

# Using fruit plants as ornamentals: An innovative practice for beautification and monetary benefits

T. Mubarak

Krishi Vigyan Kendra, (Sher-e-Kashmir, University of Agricultural Sciences and Technology)  
Kashmir - 192 233 (Jammu and Kashmir)

## ABSTRACT

Apple is the major fruit crop of temperate Kashmir valley and has improved the socio-economic condition of the farmers to a great extent. People, however, spare portion of productive land for lawns and use ornamental plants other than fruits. An innovative way to use fruit plantation for ornamentation was tested, so that the objective of beautification is achieved while getting returns from horticultural crops. Different fruit plants were added to the garden for diversity and beautification. In addition to these fruit plants some ornamentals were also recommended for further beautification. The plot was leveled and beds of different designs were made around the apple trees, which were kept free from weeds through mulching and intercultural operations. Fertilizers were applied as per the recommendations of SKAUST-Kashmir. Addition of variety of fruit plants created diversity, flowering were observed at different stages and ripen fruits were available throughout the season. Fruit plantation served two purposes i.e. ornamentation and monetary returns. The quality of the fruits over farmers' practice was also improved. Cost of cultivation was higher in the demonstration, while gross returns (Rs.47,287/Kanal) and net returns (Rs. 32,052/- kanal) were also higher in the same. Increases in the income was to the tune of 26 per cent over the farmer's practice.

**Key Words:** Apple, Ornamentation, Diversity, Beautification, Fruit plants.

## INTRODUCTION

In Kashmir valley temperate fruit in general and apple in particular is considered as the backbone of economy. Apple is the major fruit crop and is cultivated on an area of about 132.5 thousand hectares with an annual production of 1332.8 thousand MT (Anonymous, 2010). It has undoubtedly improved the economy of rural Kashmir, which in turn has greatly improved living status and life style. It is, however, disheartening



Designs of beds around fruit plantation



Apple plantation in full bloom

that people spare a large portion of productive land for lawns to beautify the surroundings of their homes and use ornamental plants other than fruits. A number of such cases can be observed in the valley. An innovative way to use fruit plantation for ornamentation was therefore tested to reverse the trend. This study was intended to sensitize our farmers, so that the objective of beautification is

Corresponding author e-mail: drtasneem.mubarak@gmail.com



**A view of farm house**



**Cherry in Demo plot**

achieved while getting returns from horticulture crops.

### **MATERIALS AND METHODS**

An orchardist Mr. Mubarak Ahmad Khan of village Khanpora situated at about 20 KM away from KVK, Kulgam was planning to remove some apple plantation in front of his farm house to make a lawn. He sought guidance from KVK's scientists and was suggested to create a garden while retaining the apple plantation. About 600 m<sup>2</sup> was marked for the demonstration. Some more fruit plants were added to the garden for diversity and beautification. This small area accommodated different fruit plants like apple, pear, apricot, peach, pomegranate, fig and cherry. In addition to these fruit plants some ornamentals were also recommended for further beautification. The plot was leveled and beds of different designs were made around the apple trees, which were kept free from weeds through mulching and inter-culture operations. Fertilizers were applied as per recommendation of SKUAST-Kashmir to the fruit plants (Table 1). Organic matter was added in the form of FYM and chopped grass was used as mulch as well as organic source of nutrients. Controlled irrigation was applied through pipes as and when required. Need based application of fungicides and horticulture mineral oils recommended by SAU were used to manage different diseases and insect-pests. Rest of the management practices were kept common with the farmer's own practice. Wooden boxes were used for packing of fruit.

### **RESULTS AND DISCUSSIONS**

#### **Effect on fruit:**

Most important aspect of this concept was that no fruit tree was removed from the selected area, rather some more fruit species were added to create diversity, observe flowering at different stages and provide ripen fruits throughout the season. Fruit plantation served two purposes i.e. ornamentation and monetary returns. It not only added beauty to the garden but also improved both production and quality of the fruit over rest of the orchard (Table 1). This was attributed to followings;

- Application of organic manure and chopped grass (obtained from moving) might have improved the physico-chemical properties of the soil. There are numerous studies which confirm that organic sources improve fertility, physical and biological properties of the soil (Reeves, 1997; Okwuagwu, *et al.*, 2003; Ewulo *et al.*, 2008) and also add to the quality of fruit (Liu and Liu., 2012).



