

WEANER CALF vs. OX PRODUCTION SYSTEMS

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The comparison of weaner production systems as opposed to ox production systems has been discussed by many over the years. While animals originating from an ox production system can be sent directly to the abattoir, weaner calves still need to be finished.

The South African feedlot industry started in the 1960's and is the largest purchaser of weaner calves. Currently approximately 75% of the beef produced in South Africa is finished in feedlots.

When finishing cattle under feedlot conditions, feed is one of the major components of input costs. Because maize is one of the main components used in feedlot feed, higher maize prices will lead to higher feed prices

and therefore lower profit margins. This creates a situation where feedlots offer lower prices for weaners in an attempt to stay profitable.

When comparing the price index of summer grains (of which maize is the main component) to the price index of cattle (Figure 1) it is clear that the price index of maize has increased at a higher rate than that of cattle since 2010.

Taking this trend into account along with the even higher maize prices predicted in future for South Africa, leaves the question to producers: at what stage will it become more profitable for farmers to produce oxen rather than weaner calves.

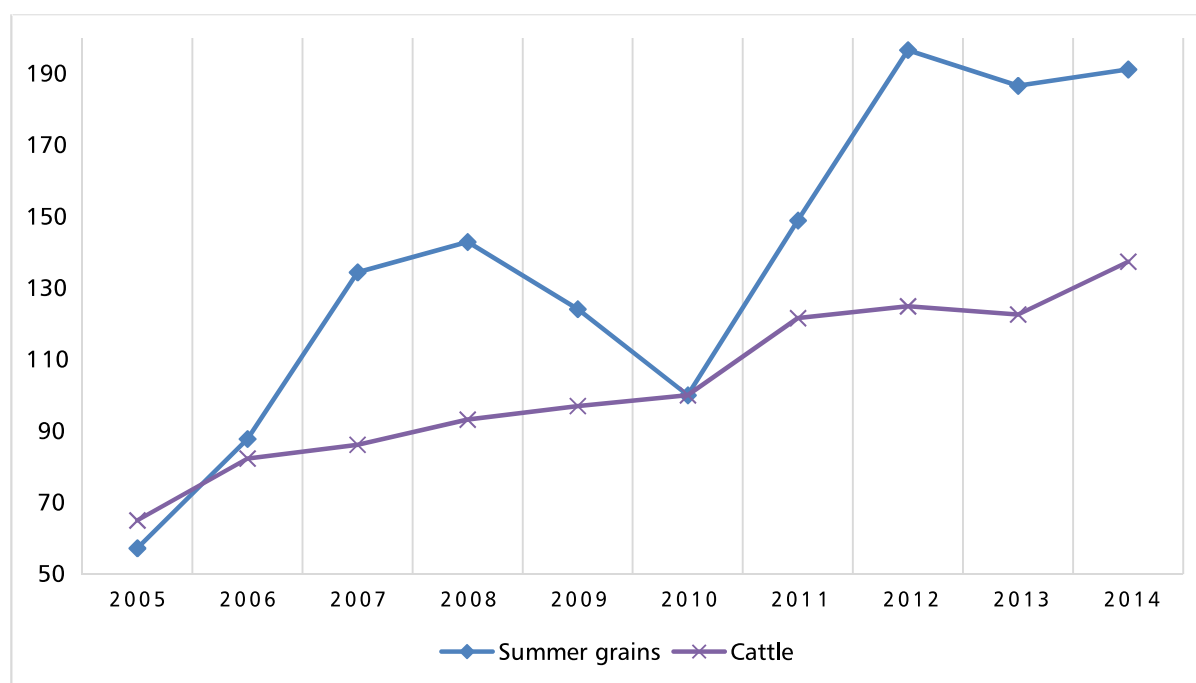


Figure 1: Price indices for summer grains and cattle

THE MODEL

To answer this question, a model was developed in Excel to compare the gross income of an ox production system to that of a weaner calf production system. This model makes provision for changes such as: the average frame size of the herd, weaning weights, carrying capacity of the farm, weaner and carcass prices, slaughter percentages etc.

THE SCENARIO

In the scenario a farm of 1000 hectares was used with the replacement percentage of the cow herd at 15% and a weaning percentage of 85%. The average carcass prices for November and December 2015 were used for the calculations and are shown in Table 1.

Table 1: Values used in the scenario

Size of the farm ha	1000
Carrying capacity ha/LSU	5
Replacement %	15%
Percentage bulls	3%
Cow mortalities	2%
Weaning percentage	85%
Dressing percentage	55%
Weaner price	R 18.65
Carcass price per kg Grade A	R 35.46
Carcass price per kg Grade B	R 30.84
Carcass price per kg Grade C	R 28.29

To accommodate variation between the different types of cattle, small, medium and large frame variables will be included in the calculations. The weight of the cows, weaner calves and oxen is presented in Table 2 along with the carcass grade at which the animals will be marketed.

