

CONTEMPORARY GROUPS

Made easy

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Breeding value estimation is based on measurements taken in contemporary groups and the information from pedigrees. Creating accurate contemporary groups is vital for obtaining stable breeding values. A comparable group of animals measured in the same place at the same time is called a contemporary group. Within these groups, any differences in measurements between animals are attributed to genetics, as all animals are subjected to the same environmental conditions. Therefore, it is unnecessary to correct for environmental influences such as temperature or rainfall, although adjustments for factors such as sex, age of the animal, age of the dam, and parity (whether the dam is a heifer or a cow) are still needed. The following guidelines will improve the quality of information obtained from contemporary groups.

WEAN CONTEMPORARY GROUPS:

Step 1. Set up the group correctly

- A contemporary group consists of calves that have been physically together in the same camp, such as weaning or sire groups.
- Each contemporary group should include calves from at least two different sires to effectively assess the ranking of the sires. If needed, you can artificially inseminate a few cows or mix cows from different groups that have been mated to various sires.
- The larger the number of animals in the group, the more stable the group will be, leading to better information. A minimum of five animals is required for meaningful breeding values, while Stud Book allows groups with three or more animals for breeding value estimation.
- Calves in each group should differ by less than 100 days in age. This can be achieved by the use of calving seasons.



Step 2. Weigh the calves (and the cows)

- Determine the best day of weighing with the Logix option 'Calculate weigh dates' under 'Short cuts'
- Weigh the entire camp's animals on the same day. Indicate if weighing takes place over several days, otherwise the group will be automatically divided by weighing date. Also, do not weigh each calf at exactly 205 days of age.
- Weigh all the calves and cows, including the calves that are culled, so that their parents can be penalized and the ranking of the group can be determined correctly.

Step 3. Send the data to Logix

- Send the data as soon as possible, as breeding values are regularly updated with the latest measurements.
- Always be truthful and accurate, because animals breed according to their genetic makeup, not according to incorrect or manipulated data.
- Review all data for potential errors before submission. Incorrect measurements can impact the animal, its family, and its contemporaries, especially in smaller groups.



HOW TO SUBMIT DATA

To submit weaning data via Logix, follow these steps:

1. Go to the SHORTCUTS section.
2. Click on CATTLE.
3. Select RECORD WEIGHTS (BEEF CATTLE) under the BEEF header.

Shortcuts ▾ Enquiries ▾

General
Cattle

Beef

Record weights (Beef Cattle) Create New

Breeder: 0672673
Breed: AAN ▾
Test Type: A22-Wean Test ▾
First Weigh Date: 25/09/2024 (DD/MM/YYYY)
☐ There are more than one weigh date in the test.

This action will open a screen for creating a new weaning test. All calves whose births have been submitted before will appear on this new screen.

Record weights (Beef Cattle)

KEEPER NO: 06726
TEST TYPE: A22-Speen Toets ▾ BREED CODE: AAN TEST YEAR: 2024 TEST NO: 01
WEIGHT DATE: 25092024

	ANIMAL ID NO	COMPUTER NO	BIRTH DATE	ANIMAL WEIGHT	DAM WEIGHT	WEIGHT DATE	SEX	REARING STATUS	FEEDING STATUS	DAM FEEDING STATUS	REMARK
1	AJR 240001	0096552450	10022024			25092024	F	▾	▾	▾	▾
2	AJR 240003	0096577614	19022024			25092024	F	▾	▾	▾	▾

* If Your cursor is on a set of values you can press CTRL + ENTER to fill the whole column with that value

Cancel / Exit Save and Send Data Add Animals

You can divide animals into groups by using a new TEST NO or by indicating their STATUS within the existing group. When submitting weaning data, it's important to remove animals whose weights are not fairly comparable to others in the group. Place these animals in their own group or record their status. If there is only one or two animals in a group, their breeding values will be assigned a mid-parent value.

