

Genes to Increase Grain Size of Sorghum

Why in News

Recently, as per a report from the University of Queensland (UQ), Australia, **genes that can increase the grain size of sorghum** have been discovered.

Key Points

About:

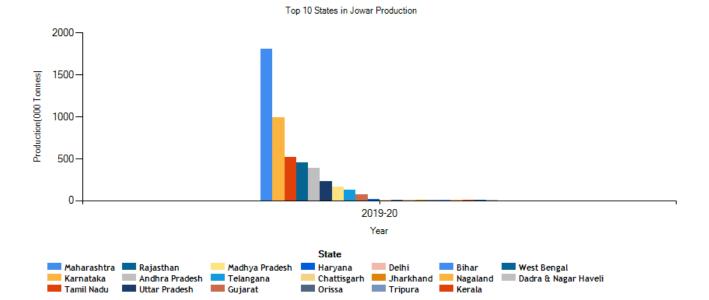
- As many as 125 regions in the sorghum genome have now been identified where variation in the <u>DNA sequence</u> was associated with grain size and response to environmental conditions.
- New variants have also been identified that are capable of doubling grain weight.

Significance:

 Bigger grain size can improve the usage value of the crop. Larger grains make it more digestible for both people and animals and improves processing efficiency.

Sorghum:

- It is a versatile grain crop used for human consumption, fodder and bioenergy generation.
- The grain is popular across the world because it has a low glycaemic index, is gluten-free and nutritious.
 - The lower the glycemic index of a cereal, the **lower is the relative rise in blood glucose level** after two hours of consuming it.
- The **variety of the crop found in India is called jowar.** It is said to have its origin in the country and is one of its most important food and fodder crops.
 - Jowar has a dedicated All-India Coordinated Research Project since 1969.
- Sorghum plants are very hardy and can withstand high temperature and drought conditions.
- It is well adapted to semiarid regions with a minimum annual precipitation of 350-400 mm. It is grown in areas that are too hot and dry for growing maize. In India, the main sorghum belt receives an annual rainfall ranging from 400-1000 mm.
- It can grow on a wide range of soils. Medium to deep **black soils** are predominantly suitable for growing sorghum.
- States Producing Jowar in India:



Source: DTE

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