

Strawberry Farming: A Gainful Opportunity to Enhance Farmers Income

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Introduction

Strawberry (*Fragaria sp.*) is a native of temperate regions, but some varieties are available which can be cultivated in subtropical climate. The leading producer of strawberry in the world is United States of America followed by Turkey, Spain, Egypt, Mexico and Poland. In India strawberry is generally cultivated in the hilly areas. They are mainly grown in Nainital and Dehradun district of Uttarakhand, Mahabaleshwar (Maharashtra), Kashmir Valley, Bangalore and Kalimpong (West Bengal). About 85% of the total strawberry production of India is confined to Mahabaleshwar, Wai and Panhngani. Though in recent years strawberry is being cultivated successfully in plains of Maharashtra around Pune, Nashik and Sangali towns. Strawberry is the most widely adapted of the small fruits. Strawberries consist of vitamins, fiber and high level of anti-oxidants which are known as polyphenols. They are also good source of manganese and potassium. It is even surprising to know that a single serving of about eight strawberries provide more vitamin C than an orange. The strawberry fruit is widely appealed for its characteristic aroma, bright red color, juicy texture, and sweetness. It is consumed in large quantities, either fresh or in processed foods such as jams, juices, ice creams, pies, chocolates, milk shakes, etc. Its usage is not just confined to edible products, strawberry flavourings and aromas are also widely used in cosmetic products such as lip gloss, soaps, perfumes, fragrances and many others. Thus strawberries have a wide range of acceptance due to their taste as well as aroma. Thus, strawberry cultivation is a potential and lucrative option for the farmers as it helps to fetch good price due to a wide variety of usage.

Many varieties of strawberry are available in the Indian market these days such as Chandler, Tioga, Torrey, Selva, Belrubi, Fern, and Pajaro. Chandler is the most common and the highest yielding variety followed by Tioga. The strawberry crop is a highly delicate as

well as perishable fruit and thus require utmost care for their growth and propagation. The proper inter-cultural operations as well as protection from extreme weather conditions to must to obtain a good yield of strawberry.

General Requirements for Strawberry Cultivation:

- Strawberry grows well generally under temperate climate. Some cultivars can be grown in sub-tropical climate also.
- Daylight period of 12 hours or less and moderate temperature of 13-22 degree Celsius are important for flower-bud formation. Each cultivar has a different day length and temperature requirement.
- Sandy loam to loamy soil with pH 5.7-6.5 is ideal for its cultivation.
- Planting during mid September to mid October is generally the best time to plant in open conditions.
- Strawberry is commercially propagated by runner plants. For large scale propagation of virus free plants, tissue culture is widely used.
- Planting distance varies according to variety & type of land. A spacing of 30 cm. x 60 cm. is usually followed but may vary according to the variety.
- Strawberry is a shallow-rooted plant, therefore, it requires more frequent but less amount of water in each irrigation. Excessive irrigation can lead to more foliar growth and stolons at the expense of fruits & flowers. Generally, irrigation is applied in furrows between the rows.
- Strawberry plants will stay dormant in winter, especially when the temperature drops below 6 degrees Celsius at night. It is important to care for plants at this stage with proper mulching and pests like slugs. After the temperature is normal, the plants will start full growth again.
- Mulching mainly helps to minimize the freezing injury. Also, it suppresses weed growth and greatly helps in reducing the chance of softening of fruits. The widely used mulching material includes clean straw, black and double coloured polythene.
- The fruit ripens during late February to April in the plains and during May and June at high elevations like Mahabaleshwar, Nainital and Kashmir.



Harvesting and Post harvest management of Strawberry

For local market the fruit should be harvested when fully ripe, but for distant markets, it should be harvested when still firm and before colour has developed fully all over the fruit. Harvesting should be done preferably daily as per picking up of fruits ready for disposal. Yield of strawberries vary according to season and variety. The average yield obtained is 20-25 tonnes per hectare or on average 500-600 gm/plant/season. Since strawberries are highly perishable, it is packed in flat shallow containers of various types (cardboard, bamboo, paper trays etc.) with just one or two layers of fruits. Harvesting should be done early in the morning in dry conditions. Washing the fruit bruises it and spoils its shine and lustre. Thus, care should be taken for the handling of strawberries else its decrease the market price of the produce substantially.



Conclusion

Strawberry cultivation is a profitable agri-business venture. Its cultivation is not possible everywhere but places where it can be grown should be harnessed as a potential source of income for the farmers. In Uttarakhand, the districts of Dehradun and Nainital favours the growth of strawberry. Therefore, if care and maintenance is taken a good yield can be obtained which in turn helps to earn better price for the crop. The market price of strawberry may range from 100 Rs per kg to 200 Rs per kg. It can be seen that upto Rs 4 lakh can be earned from an acre of strawberry plantation. The benefit of taking up strawberry over other crops is its unique taste, aesthetic appeal as well as its use in a variety of industries ranging from cosmetics to bakery. Thus, keeping in view the economic profitability strawberry crop should be taken up at more commercial levels. Government should help farmers to collectively set up processing units through which they can get even better prices for their strawberry production.