

## **Moving from Paddy to Maize - Punjab's Groundwater Crisis**

### **Why in news?**

The Punjab Agricultural University (PAU), Ludhiana, recently decided to strengthen maize, the most important alternative to rice, to address the water crisis.

### **What is Punjab's water crisis?**

- Over 70% of blocks in Punjab are in the dark zone on underground water stocks.
- At current rates of depletion, Punjab's entire subsurface water resource could be exhausted in a little over two decades.
- To conserve the resource, the Punjab government brought a law in 2009 to mandatorily delay transplantation of paddy beyond June 10.
- This is when the most severe phase of evapo-transpiration gets over.
- This has delayed harvesting to end-October and early November.
- This is when atmospheric and wind conditions cause particulate matter and gases from burning paddy stubble to hang close to the surface.
- So, the law has been blamed for creating the bad air crisis of North India, especially Delhi.
- There is serious discussion on finding a sustainable solution to address Punjab's massive groundwater crisis.

### **What is the move thus?**

- In the above context, there is a strong demand for diversification of crops, and a move away from water-guzzling paddy.
- The PAU has emphasized on moving from paddy to maize.
- It has suggested working towards narrowing the gap in economic returns between the two crops - Paddy and Maize.
- The idea is to persuade farmers towards increasing the area under maize.

### **How is maize cultivation across the country?**

- Of the 42-odd lakh hectares under cultivation in Punjab, maize was grown on just 3.8% in 2019.
- The area under maize in Punjab is only 1.6% of the total area under maize in India (98 lakh hectares).

- Nearly 46% of India's maize area is in the peninsular states of Karnataka, Telangana, and Andhra Pradesh.
- Madhya Pradesh and Maharashtra too, have large areas under maize.

### **What is the scope in Punjab?**

- In Punjab, maize can be grown in three seasons - spring (March-June), rabi (December-April) and kharif (June-October).
- Kharif is the state's main maize season.
- There is need to increase the area under kharif maize, which is also the paddy season.
- Spring maize is grown on around 25,000 hectares.
- But the crop is not promoted due to its long duration, and because it consumes water during the hot summer days.

### **What are the limitations?**

- Unlike paddy and wheat, which are procured by the government, maize is sold in the open market and is subject to the actions of private players.
- Maize is one of 24 crops for which the government fixes a minimum support price, but procurement is not its responsibility.
- This is because maize is primarily a "feed" crop.
- Notably, of the 28 million tonnes produced in India, only 13% is consumed as food.
- Fluctuating prices of maize has also been a disincentive for farmers.

### **What is needed for Punjab to effectively diversify from paddy?**

- The area under non-basmati paddy must be cut by at least 12 lakh hectares.
- [Non-basmati paddy is currently grown on 23-26 lakh hectares.]
- Instead, maize, basmati, and cotton must be grown on this land.
- Also, areas under agro-forestry and vegetables should be increased.

### **What should the government do?**

- Developing more high-yield and good varieties of maize for which there is a demand in the market should be taken up.
- But alongside this, the government must stop free power for paddy.
- This is necessary to disincentivise its cultivation and check overexploitation of underground aquifers.
- [A very large number of tubewells (more than 14 lakh in 2015-16) running on free power extract virtually endless amounts of water across the state.]
- The government could also earmark a portion of the Minimum Support Price budget for maize.

- By doing so, farmers could be compensated in case the price of maize falls below what has been fixed by the government.
- Besides government measure, conditions should be created for farmers to move voluntarily away from paddy.
- Farmers will themselves go for such crops without the government's efforts if there is a market for low water-consuming crops, and a good price for such crops.

**Source: Indian Express**

