Stingless bees increase crop yield

Prelims: General issues on Environmental ecology, Bio-diversity and Climate Change

Why in News?

Researchers from Nagaland University have shown that stingless bees, which produce a high-value honey with a distinct flavour, can increase the yield and quality of crops.

- **Identified species -** Tetragonula iridipennis and Lepidotrigona arciferal identified as superior pollinators.
- **Findings** - Both species are identified as the most efficient foragers on chilli booms in the open under low hill conditions.
- The yield and quality of chilli and other crops increased several times when these stingless bees were introduced as pollinators ***under greenhouse conditions.***
- The researchers found that the fruit set in stingless bee-pollinated king chilli (Capsicum chinense) increased to 29.46% compared to the non-pollinated crop's 21% yield.
- Similarly, the fruit set in chilli (Capsicum annuum) increased by 7.42% over the non-pollinated crop.
- The seed weight, an indicator of viability or germination, also increased by 60.47% when pollinated by the stingless bees.
- The other crops used for the stingless bee pollination test included cucumber, ash gourd, watermelon, tomato, pumpkin, brinjal, and dragon fruit.
- The potential of these bees as pollinators for fruits such as mango, guava, gooseberry, and Indian jujube was also observed and recorded.
- Stingless bees are reported primarily from the northeastern, eastern, and southern Indian States.
- In the northeast, these bees are reared traditionally in homestead apiaries.

Reference

The Hindu | Sting bees in crop yield