# OPU-IVF Calf Born in Badri Cattle

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## Why in News?

*A healthy female Badri calf has been successfully born using Ovum Pick-Up and In Vitro Fertilization (OPU-IVF) technology.*

- The achievement was a collaboration between
  - ICAR-National Dairy Research Institute (NDRI),
  - Karnal and GB Pant University of Agriculture and Technology, Uttarakhand.

## About Badri Cattle

- Badri is an indigenous cattle **breed of Uttarakhand**.
- OPU-IVF can help in the rapid multiplication of elite Badri germplasm.
- It can support breed improvement and conservation of indigenous cattle.



The female Badri calf born through IVF technology. (Photo Credit: ICAR-NDRI, Karnal)

## OPU-IVF Technology

- **Ovum Pick-Up (OPU)** – Oocytes are collected from genetically superior donor cows using ultrasound-guided ovum pick-up.

- **In Vitro Fertilization (IVF)** – Collected oocytes are matured and fertilised outside the body using semen from a genetically superior bull.
- **Embryo Transfer** – The resulting embryos are cultured under controlled laboratory conditions.
- Embryos are then transferred into synchronised recipient cows.

## Significance

- Enables production of multiple embryos from elite female animals.
- Accelerates multiplication of superior germplasm compared with conventional breeding.
- Supports genetic improvement and conservation of indigenous breeds.
- Can reduce the time required to multiply desirable genetic traits.

## ICAR-NDRI and OPU-IVF

- ICAR-NDRI has previously used OPU-IVF technology to produce calves of Sahiwal and Gir breeds.
- The next phase includes transferring OPU-IVF and cloning-derived embryos into suitable Sahiwal, crossbred and Badri recipient cows.

**Reference**

The Indian Express| OPU-IVF Calf Born in Badri Cattle

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