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ANIMAL HUSBANDRY OF GOATS USED AS HOSTS FOR GLOSSINA morsitans
COLONIES IN TANZANIA

DN-RAA-564

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1974

TREATMENT PROCEDURES FOR NEW HOST ANIMALS:

All goats brought to this laboratory are kept under 3 weeks quarantine to determine their disease status and within this period, they undergo the following treatments:-

- a) Injection with Berenil for possible trypanosomiasis infection.
- b) Injection with broad spectrum antibiotics for goats with nasal discharge.
- c) Drenching with anthelmintics; 2 doses at one week interval.

Three weeks post-treatment time is required for goats treated with Berenil and antibiotics before final cleansing of the animals. If treatment with antibiotics is not necessary, the last treatment with anthelmintics may occur only 2 weeks ahead of their introduction into the lab. The final cleansing procedure consists of washing the goats with Chloroform to remove ectoparasites followed by washing with soft soap.

Once inside the insectary building, the goats flanks are sheared and hooves trimmed. They are then assigned to pens according to sex and size and identified by collar numbers and colour-code for the 3 fly-feeding groups.

STOCKING OF LABORATORY:

Goat census at the end of August was 204 adults and kids. Eighty four goats are used in the 1st insectary to feed flies. The rest kept outside the insectary, include kids, culls, resting and new goats. The 1st insectary has small and large pens each covering areas of between 100 sq. ft. and 150 sq. ft. The stocking capacity per pen then depends on the size of goats but; an area of 10 sq. ft. per medium sized goat is now maintained. (Reference to Guidelines for breeding, care and management of laboratory animals by National Academy of Sciences). The total holding capacity of this insectary is about 120 goats. Sometimes there is a need to change goats from one pen to the other because of the problem of 'Packing-order' or Social system in pens. New goats added to the pens may or may not be accepted. This social order also exists during the feeding. The second insectary has larger pens and the area per pen is 110 sq. ft. It will hold about 150 goats.

GOAT PEN DESIGN:

The initial construction of a single goat pen in the 1st insectary consisted of wire mesh sides, a concentrate trough, a water bucket and hay rack. Goats broke down the wire when fighting each other from their pens and this led to frequent cases of wounded goats. In April this year, this problem was solved by building concrete walls dividing the pens and new wire in front. Broken concentrate feeders and hay racks were repaired and additional feeding space per goat has been provided by fixing 2 feeding troughs in some pens.

ANIMAL NUTRITION:

Goats are fed a concentrate mixture of copra cake and maize bran at the ratio of 1:3 respectively plus 3 kgs. mineral powder (Pre-Na-plus) per 100 kgs feed. The approximate crude protein is 12%. Concentrate ration per goat per day is as follows:-

- (i) Dry does 1 kg.
- (ii) Suckling does 1 kg plus ½ kg per kid
- (iii) Males and mature kids ½ kg.

Forage and water are fed ad-lib. Production of forage at present is at small scale. In the near future, the project is expecting to have expanded plots of a variety of plants with a fixed irrigation system. This will solve the problem of forage shortage during the dry season and maintain the expected high number of insectary goats.

Types of plants cultivated are:-

- (i) Cow peas
- (ii) Lucena glauca
- (iii) Pennisetum purpureum (Elephant grass)
- (iv) Panicum maximum (Guinea grass)
- (v) Chloris gayana (Rhodes grass)
- (vi) Glycine javanica
- (vii) Hyparrhenia spp. and
- (viii) Sunflower.

Goats do not seem to like Rhodes grass as the first harvest was fed to them this month. Sunflower has been planted for experimental feeding to goats.

ANIMAL HEALTH:

This laboratory has never encountered a serious disease outbreak necessitating systemic treatment or destruction of all animals at a time although in late 1972 and early 1973, most goats had pneumonia, lameness, coccidiosis, diarrhoea, abscesses, helminths and pregnant does and kids had general weakness. By the end of 1973, these ailments had gradually been eliminated by good husbandry practices and use of drugs. Maximum ventilation, acceptable temperature, hygiene and dry premises are maintained for the health of goats. Daily inspection of goats and pens are made and necessary maintenance performed. General cleaning of all pens is done once per week. Walls and floor are scrubbed and washed with plain water.

Early this year, an outbreak of ringworm occurred especially in young goats. Animals were isolated and treated with topical Furaspur, Dofungit, and a mixture of Tincture Iodine and Glycerine alternatively. In August this year, a serious husbandry problem of fleas and lice occurred and all goats in the insectary are being treated with topical Chloroform and washed with soft soap there after. Outside goats have ticks and since insecticides can not be used here, the ticks are removed and killed by hand.

The insectary goats are weighed once per month to determine health status and washed after 6 weeks. They are sheared once per week and those treated with antibiotics are rested from fly-feeding for 21 days.

SUMMARY:

To date, general health of all goats is good with a few cases of abscesses, pneumonia and rare incidences of wounds. We have at present almost one half the goats that will be required to maintain our planned colony of tsetse flies. Therefore, our maintenance requirements for host animals will be more than double. Such items as food, bedding, general health, space and disposal of wastes are items requiring developmental research.