REARING STATUS

01- Calf suckling own dam
02- Calf suckling adoptive dam
03- Twins suckling own dam
04- One of a twin suckling own dam
05- Calf suckles dam and dam is milked
06- Bottle-raised calf
07- Embryo calf

FEEDING STATUS

01- Ca/P lick
02- Prot/Energy lick
03- No lick
04- Concentrate or creep feed
05- Other lick
06- Planted pastures
07- Crop residues
08- Green feed

REMARKS

01- Age of animal out of limits
02- Dam ill or injured
03- Animal ill or injured
04- Animal weight out of limits
05- Animal index out of limits

EXAMPLE

A breeder's calves were weaned in two separate camps, one in the hills and another next to the river. Because of the distinct environments, the animals were divided into two contemporary groups, as these surroundings likely influenced their growth. The data is presented as follows:

Camp 1:

There are 50 calves, including 10 cows and calves purchased at a sale, as well as a set of twins.

All calves are placed into one main group, while the 10 purchased calves are assigned to a separate group (identified with a new Test Number). Twins are marked with the code 03 under Rearing Status, and their weights will be excluded from the BLUP analysis as there are fewer than three animals in the group. They will receive mid-parent breeding values.

Camp 2:

There are 50 calves of which five poorly performing calves had diarrhoea. Two other healthy calves have indices below 90, but they are the sons of a very expensive bull.

These calves can be assigned to their own group and will receive a new test number, or they can share the same test number as the calves in the other camp but are marked as Code 06 under the FEEDING STATUS, in which case they will also be placed in their own separate contemporary group. Calves with diarrhoea will be assigned Code 03 under REMARKS. Their weights will be marked as unreliable and excluded from all calculations, including indices and breeding values. The expensive sire's calves with low indices should remain in the group, as their parents have produced calves with poor performance and should be penalized.

This herd is divided correctly into the following 3 contemporary groups:

- **A22BRD202401:** 38 animals (Camp 1)
- **A22BRD202402:** 10 animals (Purchased calves)
- **A22BRD202403:** 45 animals (Camp 2).

MANIPULATION OF GROUPS

Invalid reasons for splitting groups include the following:

- To make the animals with indices lower than 90 look better (they and their parents are genetically poor)
- To make your expensive bull's calves look better (he breeds according to his genes, not according to his price)



- Factors already considered during evaluation, such as sex, heifers/cows etc. This makes the group unnecessarily small.
- Manipulating groups by, for example, dividing the group so that the calves with low indices can pass inspection, cause unstable and unusable breeding values. See the example below.
- If you sell a bull you made to look 'better', his breeding values will change as the truth from his offspring's poor performances becomes part of how he breeds.
- Incorrect contemporary groups may also affect the breeding values of animals in the herds of whom and to whom you sell.

EXAMPLE OF A CORRECT GROUP

An animal's measurement, when compared to the average measurement of its contemporary group, indicates its genetic potential. This example of a contemporary group shows that:

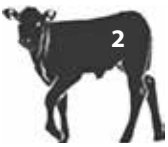
- Calves' weights vary between 230kg and 170kg; average 200kg.
- Lots of variation because within-herd indices vary between 115 and 85 - it is therefore easy to distinguish between the better and the poorer calves.
- Breeding value estimation: Calves 1, 2 & 3 are above average and calves 4, 5 & 6 are below average.

Animal no	Corrected wt	Group Index	Grp avg Deviation
 1	230kg	115	+30kg
 2	220kg	110	+20kg
 3	210kg	105	+10kg
 4	190kg	95	-10kg
 5	180kg	90	-20kg
 6	170kg	85	-30kg

Advantages of LARGE GROUPS

Accurate, stable and correct breeding values are obtained within one generation.

IF THE EXAMPLE GROUP IS (INCORRECTLY) DIVIDED INTO 3 GROUPS:

 1 102	 3 105	 5 103
 2 98	 4 95	 6 97

- All indices change: While the poorer calves are favoured, the best calves are at a disadvantage.
- There is less variation among the calves; they are all close to average.
- Rankings can change, for example, Calf 2 (+20kg) is currently below average, while Calf 5, which weighs -20 kg, has improved to above average.
- Wrong information is used for Breeding Value estimation.

SUMMARY

Accurate and stable breeding values within one generation depend on correct pedigrees and contemporary groups.

