



National Genotyping Programme

12th July 2023



An Roinn Talmhaíochta,
Bia agus Mara
Department of Agriculture,
Food and the Marine



AgTech - it's in our DNA

New National Genotyping Programme

Media Brand of the Year 2023



New €83m tagging scheme to open in June

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A world first genotype cattle tagging scheme will open for farmer applications later this month.

The five-year scheme is anticipated to cost €83m, with €23m of Brexit Adjustment Reserve funding to fully cover implementation costs in the first year of the programme.

Year one will target 800,000 cattle. All calves born to genotyped cows will also need to be genotype-tagged in the following four years.

Participation will cost a 20-cow suckler herd €480 and a 90-cow dairy herd €2,160 over the duration of the

scheme. Controversially, farmers participating in the Suckler Carbon Efficiency Programme will have a higher cost for each animal required to be genotyped under the scheme.

Years two to five of the scheme will be funded by the Department of Agriculture, processors and farmers to the tune of €5m each per annum.

How the dairy and meat processors will fund their contributions to the scheme has yet to be agreed. Minister for Agriculture, Charlie McConalogue has cautioned that this payment cannot fall back on farmers.

FULL STORY INSIDE
See page 4



May hay

Eddie Barry stacking square bales of hay at Banogue, Co Limerick, with his dog 'Boss'. Eddie and his son, David, make around 5,000 square bales every year. The hay is fed to cattle and horses and they also sell to neighbouring farmers.
L. O'Brien/ESL

Fears rewetting will slash land prices

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There are mounting fears that the value of farmed peatland could be slashed due to rewetting proposals. Roscommon-based property consultant John Earley said four recent

EXCLUSIVE

sales fell through, due to a lack of clarity around rewetting and the eligibility of peatland for forestry. Furthermore, the Irish Natura and Hill Farmers Association (INHA) warned that rewetting will collapse the value of farmed peatland as has occurred with designated ground. It pointed out that designated land

was selling for €500/ac to €700/ac, while rough ground for forestry was making €5,000/ac to €6,000/ac.

INHA leader Vincent Roddy questioned why anybody would invest in farmed peatland, given the threat of rewetting.

Read more on pages 6, 12, 13 & 16

Revealed: how many farmers applied for SCEP in your county

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SPECIAL NINE-PAGE TRACTOR FOCUS IN MACHINERY

MACHINERY >> 1-9

Coillte accused of locking farmers out of plantations

NEWS >> 23



- BAR funding for cows etc. in 2023
- 4-year follow on commitment to genotype via DNA Calf Registration
 - Cost shared 1/3 by farmers, industry, and government
- Open for applications until the 14th July.
- 600k Dairy cows + followers.

Steps involved- Existing Stock in 2023

- Sign up online only via icbf.com
 - HerdPlus membership required and must be maintained for the duration of the programme.
- Generate button tags for cows, stock bulls and all replacement heifers.
 - All done for **free** through BAR.
 - Return to lab within 28 days.
 - Samples for all animals must be fully processed and complete before the end of the year.
 - Samples will only be sent for Animals not previously genotyped.

Steps involved- 2024 +

- Buy double tissue tags this autumn
 - Will not have access to non-double tissue tags
 - Button tags will be available to purchase for herds with existing tags leftover from 2023
- Pay for genotyping this autumn
 - Cost to farmers will be ~ €6 (~€1 tag, ~€1 post/envelopes, €4 genotyping charge)
- Tag calves at birth and send samples to DNA lab
 - Farmer pays for postage
- Farmer records the calf details on new AIM screens on Agfood.ie or through Farm Software
- DNA results automatically completes the registration

Typical DNA Registration Timeline



Farm



Day 1

Calf is born and tagged. Calf details recorded with AIMS. DNA sample posted to lab.

DNA Lab



Day 3

Sample is received in the DNA lab & acknowledged.

ICBF/DAFM



Day 7

Parentage confirmed & communicated with DAFM/farmer.

Farm



Day 11

Blue card arrives in the post from AIMS.



Genotyping the National Herd; Benefits.