**Fruit laden apple plant in Demo. plot**

**Table 1: Fertilizer schedule adopted as per the type and age of fruit trees.**

Fruit tree	Age (Year)	Urea (g/tree)	DAP (g/tree)	MOP (g/tree)	Remarks
					Farmyard manure (FYM) was applied in March @ 15 kg/tree, except peach and fig where 5 kg/tree FYM was applied.
Apple	7-10	450-750	225-375	720-1150	For apple, pear and cherry fertilizers were applied as; 1/3 <sup>rd</sup> urea full dose of DAP and 1/2 MOP 3 weeks before expected flowering. 1/3 <sup>rd</sup> urea and 1/2 MOP 3weeks after fruit set. 1/3 <sup>rd</sup> urea in June-July
Pear	5-7	250-450	125-225	400-720	In case of Apricot and peach 1/2 urea and full dose of DAP and MOP was applied 3 weeks before expected flowering .Remaining 1/2 dose of urea was applied 3weeks after fruit set.
Cherry	5-7	250-450	125-225	400-720	Solubor@1g/lt. water was sprayed at pink bud stage of apple.
Apricot	5-7	250-490	100-200	350-630	3 sprays of Calcium chloride were applied to apple crop throughout the season@3g/lt. water
Peach	1-3	50-150	20-60	70-210	
Fig	3	Only FYM was applied			

**Table 2. Effect of KVK intervention.**

Parameter		Farmer's Practice	Recommended Practice
Yield Kg/kanal	A Grade	1016	1211
	B Grade	138	125
	Total	1154	1336
Rate (Rs./kg)	A Grade	32	37.5
	B Grade	15	15
Total gross income (Rs./kanal)		38998/-	47287/-
Cost of cultivation(Rs./kanal)		13568/-	15235/-
Net income(Rs./kanal)		25430/-	32052/-
Additional income over farmer's practice		6652	
Per cent increase in income.		26	

- Regular inter-culture operations improved soil aeration and facilitates decomposition of organic matter in the soil.
- Regular controlled water supply with pipe instead of flooding maintained optimum moisture and soil aeration which might have facilitated better root proliferation and shoot growth. This practice also helped in reducing root rot and collar rot disease incidence (Bhat *et al.* 2012). Root rot was prevalent in a number of trees in the rest of the orchard where flood irrigation was practiced. Foliar disease pressure was also higher in farmer's

practice mainly due to poor sanitation. Proper sanitation reduced the load of diseases and insect-pests in demonstration, which in turn improved fruit quality.

#### **Economic benefits:**

The economics was pooled over three years (2010 to 2012) for costs and income realized by the orchardist. The objective of presenting these figures is just to reflect that this practice is quite rewarding for the farmers. Farmers in the area grade fruit into two main grades i.e., Grade A and Grade B, based on colour and damage caused by pests and diseases. Each grade has three sub



**Tulip at flowering stage**

grades i.e., five layer, four layer and five layer roll boxes. The returns presented in the table 2 were based on the mean of these three sub-grades in each main grade. Cost of cultivation was higher in the demonstration plot due to higher yield, which resulted into extra cost incurred on harvesting, grading, packing, loading, transport charges and unloading charges in the mandi. Gross (Rs.47,287/kanal) and net returns (Rs.32,052/kanal) were higher in recommended practice over farmers practice (Table 2). This was attributed to improvement in productivity and higher rates of A grade fruit owing to its good quality under the recommended practice. The increase in the income was to the tune of 26.0 per cent over farmer's practice. The economics can further be improved by planting potential flowers for seed multiplication. Tulip and gladiolus in particular are very well adapted to the area.

### CONCLUSION

Land is a precious asset and it should be put to the best use. Increasing demand of fruits in view of changing life style and food habits in the country will further strengthen the economic condition of farmers associated with horticulture crops. This innovative practice of gardening may help to put in use every inch of soil for economic

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prosperity of the farming community, as this not only serves the purpose of beautification but also improves productivity, quality and profitability.

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