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Livelihood improvement and empowerment of rural growers through cut flower and bulb production

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Abstract

The study was designed to empower and improve the livelihood of rural poor through quality bulb production and cut flower cultivation at three districts of Kashmir valley (Kulgam, Pulwama and Srinagar). The study started with the identification of self-help group and the constructions of polyhouses at the same locations were carried out under the supervision of project investigator and programme coordinators of the concerned KVK's of SKUAST-K. The tenders were floated in newspapers and the lowest tenderer were selected by the committee for construction of polyhouses. After construction of 10 polyhouses, interested farmers were identified and 3 self-help groups were formed at each location. Each self-help groups consisted of 20 farmers. They were trained with regard to the bulb production as well as cultivation of cut flowers under both open and protected conditions. Timely trainings and awareness camps were organised for awareness and empowerment of unemployed youth and farmers about quality bulb/cut flower production. Main focus was on the crops like liliium, tulip and gladiolus. Training programmes were conducted on production, harvesting, storage post-harvest handling and market links. Our main target was to involve more and more rural youth resulting in the capacity building and the triggering of entrepreneurship capacities among them.

Keywords: Cut flower, bulb production, empowerment, livelihood

Introduction

The valley of Kashmir is located within the mighty Himalayan Mountains, surrounding by lush green coniferous forests, rivers, streams, springs etc. It's having rich diversity of flora and fauna, many flowering bulbous crops are known to be endemic to the region. The pleasing temperate climatic conditions don't need any praises. These very rich climatic factors of the valley are prerequisite for any successful flower or bulb production. Despite endowed with most favourable and congenial climatic conditions for growing flower crops the overall contribution to the livelihood is almost negligible. Valley's most of the populations resides in rural areas and contributes to almost 80% of population, and most of the unemployed youth are confined to these areas. Somehow there is a huge gap between state farm varsities, research institutes, KVKs etc. The population is not well versed or having any idea about the huge floricultural scope, whether any cut flower programme, bulb production or even any seed production programme of flower crops. Their livelihoods mostly depend on farm activities. According to Chambers & Connag, (1992) ^[1] livelihood encompasses the relationship between human survival and environment. It implies the capabilities, assets (including both material and social resources) and all activities required for a functional and positive means of living in the rural area. It makes rural poverty reduction as the cardinal issue. Rural livelihoods relate with wellbeing and capabilities. Sen (1987) ^[5] perceives capabilities as "what people can do or be with their entitlements". This goes beyond the material concerns of food in-take or income. Rural livelihood explores the intrinsically valued elements of "capability" or "well-being". The rural dwellers resilience in the face of stresses and shocks are vital to both livelihood adaption and coping (Davies, 1996) ^[4]. Rural people livelihoods are vital in national, regional and local economies because of the potential market for increased demand for consumer goods and services. Their potential contribution to or drain on available local resources as a dynamic and growing part of the local economy engendering employment, tax revenues or even as a stagnant sector demanding welfare support for a poor segment of the population is highly acknowledged. Rural dwellers derive their livelihood from small scale agriculture. Majority of them depend on activities of peasant farm households as a way to tackle poverty.

The rural economy is sustained on the various livelihood activities of these rural dwellers. Although the rural dwellers are crucial in the development of national economics, they are subjected to poverty, causing excessive pressures on urban areas through rural-urban migration, national, regional and global economics and the environment. Thus keeping in view the above facts, and prospectus the study entitled as "livelihood improvement and empowerment of rural growers through cut flower and bulb production" was undertaken with the financial and moral support from NMHS (National Mission on Himalayan Studies), Almora, Uttarakhand.

Materials and Methodology

Project site

Research farms of KVK Kulgam, KVK Malangpora, Farmers Field Kulgam, Pampore, Research Farm of Division of Floriculture, SKUAST-Kashmir, and Farmers Field at Dara Srinagar were the locations selected for the project.

Planting

Planting of Gladiolus, Tulip and Lilium under both open and protected conditions was carried out following proper agro-techniques developed by Division of Floriculture and Landscape Architecture, SKUAST-Kashmir.

Construction of polyhouses

For seed production (bulbs) of Gladiolus, Tulip and Lilium, polyhouses were constructed at district Srinagar (SKUAST-K Shalimar and farmers field Dara Harwan), Pulwama (KVK Malangpora) and Kulgam (KVK Pumbay and Khudwani, Yaripora farmer's field).

Demonstration of trails in the farmer's field

Vigorous demonstrations of improved varieties of gladiolus, tulip and lilium and agro-technologies under both open and protected conditions on farmer's fields were carried out.

Hunan resource development

Six training programmes were conducted in collaboration with KVK's of SKUAST-K at Kulgam and Pulwama in which farmers were trained with regard to the cultivation of cut flowers for bulb production particularly Gladiolus, Tulip and Lilium under both open and protected conditions.

Formation/identification of self-help groups

Three self-help groups were formed in each project location and each self-help group consisted of 20 farmers (consisted mainly of women folk) with one team leader. Among the various self-help groups one group from Dara, Srinagar exclusively consists of women only flock.

