

# **SUSTAINABLE METHODS AS APPLIED TO RAISING FRUIT CROPS**

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**By**

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**Reviewed by**

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In 1965 the Panhwars bought 108 acres near Khesano Taluka (Sindh) and developed the property into a fruit farm, originally with mangoes and bananas. M.H. Panhwar has a master's degree in agriculture engineering, Farzana Panhwar's master's degree is in biochemistry.

At first, they relied on the state extension service for guidance. Mostly this advice was to clear cultivate between the trees and use commercial fertiliser and pesticides as needed.

Actually, extension literature in Pakistan was not specifically geared for fruit production. So little by little over the years, the Panhwars tried out various other approaches featuring mulching, composting, mowing, use of manure, etc. and would up demonstrating that a largely organic farming system gave them the best results.

This book is in narrative form and describes their various experiments and the results. The last chapter gives their prescription for a code of practice for sustainable agriculture. It is largely organic, although they do not hesitate to use urea to speed up the composting process as well as a once-a-year pesticide fix if they cannot live without it that year.

Reading this recital of their success and failures reminded me of the classic 1943 book by Albert Howard on farming in India which played an important role in inspiring the organic farming movement. Conditions in Pakistan are, of course, somewhat different from those in the US. Manpower is considerably less expensive and many of the methods require substantial amounts. Manure, even human faeces, are readily available. Water is very cheap so they use flood irrigation.

The Panhwars did work out some very advantageous ways of getting and using mulch. At the same time they make use of modern diagnostic techniques and keep pH, NPK percentages, and trace mineral requirements in mind in their work. The end result is a farm from which they get considerably higher yields of quality fruit than the average in the region.

The book is an enjoyable read.