

Australian Merino-Gaddi Sheep Crossbreeding

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Why in News?

Himachal Pradesh is introducing Australian Merino sheep and crossbreeding them with indigenous Gaddi/Pahari sheep to improve wool quality and production.

- **Aim** - To increase the State's wool production from around 1,500 tonnes to 3,000 tonnes by 2027.
- **Concern** - Possible loss of the indigenous Gaddi breed, traditional pastoral practices and associated ecological knowledge.

About the programme

- **Initiated under** - National Livelihood Mission in 2021.
- **Location** - Government Sheep Breeding Farm, Nagwain, Mandi
- **Merino sheep imported** - 240 (40 males + 200 females)
- **Method** - Artificial insemination and crossbreeding of Merino with Gaddi/Pahari sheep.

Artificial insemination is a fertility treatment where sperm is placed directly into a woman's cervix or uterus to help achieve pregnancy without sexual intercourse

- **Objective** - To produce fine, soft, apparel-grade wool and improve pastoralists' incomes.

Feature	Australian Merino	Gaddi/Pahari
Origin	Australia	Himachal Pradesh
Wool	Fine and soft	Coarser, around 27 microns
Wool yield	Higher (upto 4.5 kg)	Lower
Adaptation	Requires relatively intensive management	Highly adapted to Himalayan terrain



- **Significance of Gaddi Sheep -**

- Integral to Gaddi pastoralism and transhumance.
- Seasonal movement between low and high altitudes.
- Can cover 10-15 km daily across rugged terrain.
- Adapted to local climate, vegetation and diseases.
- Indigenous wool is used for traditional products such as *pattu and unali coats*.
- Represents mobile ecological and cultural knowledge, not merely an animal genetic resource.

Concerns

- **Genetic and cultural loss** - Excessive crossbreeding may reduce the Gaddi gene pool and traditional pastoral knowledge.
- **Poor local adaptation** - Merino sheep may struggle with heavy rainfall, rugged terrain and long-distance movement.
- **Health risks** - Dense wool can retain moisture, increasing the risk of infections.
- **Livelihood concerns** - Higher crossbred wool prices may displace indigenous breeds, while poor markets and weak institutions continue to limit pastoralists' incomes.

Measures

- Balance crossbreeding with conservation of indigenous Gaddi sheep and prevent excessive crossbreeding.
- Monitor crossbred sheep under actual pastoral and climatic conditions.
- Improve Gaddi breeding and markets through better rams, cooperatives and fair wool prices.
- Protect Gaddi sheep as a genetic, ecological and cultural resource, not just a source of wool.

Reference

[Down To Earth| Australian Merino-Gaddi Sheep Crossbreeding](#)



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