Table 2: Variations used according to frame size in the scenario

Frame size	Production system	Weight of the cows (kg)	Weight of marketable animals (kg)	Age (months)	Carcass Grade	Number of cows and calves
Small frame	Weaner	367	158	7	A	141
	Ox		330	24	A	91
Medium frame	Weaner	508	218	7	A	122
	Ox		406	24	B	75
Large frame	Weaner	630	232	7	A	96
	Ox		430	24	B	63

Figure 2 shows the income potential for the different frame sizes. Please note that some of the indigenous cattle breeds have small frames that only start teething at a later age and these breeds can be marketed as Grade A's.

When finishing cattle under feedlot conditions, feed is one of the major components of input costs.

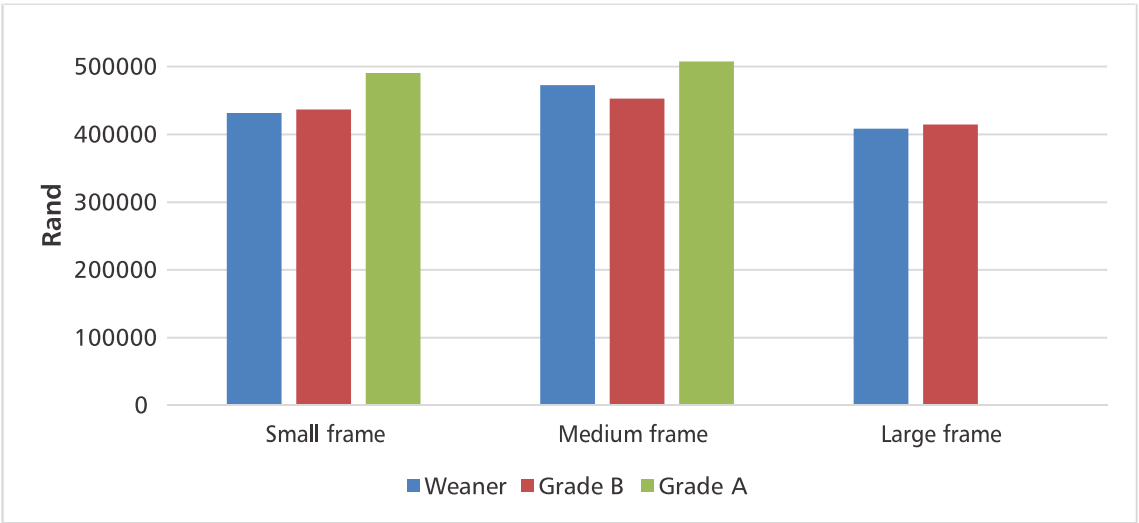


Figure 2: Gross income potential at 85% weaning percentage.

The results indicate that in cases where medium frame oxen are marketed as Grade B animals, a weaner production system would have insured a higher gross income. In the case of small and large frame herds producing Grade B animals, an ox production system performed marginally better.

If, however, the oxen could have been marketed as Grade A animals, a higher gross income would have been realised compared to that of a weaner production system. Thus, if farmers are able to market oxen that are grade A's, an ox production system could be considered. In the results shown above a weaning percentage of 85% was used.

Because this is higher than the national average of 65%, it could result in unrealistic calculations. In the following figures weaning percentages of 75% (Figure 3) and 65% (Figure 4) were used respectively to compare the effect of a lower weaning percentage on the two production systems.

