

AmbiTAG

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In news- Indian Institute of Technology, Ropar (IIT Ropar) in Punjab has developed a first-of-its-kind IoT device – AmbiTag.

About the device-

- It **records real-time ambient temperature** during the transportation of perishable products, vaccines, vegetables, meat, body organs, blood, dairy products as well as animal semen.
- The recorded temperature helps to know whether that particular **item transported from anywhere in the world is still usable or perished** because of temperature variation.
- It is shaped like a **USB device** that continuously records the temperature of its immediate surroundings from **-40 to +80 degrees in any time zone for a full 90 days on a single charge.**
- Similar devices that are available at present record data only for a duration of 30- 60 days.
- It has a range of **inbuilt features** to customise logging intervals, time zone and alarms.
- The device generates an **alert when the temperature goes beyond a pre-set limit.**
- The recorded data can be retrieved by connecting the USB with any computer.
- The device has been **developed under Technology Innovation Hub – AWaDH** (Agriculture and Water Technology Development Hub) and its Startup ScratchNest.
- So far, such devices are being imported by India from other countries such as Singapore, Hong Kong, Ireland, and China.

AWaDH- Agriculture and Water Technology Development Hub

- AWaDH is a research center at IIT Ropar established with

support from the **Department of Science and Technology (DST) and Science and Engineering Research Board (SERB)** to carry out extensive research in the field of agriculture and water.

- The **mission of the Hub** is to develop 30 Agritech, support 35 startups/spin-off companies, train more than 1000 professionals in Cyber-Physical Systems, give more than 8000 employment through different Agritech innovations, etc..
- It is **working on** (i) Water and Soil Quality Assessment Processes, (ii) Water Treatment and Management, (iii) Agriculture Automation and Information Systems, (iv) Stubble Management and Urban Farming, (v) IoT Systems, and (vi) Nuclear Instrumentation for Agriculture & Water, towards eco-friendly farming practices.
- The **technology developed at Hub would advance** the (i) Environment, Forest and Climate, (ii) Fisheries (iii) Food Processing and Public Distribution, (iv) Rural and Women Empowerment, (v) Land Resources, (vi) Electronics and Information Technology, (vii) Fertilizer