

HIGH VALUE AGRICULTURE

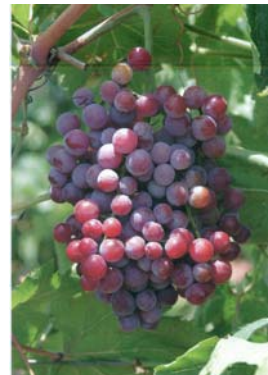
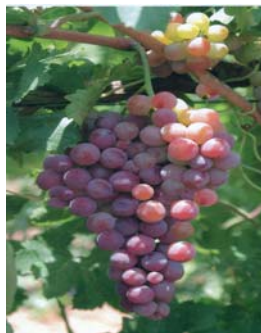
The production and consumption of high-value food products (HVFPs) has soared over the past quarter century. At the same time, wholesale and retail marketing of these items has changed rapidly and increasingly concentrated at the levels of production and marketing. This dynamic situation poses special obstacles for small-scale farmers, who constitute the majority of the population in Pakistan. They will have difficulty improving their livelihoods if they are not involved in this rapidly evolving sector. The key challenge is to find non-distorting, equitable policy and technology options that support the participation of small-scale producers in HVFP markets. Therefore research at PARC is being increasingly focused in this direction.

Research in high value agriculture focused on seed less citrus, sub-topic grapes, straw berries, baby corn, honey bees and medicinal plants.

- Early varieties of oranges with ripen in Nov. with balanced sugar acid ratio and seedless have been identified and introduced in the sub-tropical areas of Pakistan.



- Table quality grapes, which mature in June have been identified and introduced in the sub-tropic areas of Pakistan.



- Girdling improved the fruit set in olive (2.33 - 2.61%) as compared to control with fruit set of 0.66%. NPK (500+250+250 gm/tree) application also increased fruit setting (0.82% in olive).
- Chilling straw berry runners at 40C improved plant growth, number of flowers, fruit weight and number of runners.
- Work on baby corn (vegetable corn) has been initiated. Some suitable genotypes have been identified along with some Pakistani products where baby corn can be utilized.



- Honey bees pollination of onion (cv. "phulkara") contributed 6 times more seed set in while oilseed crops yielded 15-25% increase in seed yield when exposed to bees.

- Exotic species of honeybee (*Apis mellifera*) were successfully bred with SMR (suppression of mite reproduction) behavior. This method was disseminated to the beekeepers for the control of varroa mite.



- Selection and breeding of queens of indigenous honey bees (*Apis cerana*) resulted in increased number of colonies to 21. This is the only apiary of indigenous honey bee in the country.



- At Cholistan farm on a high value medicinal plant namely Ispaghol, the highest yield of 0.45 t/ha was obtained with application of 100 kg P/ha, while lowest seed yield of 0.30 t/ha was found in case of control where no P was applied.