

## ABSTRACT

Kinnow (Mandarin) is one of the major fruit crops of Pakistan. Unfortunately the production of kinnow (Mandarin) orchards is lower than standard. It was therefore, decided to plan and conduct a research study with the objective to observe various cultural practices adopted by the kinnow growers and other factors which lead to yield losses of kinnow (Mandarin). For this purpose 20 union councils of tehsil Sargodha were selected by simple random sampling technique and from each union council 10 kinnow growers were selected. Thus total 200 farmers were selected as sample. The main findings of the study were that the majority of the respondents (66.5%) had insufficient irrigation water for the orchard. A large majority of the respondents (89 %) were using flood irrigation method. Majority of the respondents (75.5%) did intercropping in their orchard. Maximum respondents (78.5%) pruned orchard before flower emergence. Majority of the farmers (54.5%) applied fertilizer twice in a year. A vast majority (97.5%) of the farmers reported that weeds were present in the orchard. All the respondents reported about the disease in the orchard. Similarly all the farmers reported that there was insects attack. A simple majority of the respondents (49.5%) orchards were attacked by whitefly, while 36% respondents reported about leaf miner attack. Majority of respondents (56.5 %) reported that the insect attack was more severe in flowering stage. Most of the respondents (91%) reported about the injuries of fruit during picking. Majority of farmers (67%) reported that 20% losses of the total yield occurred during picking. About (51%) respondents did not have transport facility. Similarly greater number of the respondents (70 %) did not have storage facility. A vast majority (94.5%) of the farmers' were aware about the recommended horticultural practices. About (54%) respondents reported that the high yield was due to the use of modern agricultural

techniques. Also maximum respondents (68%) reported that low yield was due to diseases and insects attack followed by the respondents (34%) who reported about insufficient fertilizer and irrigation facilities. A large majority of the respondents (91.5%) reported that the low yield affected their socio- economic conditions. Majority of the respondent's, social life, livelihood, children education and health was affected to some extent while purchasing power of clothing affected to great extent due to low yield.

It was concluded from the findings that there was close association between level of education, availability of sufficient amount of irrigation water, total number of irrigation in a year, interval between two irrigation, method of irrigation, stage of pruning, type of fertilizer application, total number of fertilizer application, quantity of fertilizer application, method of fertilizer application, type of weeds its density and weeds removal methods, type of insects and diseases attack, fruit drop, fruit picking, storage facility and socio-economic conditions of the farmers with yield per acre.

It was recommended that sufficient water should be made available for irrigation at proper time. Knowledge about intercropping is necessary for successful cultivation of citrus orchard. Fertilizers, insecticides/pesticides, should be made available to the kinnow growers at proper time, conveniently located centers and subsidized price. Recommended doses of fertilizers and integrated pest management practices should be popularized among the farming community. Cold storage facilities should be made available especially in the vicinity of kinnow growing areas. These findings of the study will open the door for the students as well as for the researcher to do further research in this area.