

Reimagining Animal Identification: Ireland's Progress Towards a Fully Genotyped National Herd

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Genotyping calves at birth enhances traditional identification systems by providing a unique biological identifier for each animal and by enabling verification and corrections of parentage, sex, and breed details supplied before the registration is complete. The cumulative benefits of a fully genotyped national herd present a major opportunity for Irish agriculture, with estimated returns of up to 4:1 on investment (AbacusBio, 2022) predominantly as a result of increased productivity due to more informed breeding decisions.

Administered by the Department of Agriculture, Food and the Marine (DAFM), Ireland's Animal Identification and Movement System (AIMS) requires all bovine animals to be tagged with national EID identity tags and registered on the AIMS database within 27 days of birth. Launched in 2023, the National Genotyping Programme (NGP) is a collaborative initiative involving ICBF, DAFM, and industry stakeholders, and participating farmers. The programme operates on a co-funded model, with each the Government, Industry, and farmers contributing €6 per calf (€18 Total). To date, over 18,600 herds representing more than 1 million cows (Half the national herd) have enrolled voluntarily. Since its launch, over 1 million cows and breeding animals in NGP herds have been genotyped at no cost to farmers through government funding, bringing the proportion of the national cow herd genotyped to 55%. All calves born in participating herds are genotyped at birth, with a DNA sample collected as part of the official DAFM Tag. During peak calving season, over 100,000 samples are processed per week, with the full process from date of birth to DNA Registration completed in 13 Days on average. Since January 2024, more than 2 million calf samples have been processed, with over 1 million expected in 2026 alone.

Delivering DNA calf registration presents significant technical and logistical challenges, including large-scale sample processing, system integration across AIMS, ICBF, Tag Companies and farm software platforms, and the rollout of new identification tags that also facilitate DNA and mandatory BVD sampling. This has been achieved with an average laboratory turnaround of 4.5 days, full calf registration by 13 days of age, and sustained processing of over 100,000 samples per week during peak periods.