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## **2. Sustainable Livestock Farming**

### **Why in News?**

- Recently, Thermal stress poses a serious threat to Sustainable Livestock Farming in Kerala

### **Highlights**

- In Kerala more than 95% of the cattle are crossbreeds with low thermal tolerance compared with native Varieties.
- Kerala Veterinary and Animal Sciences University (KVASU) has started a project for selecting cattle in the context of climate change to cope with Thermal Stress.
- Thermal stress refers to the physiological and metabolic responses of animals to elevated temperatures that exceed their comfort zone.
- It occurs when the animal's body is unable to maintain its normal internal temperature, and it results in a range of negative effects on the animal's health and productivity.
- Thermal stress can be caused by a variety of factors such as high ambient temperature, humidity, solar radiation, and lack of proper ventilation or cooling mechanisms.
- It Is a significant concern in livestock farming as it can have severe economic and animal welfare consequences.
- A good heat detection program is necessary to detect cows with marginal heat symptoms as cows exhibit lesser heat symptoms during heat stress.
- It is always advisable to continue AI (Artificial Insemination) breeding instead of using bulls because in natural breeding both bulls and cows suffer infertility due to summer stress.
- Genetic selection of animals based on specific molecular genetic markers for heat tolerance can be a boon to alleviate heat stress in cattle and buffaloes by identifying the heat tolerant animals
- Thermal stressed animals are more prone to lower reproductive and productive performance.
- Feeding high quality forages and balanced rations can decrease some of the effects of thermal stress and boost animal performance.