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AI-Bulls for organic farming

From Swiss organic farms for all dairy farms in Europe

SABRE-TP, ETH, 10th November 2021

Why do we need organic semen straws for dairy breeding?

- almost 90% of all cows on organic farms in Switzerland, but also in all the other industrialised countries are inseminated artificially (AI)
- But available semen straws usually originate from conventional bulls
- And we don't know how much concentrates and how much antibiotics they and their ancestors had got and how often they had been allowed to graze outside
- **Organic farms need animals that can produce adequate amounts of milk with very little concentrates and antibiotics (in Switzerland only 5% concentrates in the rations will be allowed from 2022 onwards). They have to be good grazers as well as healthy, long living animals.**
- **Since 2016, a group of experts has been working to make the Bio-KB bulls project a reality.**



Goals of the Organic AI-Bulls project

- Starting in 2021, there will be organic semen straws from the breeds Swiss Original brown cattle (OB), Brown Swiss (BV), Simmental (SI), and Swiss Fleckvieh (SF) (two bulls each).
- The bulls come from organic farms with a lot of grazing, which feed little or no concentrated feed and very rarely treat the animals with antibiotics.
- They are not big, have very good functional traits and medium milk and meat yields.
- The organic bulls are available in the Swissgenetics (the largest Swiss genetics provider) standard offer.
- At least 500 straws per organic AI-bull are sold per year.
- If the bulls are well received by the breeders, the project will be continued



Selection criteria for **farms** selling organic bull calves to the project

1. Organic farm
2. The dam (bull mother) must not receive more than 300 kg of concentrated feed per year.
3. The dam should never have received antibiotics; at most once in an emergency.
4. In the growing season, the cows eat at least 50% of their requirements on the pasture.



Selection criteria for dams

<u>Criteria</u>	<u>Brown Swiss (BV)</u>	<u>Original brown (OB)</u>	<u>Swiss Fleckvieh (SF)</u>	<u>Simmental (SI)</u>
Sacrum height	≤ 148 cm	≤ 145 cm	≤ 148 cm	-
Breeding value for pasturing	≥ 105	≥ 100	≥ 1050	≥ 1050
Fitness value (FIW / IFF)	≥ 105	≥ 105	≥ 105	≥ 100
SCC first 3 Lactations	mostly ≤ 100 000	mostly ≤ 100 000	mostly ≤ 100 000	mostly ≤ 100 000
Fertility: calving interval (days)	≤ 430	≤ 430	≤ 430	≤ 430
Milk prod. value (MIW / IPL)	≥ 100	≥ 95	≥ 100	≥ 100
conformation udder, legs (LBLI. Lac)	≥ 80	≥ 80	≥ 80	≥ 80
Longevity	≥ 14 Lakt. 3 female ancestors together	≥ 14 Lakt. 3 female ancestors together	≥ 14 Lakt. 3 female ancestors together	≥ 14 Lakt. 3 female ancestors together
Meat value / IVF	-	-	≥ 100	≥ 100

Selection criteria for bull calves

<u>Criteria</u>	<u>Brown Swiss (BV)</u>	<u>Original brown (OB)</u>	<u>Swiss Fleckvieh (SF)</u>	<u>Simmental (SI)</u>
Breeding value height	≤ 105	≤ 105	≤ 105	-
Breeding value for pasturing	≥ 105	≥ 105	≥ 1050	≥ 1050
Fitness value (FIW / IFF)	≥ 105	≥ 105	≥ 105	≥ 100
Milk production value (MIW / IPL)	≥ 105	≥ 105	≥ 105	-
longevity	≥ 14 Lakt. 3 female ancestors together	≥ 14 Lakt. 3 female ancestors together	≥ 14 Lakt. 3 female ancestors together	≥ 14 Lakt. 3 female ancestors together
Conformation udder, legs	≥ 100	≥ 100	≥ 100	≥ 100
Meat value / IVF		≥ 100	≥ 100	≥ 100

Further criteria during rearing

- After selection on the basis of available data (GA-breeding values; breeding values and phenotypic data of dams) bull calves are visited on the farm at the age of 5 to 12 weeks. Conformation traits (legs / udder) as well as health and character are assessed. Calves are definitely selected if everything is fine.
- A contract between the birth farm and FiBL is written. At the age of 5 months bull calves are bought from the birth farm for 2'500 CHF.
- Brown bulls (BV and OB) are reared on the Plantahof-farm, SF- and SI-bulls are reared on the FiBL-farm. They don't get any concentrates and 15% of maïs at most. In summer they go on pasture as often as possible. They are all kept and fed together.
- Every month all bulls are weighed and measured and assessed for character (during weighing / during foraging on pasture) and faeces samples are taken from every bull and a health check is carried out
- Daily weight gain is calculated, faeces samples are analysed for parasites and they are washed out and assessed for residual fibres. This is the research part of the AI-bulls-project: could residual fibres be used as a new trait for digestion capacity?

Selected bulls (October 2021) I. Swiss Fleckvieh

B



Florino KINGBOY (SF)
Available since March 2021



Solar CARO (SF)
Available since September 2021

I. Swiss Fleckvieh



Donald KARI (SF)

Available starting probably in January 2022

2. Brown Swiss (BV)



Simbaboy JANSRUD (BV)

Selling since Mai 2021



Turayo TITANO (BV)

Available starting probably in January 2022

3. Original Braunvieh (OB)



Max ZOGGEL (OB)

Available starting probably in January 2022



Lego LOKO (OB)

Available starting probably in December 2021

4. Simmental



Brisago FIRMIN (SI)
Available starting probably in December 2021

Further information:

Additional bulls are still in rearing: 3 SF and 1 SI at the FiBL-farm and 3 BV and 1 OB at the Plantahof farm

Further information:

www.bio-kb-stiere.ch;

www.swissgenetics.ch