Topic

Economic resilience

Adding value to milk: the A2A2 case

Background

A2A2 milk is characterized by the presence of A2A2 Beta Casein, unlike the commonly available milk which mainly contains the A1A1 Beta Casein. Beta Casein A2A2 was originally present in bovine milk but over time, due to the genetic selection that occurred in dairy cattle, it was replaced by A1A1 variant. In the last few years, production and marketing lines of A2A2 milk have been created in several countries, valorizing this niche product.

How does the strategy work + Equipment involved

A2A2 herd can be obtained by:

Internal replacement

Individual analysis of cows milk to determine the presence of A2A2 Beta Casein. A2A2 cows can be retained and bred to A2A2 bulls. The rest of the herd can be gradually culled. Concurrently, it is possible to check potential replacements using blood or hair analysis.

Buying A2A2 cows

This strategy can be used after the herds first screening: Purchased A2A2 cows replace non-A2A2 cows that are culled. It is a method of speeding up the establishment of the A2A2 herd. It is more expensive and potential management and animal health issues must be taken into account.

It is a good practice to create a certification system at farm level to be able to show to external stakeholders that the milk is A2A2 produced by A2A2 cows.

In Italy, the Operational Group *Parmaggrega* was aimed to create the first A2A2 Parmigiano-Reggiano PDO cheese by promoting the genetic selection and the certification process.

For more info: https://www.sanpierdamiani.com/en/farming/

Quote of a farmer:

"We sell A2A2 Parmigiano-Reggiano PDO Cheese through e-commerce and this enables us to reach countries where this kind of product is particularly valued "

Positive features

- A2A2 milk has attracted growing interest in recent years in Anglo-Saxon countries, particularly in New Zealand. Studies carried out on this type of milk have identified the different digestion processes of this protein compared to the A1A1 variant which make A2A2 milk attractive to the consumer.
- A2A2 milk production is linked to a genetic selection, so it is possible for the farmer to "create" a different type of milk with a relatively low budget investment.

Be careful, especially on these points

Breeding a full A2A2 herd can take years, especially if the farmer wants to use his own cows as replacements.

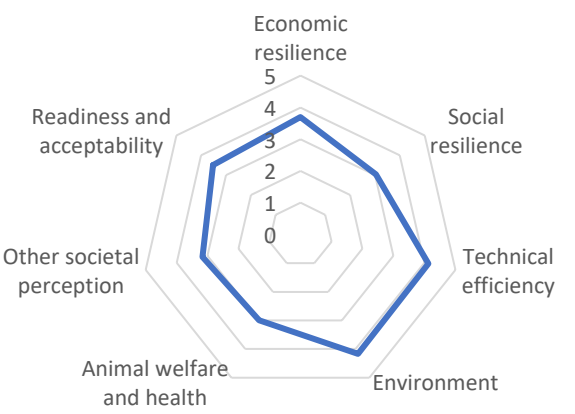
It can be difficult to combine A2A2 genetic selection with other genetic targets already in place in the farm.

Specific advises

Milk analysis is generally cheaper than either blood or hair testing in detecting A2A2 cows. Laboratories can have very different charges to perform these analyses.

It is considered good practice to plan with the farm Vet a good genetic program to combine the A2A2 target with other targets and the available budget.

Assessment of method



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