

Promoting Horticultural Crops to Alleviate Poverty in Sindh and the Southern Punjab

Engineer M.H. Panhwar, has established a Trust to promote scientific knowledge and technology. He has introduced many new fruit crops in Sindh, has developed a number of new varieties of existing and new fruit crops and has also introduced them commercially near Hyderabad. He and his wife Farzana have delivered a number of lectures to the farmers organised by Export Promotion Bureau, SMEDA (Small and Medium Enterprise Development Authority) and many other organisations and feel that this is not enough and now plan to deliver one day's training course on mango at Hyderabad. The plan is to invite mango growers and another persons in the mango industry at various places in next four to six months starting with Hyderabad and give them training on correct method of growing harvesting, packing and exporting mango.

If the programme at Hyderabad is well attended and response is good, programme will be started in other districts immediately and completed before harvest. Similar programmes will be started on other fruit crop.

Objective of Training Programme.

Yield of mango in South-Asia is 3 tons per acre against 10 tons in developed countries, due low inheritant qualities of our varieties, lack of weed control, improper fertilising, lack of micro-nutrient applications, not being able to diagnose diseases like anthracnose, stem end rot, powdery mildew, bacterial black spot, mango malformation, lack of control of various insects and improper management of orchard?

In general the yield can increase to 10 tons per acre by the following methods if applied scientifically and intensively. M.H. Panhwar farm had achieved these results a decade ago.

Management Method	Increase in yield
◆ Weed control. -----	30-40%
◆ Proper fertilising.-----	30-40%
◆ Micro-nutrients application.-----	10-20%
◆ Irrigation water requirement.-----	40-50%
◆ Disease control.-----	30%
◆ Insect control.-----	30%
◆ Overall management including mulching growth regulation, pruning, controlling effects of adverse climate.	<u>30-40%</u>
TOTAL	200-240%

The above shows that increase of yield by 200 to 240% i.e., from present 3 tons to 9-10 tons is possible by proper management except for varieties which hereditary are poor yielders. This also makes it advisable to study all these factors and manage orchards for optimum conditions. This also applies to all other fruit crops. The training programme is aimed to increase mango harvest season, yield and quality for local use and export and will full guide lines would be explained.

Training programme.

The following 32 subject will be discussed for 10 minutes each followed by 5 minutes for questions and answers. Certain minor subjects can be combined in one. There will be more reliance on individual and multimedia methods.

Various new mango cultivars, with harvest date from 15th April to 1st October against present 20 May to 10th July in Sindh.

Management methods involving educated manager or owners personal supervision at all stages.

Bienniality in mango and methods of overcoming it.

Increasing plant density per acre from the present 20, 25, 40 and 50 trees to 100 or more by selecting dwarf and semi dwarf varieties against present vigorous and tall

Increasing yield per acre from present 3 tons, to 10 tons by introducing high yielding and dwarf varieties, higher density per acre and intensive management.

Proper fertilising i.e., proper ratio of NPK (nitrogen, phosphorus and potash), application methods and timing and fertilisers with sprays.

Options to use farm yard manure, green manure and incorporation of agriculture wastes in soil or use of synthetic fertilisers only or combinations of the above.

Micro-nutrients their doses and applications methods and on the farm manufacture, foliar feed of macro and micro-nutrients.

Irrigation doses considering the fact that transpiration and crop factor varies between 65% to 140% of evaporation through out the year and is maximum during fruit development.

Whether stopping water in autumn for induction of flowers is helpful or harmful?

Different methods of weed control in orchards namely; ploughing, mulching or herbicides.

Control of diseases namely; anthracnose, powdery mildew, malformation, stem end bacterial black spot, premature ripening, soft nose, and other minor diseases.

Control of insects; fruit fly, borers, hoppers, miners and thrips.

Harvesting early or late, correct or incorrect methods, self harvesting and packing.

Harvest contractors and self-marketing.

Sophisticated export markets of Europe, Hong Kong, Singapore and Australia for mango and most acceptable varieties according to size, colour, sugar content blemishes freedom and long shelf life.

Whether existing varieties or cultivars are suitable for export and factors governing local and international market acceptability.

Post-harvest diseases.

Preparing for export.

Processing of mango for local use and export.

New management tools: Growth regulators for flower induction increasing fruit size and reducing fruit drop, deblossoming, delaying flowering.

Pruning as management tool.

Gamma Irradiation export management tool and economics.

Bagging as management tool.

Reducing stem end rot management tool.

Reflection of light as management tool.

Wind breaks management tool.

Retarding mango decline and top working as management tool.

Thinning of flowers and fruit as management tool.

Can private mango exhibitions they promote fruit culture.

The first such training course will take place on 30-03-2003 at Mehran Arts Council and time table will follow.