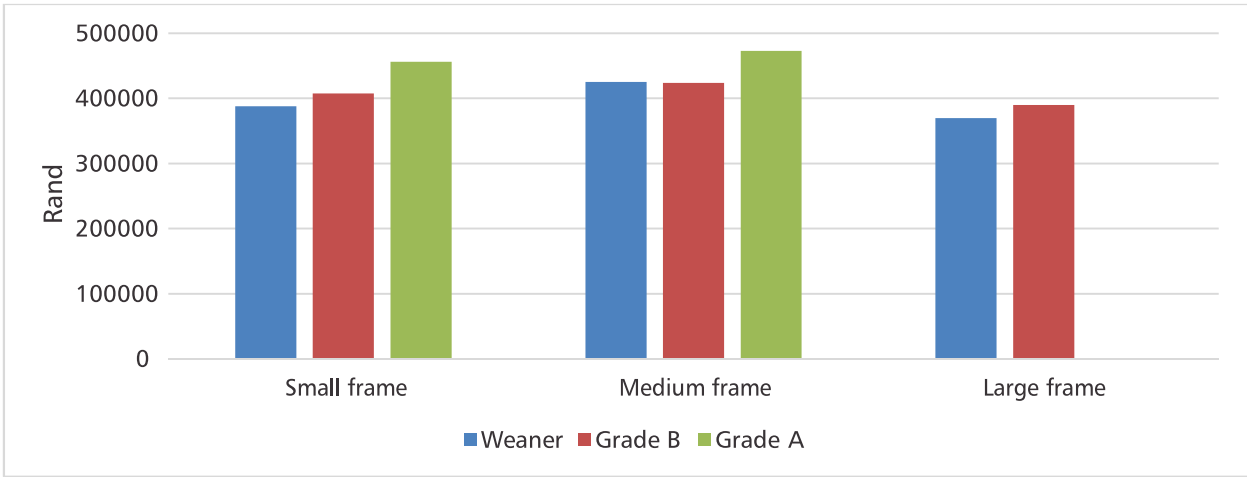


Figure 3: Gross income potential at 75% weaning percentage.

Results from a 75% weaning percentage (Figure 3) reveal that an ox production system will ensure a higher gross income than that of weaner production for small and large frame herds. In the case of medium frame herds the weaner and ox

production systems results in virtually the same gross income when oxen are sold as Grade B animals. In small frame herds where oxen are sold as A Grades, they outperform weaner productions by almost R 70 000.

Medium frame A Grade oxen proved to have a R 50 000 higher gross income than that of weaner production at a 75% weaning percentage.

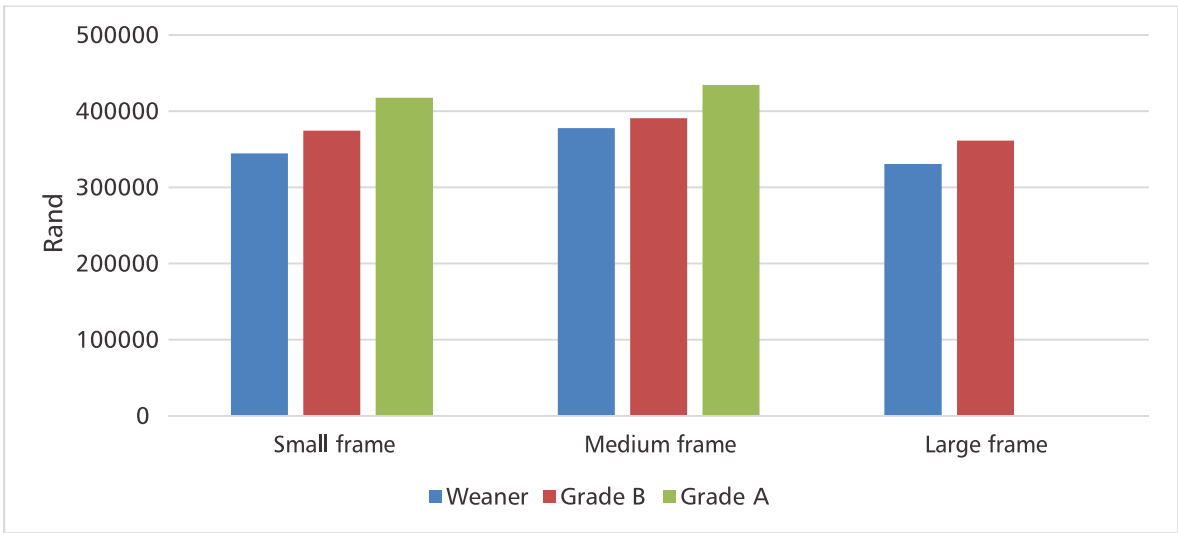


Figure 4: Gross income potential at 65% weaning percentage.

In Figure 4 the results from the calculations done at a 65% weaning percentage are shown. Ox production proves to outperform weaner production in all the frame sizes even if the animals are sold as Grade B animals. Therefore, these results suggest that on farms where weaning percentages of 65% - 75% are realised, an ox production system should be considered to increase gross income.

SOMETHING OF NOTE

Despite what these calculations show, one must always remember that the production system being considered must fit into the production potential of the environment and that the cattle being farmed with are already adapted to the environmental condition.

One of the main advantages of an ox production system is the flexibility of the system to manage drought conditions. If, for example, a drought is experienced, the oxen can be sold at a younger age to free up grazing area that can be used during the drought. By doing this, the cow herd is not reduced due to the drought and the veld is not overgrazed.

When a farmer decides to switch from a weaner production system to an ox production system, it has to be kept in mind that there are certain aspects that must be taken into consideration. Careful planning should be done to accommodate the possible cash flow problem that could occur during the transition period. The number of cows should also be reduced to accommodate the oxen. ■

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