SCARCE OR PLENTY, WATER GIVES CAUVERY BASIN FARMERS A HEADACHE

3 villages in Chief Minister’s home constituency part of danger zone as

By Vinay Madhav

Bangalore, Feb 24: Caught in an unending row over water between Karnataka and Tamil Nadu, farmers in the State’s Cauvery basin are now rolling up their sleeves for yet another battle. Excessive irrigation of their dry land has resulted in soil degradation. Already farms in parts of Chamarajnagar, Mysore and Mandya districts have become saline or alkaline.

An excess of soluble salts in the soil can eventually affect crops. Salinity, say agriculture experts, can lead to alkalinity, making cultivation impossible.

One of the worst-hit areas is Yelandur taluk in Chamarajnagar district, where over one-third of the irrigated land has turned saline. Farms in Kahalli near Nanjangud and Karuna in Chamarajanagar have turned alkaline, where nothing can grow. Three villages in Chief Minister S.M. Krishna’s home constituency Maddur have also shown signs of alkalinity, say the experts.

A leader of farmers in T Narasipura, Kurubur Shantha Kumar, says: “We are facing problems in many villages and farmers know that there is something wrong with their soil. However, as long as they can grow one crop of paddy using chemical fertilisers, they do not care much.”

Most of the farmers in the area grow paddy, which needs no percolation of water deep into the earth and can, to some extent, withstand sodium salts such as common salt. Still, it is only a matter of time before these fields also turns alkaline, experts warn.

A detailed study on this subject has been carried out by Prof. Srinivasa, Head of the Soil Science and Agro Chemistry Department at the College of Agriculture near Mandya, better known as VC Farm.

The Soil Conservation wing of the State Agriculture Department has also made a study aided by satellite imagery, which has indicated some problem areas in the Cauvery basin.

Prof. Srinivasa notes that post-1990, soil fertility in the irrigated areas of the State has been going down due to intensive farming and excess use of chemical fertilisers and pesticides. “Besides, the imbalances in micro-nutrients of the soil were not taken care of,” he points out.

His study has found that
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Excessive irrigation, salinity, alkalinity lead to degradation of dry land

Black soil, which absorbs more water, is susceptible to salinity. When water evaporates, it leaves behind soluble salts. But any area can turn saline eventually because of water logging.

In Mandya, the problem is bad drainage. In Kergod, areas around the VC Farm, Madadakanahalli, Mallanayakan Katte, and Pranokkallu have shown symptoms of salination. In Maddur, Chikkarasinakere, Doddarasingakere and Muttanahalli, the problem is alkalinity. In Malavalli, areas around Hadli and Gowdagere are turning alkaline.

In Mysore district, the areas around Nanjangud and T Narasipura, especially Kurubur, Vatal, Addala and Mugur, exhibit symptoms of salination.

Chamarajnagar, where most of the irrigated land has black soil, faces a severe salinity problem. Out of 8,000 hectares of irrigated land in Yandalur taluk, over 3,000 hectares face the soil salination problem, says Prof. Srinivasa.

The Joint Director of the Agriculture Department at Chamarajnagar, Shivaraj, says that the problem is more severe in Yandalur. “In paddy growing areas, we have advised farmers to stop using some pesticides which aggravate the problem. They are also resorting to green manure, known as diancha. Moreover, a paddy variety known as IR-3066 is being extensively used in these areas,” he says.

However, in areas like Maddur and Malavalli, which have red soil, the problem is due to water logging. The water table is high and in some areas, the drainage system is improper. The water flowing through irrigation canals contain dissolved salts. During summer, the water evaporates, leaving behind the salts.

The soil first turns saline and later turns alkaline, Prof. Srinivasa adds.

“When the soil turns alkaline, only paddy crops can be grown. However, if the pH level exceeds 10.5 percent or the exchangeable sodium percentage (ESP) exceeds 70 percent, nothing can be grown in that area,” he says. These indicators are approaching the danger levels at Kahalli, Maddur and Malavalli, he warns.

However, soil in most areas can be reclaimed, if detected early. Good drainage and leaching of salts, by inundating land with good water, would do the trick.