Results and Discussion

Ten polyhouses were constructed in three districts of Srinagar, Pulwama and Kulgam. Out of 10 polyhouses 2 were constructed at farmer's field. The demonstration trials of gladiolus, tulip and lilium have been laid under open and protected conditions at farmer's field. The standardized agro-technologies have been adopted for raising a good crop (Plate 1). Six training programmes were conducted in collaboration with KVK Kulgam and KVK Pulwama SKUAST-K in which farmers were trained with regard to the cultivation of cut flowers for bulb production particularly Gladiolus, Tulip and Lilium under both open and protected conditions. Two

training programmes were conducted in each project location and in each training programme 20 farmers were trained making a total of 40 farmers at one location and grand total of 120 farmers at three project locations. In addition the farmers living in surrounding areas of the project locations were also trained in the training programmes (Plate 2). Growers from the concerned districts showed much interest to switch to floricultural farming to improve livelihood. We were able to inculcate the successful entrepreneurial and innovative ideas among the different trainees among which one person namely Aejaz Ahmad Kutai S/O Ab Khaliq Kutai is a typical or prototypic example. He is a graduate resident of a remote village Kawdran about 20 Km away from the district head quarter Kulgam. The only source of income for the family is agriculture. Though the land holding is extreme marginal (0.25 ha) an innovative idea of diversification and intensive cultivation has helped him to earn a good living. He was able to grasp sound knowledge about the various agro techniques, government scheme in which incentives in terms of infrastructure are provided for floriculture. We constructed 1 polyhouse for demonstration purpose of cut lilium production, and another poly house from state government sponsored floriculture scheme. We come up with an innovative idea as detailed here. In Kashmir valley the crop cycle of lilium starts in the month of December with the planting of bulbs. About 3 thousand bulbs were planted in each polyhouse (20 × 80 feet dimensions) constituting a total of around 6 thousand bulbs. An amount of INR 79720.00 was incurred on purchase of seeds, digging of land, fertilizers and fungicides, harvesting. Since the bulbs sprout and emerge during ending February or early March, we thought of utilizing this period for cultivating other crop. We looked for different options and decided to go for spinach or kale as per the demand and crop season. Spinach/kale becomes ready for market by the 3rd week of February and is completely uprooted and sold in the market. The average yield of 740kg of vegetables is obtained by the farmer as per his statement, which is sold to the vegetable trader at INR 20/kg. The cost involved in cultivating spinach/kale which includes seed, sowing, irrigation and uprooting is INR 1170/= and the gross income is INR 14800.00. After few days of harvesting spinach/kale the field is again irrigated. Lilium emerges and flowers in during ending May to 1st week of June. During the growing season of lilium 2-3 sprays of Carbendazim at 0.1% to protect the crop from diseases. Around 4000 spikes are harvested for sale at INR 12/spike earning them INR 48000.00. The cost incurred on harvesting, packing and transportation is INR 4400.00. The field is cleared from crop residues and slightly disturbed with rakes in the month of September. Here again the cost involved is INR 1170.00. The crop becomes ready for sale in the month of November and yield obtained is 900 kg and is sold at INR 17.5 earning him INR 15750 as gross income. The lilium bulbs are now uprooted in the last week of December for sale and replanting in the polyhouses. They again plant 6000 bulbs and sale 12000 bulbs in the market at INR 12/ bulb. This way a gross income of INR 144000.00 is earned. Cost involved in uprooting is INR 680. Here they use their own seed therefore saving cost on seed as well. This way the crop cycle for a year completes. The economics of the two polyhouses are given in table (1) below. As evident from the table that they got an additional income of INR 28210 over single crop cultivation under protected condition by using wisdom and understanding.

Table 1: Economics of crop cultivation in 2 polyhouses of 20 × 40 feet dimensions

S. No	Crop	Cost of Cultivation (Rs.)	Gross income (Rs.)	Net Income (Rs.)
1	Lilum	84800/=	264000*/=	179200/=
2.	Vegetables	2340/=	30550/=	28210/=
Total 1+2		87140/=	294550/=	207410/=

*Including cost of bulbs produced by farmer and replanted in December for next year



Plate 1: Demonstration of trials under both open and protected conditions



Plate 2: Training cum Awareness camps

Conclusions and Recommendations

Despite endowed with biodiversity heavenly, climatic factors, human resources etc the floriculture sector in Kashmir valley

is still at infancy. It has yet to maintain and integrate the development of such sector from quantum production to seamless marketing, to boost rural economy of this region.

During the course of investigation it was observed that the willingness among the farmers is lacking, the knowledge about the possible utilization and exploitation of other endemic crops could be the hallmark in improving the rural livelihood. The integration of traditional knowledge with the scientific one could be another strategic shift towards prosperity among rural poor. Human resource development through training programmes, workshops, awareness camps, on field demonstration of quality planting material, university approved agro-techniques, innovative methods/ideas and crop diversification.

Floriculture industry offers immense potential for economic activity, by providing income-generating opportunities to a section of the rural population of the state, through the conservation and sustainable use of such important natural resources. A proper knowledge based trainings need to be organized.

Realization of potential and need for development industry in the state should be emphasized in different forums. Enormous advantage from this Sector can be derived if the State Government takes timely and proper initiatives. Therefore, related projects/schemes may be immediately taken-up by the concerned Department, University, Research institutes etc. Sustainable Management and *In-situ* and *Ex-situ* conservation of endemic and threatened flower crops, Market Information Support, Developing marketing infrastructure, Export promotion, Organize trainings about sustainable practices, Setting up of demonstration centres, Awareness Programmes etc.

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