LOGIX

Wean Contemporary Group:

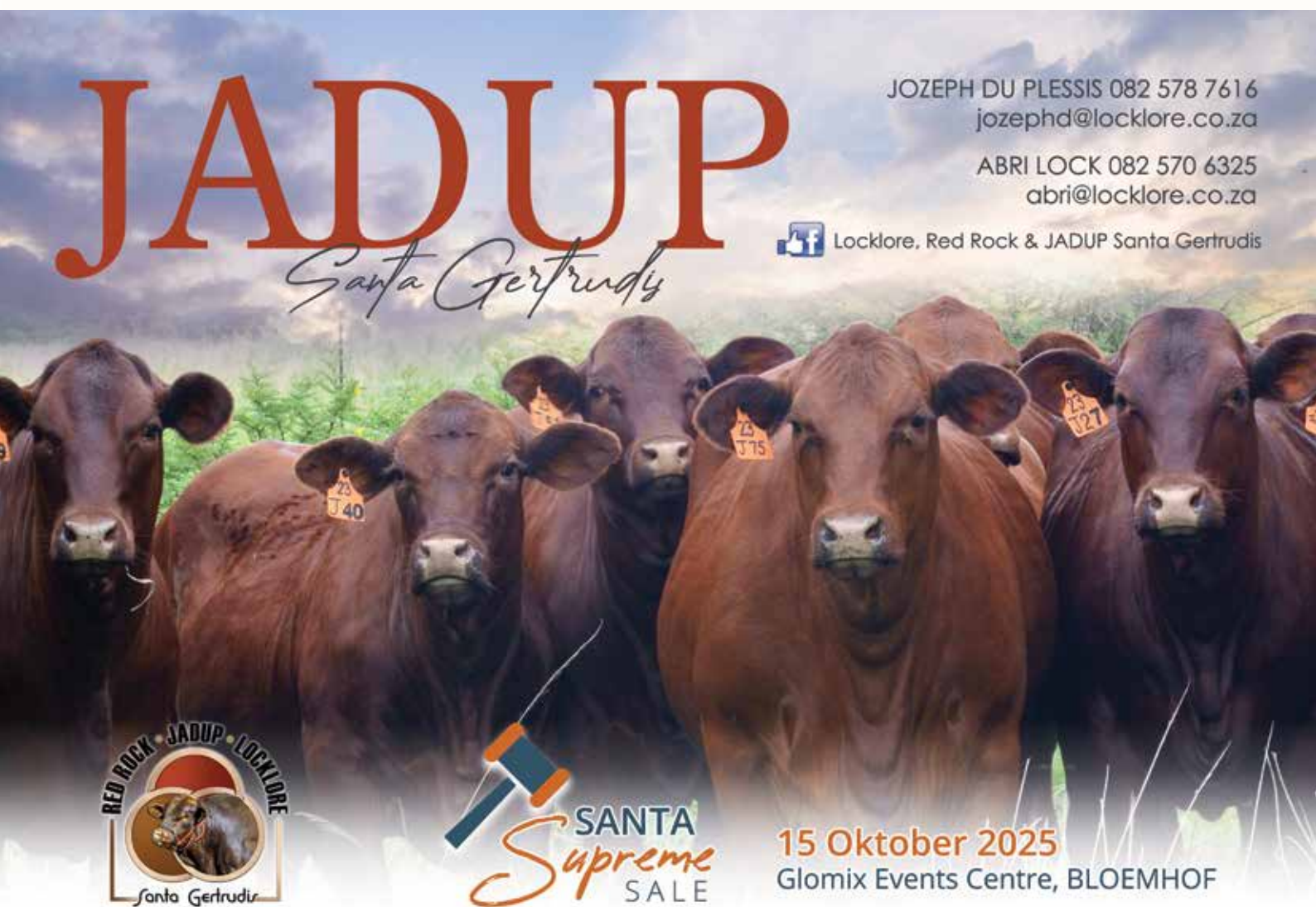
- Include as many animals as possible.
- Calves should be offspring of at least two bulls.
- Calves must be born within a 100-day window of each other.

Weighing Procedures:

- Establish the correct weighing date using Logix.
- Weigh all cows and calves on the same day, including the culled calves

Submitting data:

- Ensure that you submit accurate data promptly.
- Group animals that share the same environment together.
- Place animals with weights that are not comparable to the rest of their group in a separate group.
- Avoid altering groups to favour lower-performing animals, as this can disadvantage higher-performing animals and lead to unstable breeding values in your herd.



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