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Abortion rate and mortality among exotic pregnant heifers imported to the Gezira in the Central Region of the Sudan

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SUMMARY *Despite the intensive management and husbandry precautions, exotic pregnant heifers imported to the Gezira, Sudan, suffered excessive stress. Four of five heifers aborted due to stress. Death was due to pasteurellosis, babesiosis and heart water.*

INTRODUCTION

As in other tropical countries, importation of pure-bred exotic temperate cattle breeds for upgrading or promotion of animal production in the Sudan has been a controversial issue for a long time. Exotic bulls were imported into the country as early as 1925, but only during the last decade has frozen semen of European breeds been imported. The high risk of climatic stress and susceptibility to enzootic diseases discouraged the establishment of European breeds and their crosses with local types. However, despite the cautious advice by veterinarians and the authorities concerning that risk, some private companies and individual farmers have recently decided to import European Friesian cows into the country.

IMPORTED ANIMALS AND THEIR MANAGEMENT

A group of six two-year old pregnant Friesian heifers were purchased by a competent farmer and imported from Germany into the Gezira (Latitude 14°24'N, Longitude 33°29'E, 407 meters above mean sea level) in the Central Region of the Sudan during the third week of October 1984. The animals were flown from Germany by a normal cargo aeroplane. On arrival at Khartoum airport the animals appeared to be in excellent health and condition.

Immediately after arrival the animals were loaded and transported by truck during the night to their destination, a distance of 190 kilometers south. The truck was open from all sides except for the heavy cross and side iron angle bars. These bars were padded with cloth to prevent possible injuries. The floor of the truck was made of hardwood. The animals were left loose in the truck, and lay on the floor for most of the journey.

The new environmental conditions were excellent: The animals were kept in a clean, acaricide-sprayed, sand floored, 8x9 metre pen. The pen was covered by a 4 metre high corrugated iron ceiling and a thatched roof and surrounded by a 1½ metre high brick wall, leaving adequate ventilation all around. The temperature in the pen was lowered to 25°C by a cold current of air ducted through a watercooler and circulated by ceiling fans. The outside average ambient temperature and relative humidity at that time of the year were 33.4°C and 39% respectively.

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The animals were the first of their type to arrive in that area.

Gestation ranged from 187 to 224 days.

Freshly cut berseem (*Medicago sativa*), sun-cured Abu 70 (*Sorghum vulgare* forage) together with pelleted mineralised concentrate feed of sesameseed cake, wheat bran and molasses were offered *ad libitum*. Water was constantly available.

CASE REPORTS

General observations

Twelve hours after the animals had settled down, signs of respiratory distress and uneasiness were evident. The respiratory rate progressively increased above normal and the animals tended to gather in front of the cold air duct for most of the day. Feed intake was satisfactory during the first 96 hours, after which it started to decline. Feed consumption was greater during the night than the day. Two animals stopped eating on the sixth day. The sun-cured sorghum forage was preferred to the fresh berseem.

Clinical symptoms

Clear signs of rhinitis and pneumonia were observed in the second week after arrival. The condition of two heifers deteriorated severely, and laboured respiration and protrusion of the tongue were evident. Immediately after the appearance of these symptoms long-acting tetracycline hydrochloride (Terramycin LA, Pfizer) was intramuscularly injected at the rate of 5g/kg LW. The treatment was repeated four days later. There was no clear response to this treatment.

During the third week, on day 14, 17 and 18 after arrival, three of the animals aborted. A fourth animal aborted on day 31. On day 19 one animal prematurely (241 days gestation) delivered a male calf. Surprisingly the calf was in good condition, nursed on its dam, but thrived for only three weeks. There were clear signs of bronchitis, and sounds of alveolar stress were auscultated; the calf died of pneumonia, as was revealed by the post mortem findings. Dystocia occurred in one case, and due to the lack of immediate facilities for caesarian section, foetotomy was resorted to.

From day 25 to day 31 five of the animals died. The only animal that survived (and which aborted on day 31) is in good health at the time of writing of this report (three months later).

Post mortem findings

On post mortem, all five carcasses showed acute pneumonia, hyperaemia and oedema of both lungs. Three of the carcasses were icteric. One carcass showed a hydropericardium. There were no other obvious major pathological findings. Post mortem examination of the aborted foeti was not carried out.

Laboratory findings

Blood smears were taken from the ear vein, endothelium of the pulmonary vein, and renal glomeruli. Giemsa and Gram stains were used. In two cases there was a leucocytosis: a total count average of 14,000 WBC/mm³ was recorded. No differential count was conducted. The blood films also revealed *Pasteurella sp.* in two of the cases. *Babesia bigemina* was demonstrated in three cases and *Cowdria ruminantium* in one case.

DISCUSSION AND CONCLUSION

It was evident that death was due to pasteurellosis, babesiosis and heart water. Despite the high standard of management and care the animals had been predisposed to these infections by the stress of pregnancy, transport and the sudden

change in environmental temperature and humidity. An intensive analysis of data covering a forty year period on the performance of crossbred cattle in the largest dairy farm in Khartoum (3) showed that the reproductive performance of crossbred cattle was inferior to their indigenous contemporaries. The authors reported that high grade cows had a shorter productive life and higher death rates than the local breeds. The low production of milk and meat of the indigenous cattle is believed to be part of their adaption to the environment and better resistance to endemic diseases (2). Farnworth (1) assessed the performance of non-indigenous breeds imported into Saudia Arabia, and emphasised that pregnant stock should be transported with the minimum of stress and should not be more than seven months pregnant. He also outlined that hot humid spells can cause premature birth and even abortion. Although the premises were kept clean and it was difficult to find clear evidence of ticks on the sand floor or brick wall of the pen, the presence of ticks would not be unexpected. In the cases reported here, the death of the five animals illustrates the vulnerability of exotic breeds to enzootic diseases. The survival of only one animal of a group of six adds impetus to the opinion that caution is necessary when considering the import of exotic purebred cattle.

ACKNOWLEDGEMENTS

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REFERENCES

1. Farnworth J. Managing dairy herds in hot desert conditions. *Middle East Agribusiness* 1986; 26-7.
2. Osman AH. Sudanese indigenous cattle breeds and the strategy for their conservation. Food and Agriculture Organisation, Rome. *Animal Production and Health Paper* 1984; 44/1: 58-64.
3. Osman AH and Russel WS. Comparative performance of different grades of European-Zebu crossbred cattle at Ghurashi Dairy Farm, Sudan. *Tropical Agriculture (Trinidad)* 1974; 51: 549-58.