MARIGOLD CULTIVATION:

AN EFFORT TOWARDS DOUBLING FARMERS INCOME

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Marigold (*Tagetes erecta* L.) is a popular and commercial flowering annual cultivated in different parts of the country and has been commercialized as an ornamental plant. This crop is a source of natural pigments from its orange/yellow flowers. It can often be cultivated in waste land, monkey menance area, a wide range of anthropogenic habitats where vegetation is regularly disturbed. *Tagetes erecta* is able grow in many climates and soils types and, once established, it can very quickly form dense populations. The plants of marigold are grown for garden decoration and extensively used as loose flowers for making garlands for social and religious functions. The short duration to produce marketable flowers, shape, size, attractive colours, and good keeping quality has attracted the attention of flower growers. The demand for marigold flowers rises during festivals viz., Dussehra, and Diwali etc. The crop can be planted in the beds for mass display or grown in pots. Mild climatic conditions of 18-35 °C is required for luxuriant growth and flowering, however, above 35 °C restrict the growth of the plants, which leads to reduction in flower size and number. Sandy loam soil with pH 5.6 to 6.5 is ideal for its cultivation.

Marigold can be propagated through seeds and cuttings. Seed propagation is mostly preferred for the cultivation of marigold. Its seeds are black in color which remain viable for about 1-2 years. Sowing of seeds is done in pots, seed boxes or nursery raised beds. Before sowing the seeds of marigold are treated with captan 2 g/kg and should be sown thinly (6-8 cm row to row) and 2cm deep and covered with sieved leaf mold. About 200-300 g seed/acre is required for raising the nursery in summer and rainy season and for one hectare area about 1.0-1.5 kg seed is required for planting. After 20-25 days of germination seedling can be transplanted in the field. Depending on seasons, planting can be done in rainy, winter and summer season. Therefore, this crop can be cultivated throughout the year. Transplanting should be done in the field which is well ploughed followed by 2-3 harrowing and mixing of FYM at 20-25 t/ha should be incorporated to the soil to avoid air pocket. Moreover, recommended N:P:K fertilizer dose would be 120:60:40. Half quantity of nitrogen, full doses of potash and phosphorus should be applied as basal dose, preferably one week after transplanting. The remaining quantity of nitrogen should be 30-40 days after transplanting. Plant density should be 30 cm x 30 cm for French marigold and 40 cm x 40 cm for African marigold. Light irrigation should be given in the field after transplanting. Weeds are the main problem during rainy season as it destroys the crop in terms of growth and productivity of marigold. So, 3-4 manual weeding are required during the crop growth season. Irrigate the crop whenever required depending on the type of soil. After 40 days of transplantation pinching is done for effective growth and production of a greater number of flowers. Irrigation before plucking gives better flower quality. Flowers are plucked when it attained full size and should be harvested in early morning. Regular harvesting and removal of dried flower enhances the yield of marigold. The total blooming duration of marigold is about three months. After harvest it should be stored at cool place. The fresh flower yield of marigold is 200-225 q/ha

CONCLUSION

Marigold flowers are a rich source of a carotenoid pigment and lutein content. Nowadays, lutein content is emerging as a popular active ingredient which is used in the food industry and textile coloration. The pigment has acquired greater significance because of its excellent colour value. Moreover, marigold flower extract has been extensively used in veterinary feeds. In current scenario, large and small-scale industries have begun exploring the use of natural colorants as a possible means of producing an ecologically sound product which would also appeal to the consumer. These industries have increased the demand of marigold worldwide. Therefore, Western Himalayan farmers could double their incomes from waste and marginal land by switching to marigold cultivation.