- Work undertaken by AbacusBio, in conjunction with ICBF & Teagasc to quantify the benefits => €79.6m/annum
 - Genetic Improvement related => €46.2m/annum (~58% of total)
 - 20% gain in accuracy for sire + dam verification, compared to just sire
 - Correcting parentage errors (currently 15% errors)
 - Improving genetic merit of stock bulls, e.g., 4 & 5 star re: BDGP
 - Easier identification of “outliers” for breeding program, e.g. high output & low methane
 - Non-Genetic Improvement related => €33.4m/annum (~42% of total)
 - Surety re: future trading of animals based on genetic merit (CBV)
 - Labour saving for farmers/industry => removal of errors at source
 - Surety re: future carbon incentive/trading initiatives (i.e., Bord Bia, processors, etc.)
 - Enhanced traceability => National DNA database re: farm to fork. Also relevant in context of animal theft, “dumped” carcasses
 - Market point of difference => Create premium brand around genetics, carbon, enhanced traceability, etc.
 - Future R&D



Every calf in the country should be DNA tested – Teagasc

A Teagasc beef seminar in Wexford included lengthy discussion on the commercial beef value (CBV) index for cattle.



Genomic registration for the suckler herd is a "small jump", says Teagasc.

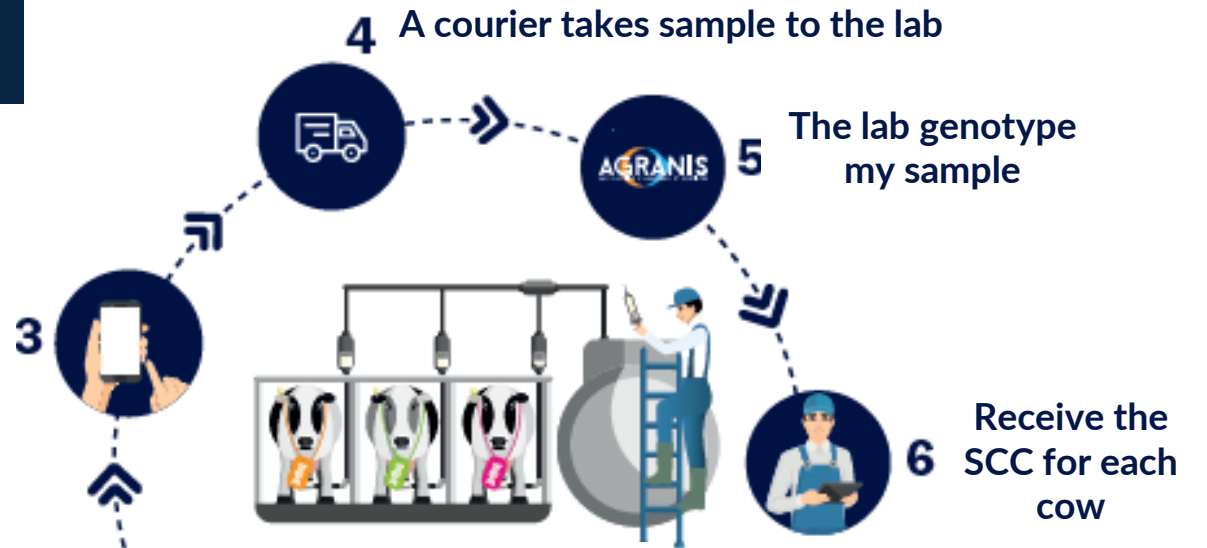
GenoCells® - How it works ?



1.
My herd has to be fully genotyped

Declare my sample on the ICBF App

Take a milk bulk tank sample



- Genotypes provide a record of the cow's DNA.
- Somatic cells in milk contain the DNA of the cow.
- Bulk Tank milk contains somatic cells from every cow that contributes milk.
- This DNA can be extracted from a bulk tank milk sample and genotyped.
- If the cows are genotyped then we can identify the cows from their DNA in the milk.

CBV - Impact on Animal Value (dairy males)

CBV Rank	Num Calves	Lower CBV	Upper CBV	Calf Price	Weaning	Finishing	Finishing Age	Num JEX
1	29,543	€16	€215	€66	€427	€1,524	771	247
2	29,526	€5	€16	€53	€395	€1,455	774	400
3	29,554	-€2	€5	€50	€390	€1,420	774	638
4	29,555	-€8	-€2	€49	€377	€1,403	775	873
5	29,451	-€13	-€8	€49	€382	€1,383	775	1,164
6	29,542	-€19	-€13	€48	€370	€1,368	775	1,629
7	29,587	-€25	-€19	€46	€362	€1,351	779	2,529
8	29,494	-€32	-€25	€46	€359	€1,333	779	3,759
9	29,508	-€43	-€32	€42	€355	€1,300	781	6,317
10	29,497	-€181	-€43	€39	€332	€1,223	786	12,476
Difference between best and worst 10% on CBV				€27	€95	€301	-15	

