

POST HARVEST PROBLEMS OF FRUITS AND VEGETABLE SUPPLIES IN THE CITY OF HYDERABAD.

**BY
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General.

There are health and economic problems connected with fruit and vegetable supplies to the city of Hyderabad as well as to all other cities and towns of Pakistan. These are created by pre-harvest treatments, which indirectly affect post-harvest quality from the marketing chain to consumption including waste disposal and create serious problems of health.

Pre-harvest treatments to fruits and vegetables affecting the post-harvest quality and standardized chemicals in Pakistan.

Intensive agriculture has led to excessive use of pesticides on fruit and vegetable crops on large scale. Some of these have undesirable consequences. In 1994 some 203 farm chemicals were standardized by Government of Pakistan for import of them and of them 63 were already banned for use in U.K and USA, but are still being manufactured in developed countries imported and used on crops in Pakistan and other developing countries. There is ban on their use in the developed countries but not their manufacture, on the excuse of free trade.

Chemicals used on fruits, vegetables and cotton and their effect on buffalo health.

Consequences these chemicals on fruits and vegetables can be highlighted as an indirect evidence of use of some systemic chemicals on cotton, transmission of them to flowers and subsequently to seed. After extraction of oil from seed for human use, the waste product called oil cake rich in proteins is fed to buffalos in the cattle colony Karachi and probably in all major cities of Pakistan. Some years back the herd-owners found that after feeding cotton seed oil cake to buffalos, 40% of them stopped yielding milk, became sick and half of them died. The sick

ones never recovered to be productive and were disposed off in meat market. The herd-owners then shifted to horse beans (channa) as buffalo feed, but milk yield decreased and coconut cake once sold very cheap is not available in Pakistan and soybeans are too costly. If cotton seed cake can be so dangerous to animals, we have to think of oil we eat. When the same chemicals are sprayed on fruit trees and vegetables, a number of times before and after flowering and during fruit development, can these fruits and vegetables be claimed as healthy or worth eating?

Fruit milk shakes and hormones RBST.13

Milk has become relevant to post-harvest of fruits, as popular drink called milk shakes of mango, apple, chicku (sapodilla), etc., use this milk. It is well known that RBST is injected to buffalos to yield more milk and they do yield more within 5 minutes of injection. Buffalo eat extra feed to produce more milk, but cost of extra feed is more than returns from extra milk yielded by the animals and herd-owners do not understand it. It is not realized that RBST is a dangerous chemical, banned for use in USA and Europe some 3 years back, due to continuous efforts by Professor Samuel Epstein, who found it as a serious cancer against. It is still used daily throughout Pakistan and even in villages. Besides fruit milk-shakes, this milk is also used for all other purposes and also in tea, Pakistan's national drink.

Chemicals in food and breast cancer.

Incidentally one out of seven women in northern America is going to die of breast cancer, due to use of chemicals in food and three international conferences have already been held on this issue in the past 5 years.

Post-harvest chemicals treatment for improving shelf life.

Fresh fruits after harvest is either dipped in chemicals or is sprayed with them to kill fungus, present on skin of fruits and vegetables to increase shelf-life. They do kill the fungi, but their effects on human health have not been measured. At least one such chemical was banned in USA in 1989, but reportedly for other reasons.

Fruit fly infection control and ingress of harmful farm chemicals.

Fruit fly with its ovipositor injects eggs inside the fruits. Eggs hatch into larvae, which feeds on fruit and tunnels towards the seed, spoiling it altogether. The presently used remedy is to dip harvested fruit into a chemical for one minute's duration and it penetrates inside pulp and kills eggs and larvae. This fruit is then

marketed within next few days, though manufacturers recommend withholding period of one week. If chemicals can kill larvae inside fruits, how about human consumers of this fruit?

These are just a few examples of pre and post-harvest treatments at the farm.

Standards for fruit and vegetable harvest.

There are no standards and criteria for proper harvest time, size and quality and separation of diseased fruit before packing. Some owners are very careful about separating diseased fruit from healthy one, but mostly it is the fruit harvest contractors who do not care. They pack diseased and rejected fruit and dump it in the market.

This fruit comes to the market for sale. Commission agents themselves buy the fruit or sale to sub-agents (Mashakhors) and both groups ripen the fruits for local use. The diseased fruit is also sold to the retailers, who sell it at discounted rates to general public.

Juice processors and hepatitis.

The rejected fruit is collected at the market by juice processors, who sale juice in containers. They do not care for the disease, so long fruit has flavor. Still some rotten fruit remains with agents and sub-agents who throw it on roads in the market. The vegetables usually dry and rot quickly and they are allowed to be dumped on the roads to be collected by sweepers as waste. Fruit and vegetables markets are places for garbage disposal, and are awfully smelly and unhygienic, due to rotting of the organic material which is first attacked by fungi and then by insects. Market air is full of fungi which then attack fresh fruits and vegetables coming to market and they start deteriorating very fast, but are dumped onto the consumers.

Street juice shops and restaurants.

In every quarter and almost every major street, there are juice vendors and shopkeepers. A large percentage of them buy only rotten fruit, separate portion which appears to have healthy look and put it in freezer to lower its temperature. They exhibit a few pieces of good quality fruit to attract customers, but juice is extracted from rejected fruit of mango, citrus, apple, water melon, falsa, carrots, grapes and pomegranates in the cold storage.

This is fresh juice that most of these shops general supply to un-suspecting customer. There are many exceptions but their prices are high. Rotten fruit is also

converted into deserts and salads in cheap restaurants where mango, banana, papaya, apple and citrus are used as such. Except costly ones, most middle and lower class restaurants use this material.

Plastic bags for fruits and vegetables and lung cancer.

The consumers are delivered fruit and vegetables in plastic bags. The house holds dump these bags in the garbage cans and are collected by municipality and used as fill material but plastic bags do not decompose and their disposal is made easy, by burning. Plastic bags usually are first burnt on the streets, but whatever are left in garbage, are burnt at the dumping grounds. The whole city of Hyderabad almost every day witnesses these plastic fires and their smoke. The smoke is formaldehyde a gas which causes lung cancer. It is expected that lung cancer will take shape of an epidemic in big towns and cities of Pakistan.

Acknowledgements.

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- i) 'Recently Standardized Pesticides in Pakistan and need for Change', read at International Conference at Worwick University, U.K., on July 26-28, 1996.
- ii) 'Poison in Milk (RBST)' Letter to DAWN, 1996.
- iii) 'Breast Cancer in Women' papers read at two conferences Kingston (Ontario) Canada, 1997 and Ottawa (Canada), 1999.