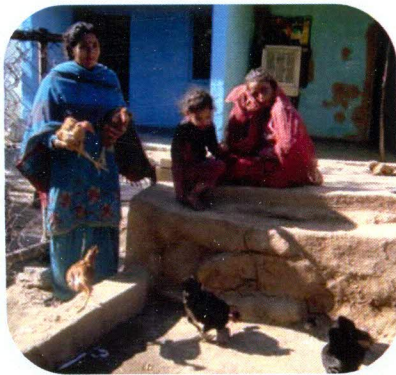
Migrant, landless and marginal farmers of Reasi and Udhampur district are having a low source of income as they are having no or marginal agricultural land for farming purpose. They mainly work as farm labours in local farmer's field. Women either remain at home or accompany men to farmer's field. Thus in order to provide these farmer's with specialized farming which does not require land and also generates good source of income for Improving their livelihood security.

KrishiVigyan Kendra, Reasi made an attempt to improve socio-economic status of these migrant landless women with following objectives in mind.

- / To encourage these farmers especially women to contribute to families income.
- / To provide these women with small, steady and sustainable source of income round the year.
- / To improve nutritional requirement of their family

Poultry farming by migrant and small marginal farm women in Reasi&Udhampur

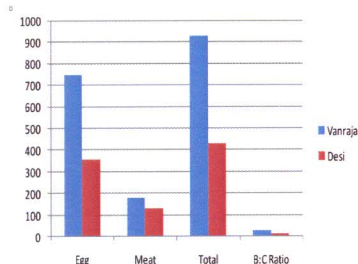
Socially we are having male dominating family system in which all income from agricultural produce is in hands of male farmer's. It is observed that there is always shortage of money in the hands of rural farm women. However poor farm women have maintained local desi poultry strains with traditional management having low productivity & low level of income. There is a need to replace these low producing breeds with high egg laying varieties like Vanaraja, RIR.



Thus in order to improve socio-economic status of rural farm women of district Reasi and Udhampur, KVK Reasi has made an attempt by propagation of backyard poultry farming using Vanaraja and RIR poultry birds. It was observed that poultry keeping is the women's domain which helped in empowering them socially as well as economically. The results support the possibilities of establishing this neglected sector as a better alternative for sustainable rural development in these undeveloped areas of J&K state So, keeping in view the above facts about Vanaraja birds, backyard poultry production system was taken into consideration. With improved variety of vanaraja birds.

Promising features of Vanaraja:

- / Can thrive well and perform better even in adverse environmental conditions.
- / Sturdy and resistant to most of the common poultry diseases because of its high immune competence.
- / It has better feed efficiency even with diets containing low energy and protein which are based on common feed ingredients available in rural tribal areas like rice bran, broken rice, crushed maize etc
- / It can perform better in backyard conditions by eating green grass and insects available in the fields.
- / Natural color combination in this bird is more attractive than the Desi hen.
- / It starts producing eggs at the age of 175 to 185 days of age and produces about 150 to 180 eggs in a year.
- / Vanaraja eggs are heavier (55 to 63 g) and their color is more attractive than the eggs of desi hen.
- / An adult hen weighs about 3 to 4 kg, and cock weighs about 3.5 to 4.5 kg at 6 months of age.
- / Broodiness is absent in Vanaraja, however, Vanaraja chicks can be hatched out from fertile eggs from Vanaraja bird by brooding the eggs with Desi hen. Fertility & Hatchability of eggs are 90-95% and 82-87% respectively.



Comparison of Vanaraja and



Desi local breeds

Parameter	Vanraja	Local desi Birds
Mortality up to 10 weeks %	Less than 5%	Less than 4%
Mortality during laying stage %	Less than 12%	Less than 10%
Average age at first lay (days)	175-185	220
Average body weight at first lay (kg)	2.30	1.25
Average annual egg production (no.)	150-180	60
Colour of egg	Tinted	Tinted
Average Egg weight at 40th weeks (g)	54	41
Dressed weight, %	72 %	64%
Survivability, %	98%	90%
Hatchability, %	82-87%	72-77%
Fertility, %	90-95%	86-88%

Methodology

A survey was carried out and Performa based information regarding the socio-economic status of poultry farmers as well as the percentage of farmers interested in backward poultry farming was generated. Households having no income source and interested in poultry rearing were randomly selected. More than **205** number of house holds were distributed Vanraja and RIR from 2012-2014. To avoid mortality at early age because of infectious diseases and predators attack, it was planned to distribute the grown up poultry birds to the farmers. Cross bred poultry stock comprising of Vanraja, Rhode Island Red (RIR) of age group approx 1 month was procured from Department of Animal Husbandry, Reasi District. It was observed that about 50% of the farmers gave supplementary feed in the form of crushed maize, wheat and rice to the chickens. Rest of the farmers did not provide any supplementary feed and birds usually fed themselves on kitchen and farm waste. Most of the farmers (90%) kept the birds free during day time and provided shelter only at night in the form of small wooden cages. Some farmers (20%) kept the birds in the same shed along with large animals. Only 5 % of the farmers had built a separate shed for chicken.

Each family was given 10 nos. of Vanraja and RIR birds. Regular and timely monitoring of birds was done. These varieties represents a stock that is scientifically developed and has all the attributes of the village chicken in terms of colour, hardiness and ability to thrive in scavenging conditions without any major change in traditional husbandry practices. At the same time, it has the advantage of higher weight gain yields and egg production capacity.