- Proves that when using the correct DBI sire, calves with Jersey breeding can achieve good finishing prices



- Little difference in price of 3 week old dairy male calves (€27)
- Small level of difference when sold as weanlings (150-365 days) (€95)
- Large level of difference when they reach slaughter @ ~2 years of age (~€301)
- CBV is an excellent tool to help identify more profitable animals
- Critical for rearers & providing feedback to dairy farmers re: breeding choices

CBV - Impact on Animal Value (AA males)

CBV Rank	Num Calves	Lower CBV	Upper CBV	Calf Price	Weaning	Finishing	Finishing Age	Num JEX
1	9,110	€112	€242	€181	€622	€1,722	754	26
2	9,115	€97	€112	€163	€615	€1,642	761	35
3	9,115	€86	€97	€159	€588	€1,618	762	56
4	9,111	€77	€86	€166	€574	€1,596	769	54
5	9,108	€68	€77	€157	€574	€1,575	769	96
6	9,111	€60	€68	€148	€559	€1,551	770	114
7	9,099	€52	€60	€144	€548	€1,536	775	143
8	9,117	€43	€52	€140	€543	€1,500	782	202
9	9,110	€31	€43	€140	€542	€1,478	782	290
10	9,101	-€90	€31	€123	€498	€1,396	791	896
Difference between best and worst 10% on CBV				€58	€124	€326	-37	



- Similar trends apparent for Angus calves from dairy cows.
- Impact on profitability at finishing is even more pronounced (€326)
- Big difference in finishing age – over 1 month!

Common Questions

- **Do DNA and BVD samples go to separate places?**
 - Yes, BVD Samples should be sent to your BVD lab as normal. DNA samples should be posted to the specific genotyping Laboratory in the return envelopes provided through the program.
- **How do I tell the difference between DNA and BVD samples?**
 - The BVD sample goes in the white bottle. The DNA sample goes in a pink bottle.
- **How often should I post samples?**
 - Samples should be posted at least once a week. The sooner you post samples, the sooner you will receive your blue cards. Peak season most farmers will post twice a week.
- **How long will it take to get my blue card?**
 - Between 10 and 18 days (average 13 days in 2022).

Common Questions

- **Do all calves need to be sampled at birth?**
 - Yes. All calves must be sampled at birth, regardless of sex or breed. Calves that die at birth must also be sampled. The €4 genotyping cost for each calf will have already been paid upfront, so there is nothing to gain by not sending the sample.
- **Do cows that will be culled need to be sampled?**
 - You will receive DNA tissue tags for culled cows. These will not cost anything to genotype. If they are among your breeding animals while you are taking samples, we advise to sample them rather wasting time separating them. However, once you submit samples for all your breeding animals, you will not be obliged to send in samples for culls.
- **When will my calves get genomic evaluations?**
 - Once your calves are fully registered and you have received your animal passport, the calves will fall into the weekly genomic evaluation process. Depending the time of the week the registration is completed, each calf should have a genomic evaluations within 2 weeks of registration.

Common Questions

- **Do I have to be registering my calves online to participate?**
 - Yes. At present, the DNA Registration process for your calves has only been developed for online registrations. Paper registrations are not currently compatible. Calves can be registered online via Agfood.ie or any of the Farm Software packages currently offering calf registrations.
- **What do I do if I'm not sure who the sire/dam are?**
 - You should submit registration details to the best of your knowledge as per normal registrations. If you are entirely uncertain of the sire, then a sire breed is all that must be submitted. The genotype sample will then be used to identify and automatically correct any errors you may make and even add the sire where none has been provided by you.
- **Will I be doing my Autumn 2023 born calves through this programme?**
 - Any calves born up until the end of 2023 will be registered under the current registration process. Calves born after DNA tissue tags are issued for the existing breeding animals but before January 2024 will be genotyped at the herds own cost.

Summary

- 5-year commitment
- Direct Debit required
- HerdPlus membership required

- Finalise list of herds.
- Button tags ordered for 800k animals – must be returned to lab ASAP
- Double tissue tags available this autumn – only for herds in programme
- Queries: email ngp@icbf.com or call 023-8820452

Our Farmer & Government Representation



An Roinn Talmhaíochta,
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Department of Agriculture,
Food and the Marine



Our AI & Milk Recording Organisations



Our Herdbooks



Acknowledging Our Members