Vanraja males attain body weight of 1.4 to 2.5 kg and female birds attain weight 1.12 kg at the age of 16-18 weeks, whereas the same weight was attained by desi breed at the

age more than 240 days i.e 34 weeks . Egg laying capacity is 150 to 180 eggs compared to the 60 eggs produced by traditional village chicken in a one year laying period. The average age at sexual maturity was 175 days, with an average egg weight of 53-58 g. In these hilly areas meat demand is much higher than plain areas as a result price of meat is Rs. 130-150 /kg and egg is Rs. 5-6 /egg. Average body weight of the male birds at the age of 16-18

weeks was 1.4-2.4 kg. At this age most of the farmers market their birds for meat purpose. Average age at which female started laying eggs was 175-185 days, with average egg production of 150 eggs/ hen/ annum

Trainings Imparted on Poultry

Year	Farmers Trainings		Vocational Trainings	
	Nos	Participants	Nos.	Participants
2012	04	74	-	-
2013	02	37	02	31
2014	02	42		

Impact of KVK

Farmers were imparted training for rearing these birds and were advised to make use of waste material to prevent predation. Women were encouraged to rear these birds mainly for egg purpose and they showed keen interest in care, feeding and management of these birds. KVK, Reasi scientists imparted regular trainings, vocational trainings, group discussion and conducted diagnostics visits. Regular and timely visits are made to these farmers houses and are given necessary instructions regarding feeding and disease management. Disease diagnostic visits are made in case of disease outbreak



proper medication is given by KVK free of cost. Data was collected on regular basis on weight gain, egg weight ,growth and egg production. In order to encourage farmers for starting Backyard poultry farming as an enterprise. **KVK, Reasi has initiated and started their own poultry demonstration cum training unit for these local farmers.**

In this unit Vanraja birds are being reared in a low cost poultry shed specifically made using locally available materials . The demo poultry unit with Vanraja poultry birds is a source of attraction and encouragement for local farmers and they are now ready to start their own vanrajabirds poultry units.

Monitoring and trainings by KVK Reasi

Households engaged in BYP obtain a small but steady flow of income by selling of eggs almost daily, at the rate of Rs. 5 to 6 per egg. The total gross income from eggs per bird @ 5 Rs /egg was about Rs. 750/-. Farmers also sell live birds, at a price ranging between Rs. 130 to 150/ kg live weight. It was observed that on an average 4 birds were sold for meat purpose where as 6 birds were kept for egg purpose. Average annual income generated from backyard poultry birds per unit(10 birds) was



calculated to be **Rs. 5228** per household although high variation among households was observed. A positive association between economic condition, availability of grains, literacy of family farmers and total income generated from birds was observed. Most of the households disposed their produce like eggs or chickens in nearby markets, whereas, those away from the towns sold at door steps. **Annual income generated by each household by adopting backyard poultry farming**

Number of house holds engaged in backyard poultry farming in total	208 Nos
Average flock size (No. of Birds)	10 Nos
Average birds Sold	04 Nos
Average body weight of bird at the time of marketing	1.4 Kg
Average market price per bird	Rs. 182
Total benefit from birds/ Household	Rs. 728
Average number of eggs sold/self-consumption	150Nos
Average no. of birds kept for egg purpose	06 Nos.
Average market price per egg	Rs. 5.00
Benefit from eggs/ Bird	Rs. 750
Total benefit from eggs/ Household	Rs. 4500.
Net income generated(egg + meat)	Rs.5228

Based on study, it was concluded that Poultry keeping in backyard gives high returns as the investment is very low. Beneficiary households get food security and steady flow of income making this practice an effective means to reduce poverty in the rural hilly areas. Mainly women of household were responsible for poultry raising and marketing of eggs so it helped in empowering women socially as well as economically. With regular Veterinary services in the adopted villages mortality among birds was very low. Although major reason for mortality in birds was predation by wild animals mainly cats, so a proper management and housing activities should be implemented. The results strongly supports possibilities of establishing this neglected sector as a better alternative by the national as well as international development agencies as an element of sustainable development in the rural hilly areas of Jammu and Kashmir.

Details of Birds distributed under FLDs

S.No	Village/District	No. of Farmers	No. of Birds
1	QassiPatta (Reasi)	33	370
2	Talwara(Reasi)	16	240
3	Zero MorhTalwar(Reasi)	34	390
4	Gool (Udhampur)	20	200
5	Pagyal/Jhakar(Udhampur)	30	300
6	Dharmari/Thoru(Udhampur)	25	250
7	Bhabbar/Mansoo(Reasi)	50	500
TOTAL		208	2250

Income Comparison between Vanraja and local Desi Bird

* @ 1.4 kg

** @ 1 kg

Poultry	Average body weight at first lay (Kg)	No. of eggs / year	Total expenditure (Rs.)	Income per year (Rs)/bird			Benefit Cost Ratio
				Eggs	Meat	Total	
Vanraja	2.30	150	30	750	182*	932	31.0
Local	1.25	60	30	300	130**	430	14.3

S.No	Cost per bird	Name	Village/District	No.of eggs
1	Rs30	Nirmala Devi w/o Bodh Raj	Gool (Udhampur)	150-180 eggs/year
2	Rs30	Kamlesh Devi w/o Arjan Singh	Gool (Udhampur)	150-180 eggs/year
3	Rs30	Neelam Devi w/o Gopal Singh	Gool (Udhampur)	150-180 eggs/year
4	Rs30	KhurshadBibi w/o MohdBashr	Talwara (Reasi)	150-180 eggs/year
5	Rs30	SaleemaBibi w/o MohdSadeeq	Talwara (Reasi)	150-180 eggs/year
6	Rs30	Naseem Akhtar w/o RafiqChoudhary	Talwara (Reasi)	150-180 eggs/year



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Published by :-

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