

## NOTES TECHNIQUES

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# Animal health and production in the Tihama area of the Yemen Arab Republic

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## Summary

*Livestock and poultry production throughout the Tihama has developed to suit the agricultural necessities of the region.*

*Livestock in general exist off agricultural by-products and semi-arid land and are not in competition with the human requirement for grains.*

*Such economic production needs not be modified in its essentials.*

*Rinderpest, foot and mouth disease and contagious caprine pleuro pneumonia are the major hinderance to livestock productivity. Malnutrition though a problem can easily be countered with phosphorus and other mineral supplementation.*

## Résumé

*L'élevage en général, y compris l'aviculture, s'est développé dans tout le Tihama pour répondre aux besoins de la région.*

*La production animale repose en général sur l'usage de sous-produits agricoles et de terres semi-arides; il n'est pas en compétition avec l'homme pour les céréales. Ce type de production ne nécessite pas de modifications majeures.*

*La peste bovine, la fièvre aphteuse et la pleuro-pneumonie contagieuse caprine constituent les facteurs principaux qui limitent la productivité de l'élevage. La malnutrition existe, mais elle peut aisément être corrigée par une supplémentation en phosphore et en autres minéraux.*

## Introduction

The Tihama is the flat coastal plain of the Yemen Arab Republic which lies adjacent to the Red Sea. It extends from Saudia Arabia in the north to the Peoples Democratic Republic of Yemen in the south. It is 20,000 square kilometres and is from 33 to 66 kilometres wide. The eastern border of the Tihama is an escarpment rising up to the highlands. Seasonal rivers (Wadis) flow from the highlands into the Tihama. They seldom reach the sea but are lost in shallow water tables which are about 20 metres deep. Soils are calcareous silty and alluvial. The wadis are flanked by narrow belts of saline soil (Yemen Agricultural Handbook, 1974). The climate is hot and humid. Hodeidah the principal city has average winter and summer temperatures of 25°C and 32°C respectively. Relative humidity recorded in Hodeidah was 90% in december and 74,5% in July (Bralsford, personal communication). The temperature is higher inland but the humidity decreases. Up to 400 mm of rain falls annually adjacent to the highlands.

The people inhabiting the Tihama area of Yemeni and African extract. Land is owned by individuals and sharecropping is common. The Tihama is of great agricultural significance to the Yemen with four types of cultivation been commonly seen (dry-land, well irrigated, wadi irrigated and rain fed). Large areas are not cultivated. The principal crops are sorghum, millet, maize, cotton, sesame, tobacco, cowpea, dates and vegetables. Livestock production is central to agricultural production in the Tihama, oxen being the main source of power.

## Cattle

There are about 900,000 cattle (50 % of the national total) on the Tihama. They are primarily Bos indicus shorthorned and docile. A few cows in Hodeidah have Friesian or Sahiwal blood. Cattle are kept primarily for cultivation though of course they provide milk, manure, fuel, hides and are a ready source of money. Beef is rarely eaten in the Tihama but cattle are traded out of the area into the highlands in large

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numbers through a series of markets strung throughout the region. Cattle are of considerable financial importance and are traded without any apparent social restraints. Cultivation is carried out by either individual or paired animals. Bulls, steers, cows and immature animals are used. Cattle are fed primarily upon agricultural by-products stovers and straw plus some grains when working. Grasses may be cut and zero fed to animals tethered near the household. Cattle herds are small usually consisting of about 6 animals (2 oxen, 2 cows and 2 replacers) in the more fertile area and perhaps half as many in the poorer areas. The amount of fodder available limits the herd size and the sale of fodder may be more rewarding financially than rearing cattle. A surplus of cattle are produced in the Tihama and calves, yearlings and worn out cows and oxen are sold in to highlands for meat, milking and work purposes.

Milk production in village cows has not been quantified but in Hodeidah dairy cows yield up to 300 gallons per lactation for human consumption. These cows are fed stover, bread, sesame cake or cotton seed. The calf always suckles while the cow is being milked, the milk being used in tea and coffee or turned into ghee.



Photo 1. — Oxen being traded at a Tihama market.

The major veterinary problems of cattle are rinderpest (major outbreaks in 1972 and 1976), Foot and Mouth (A and O types) and malnutrition. Rabies, tuberculosis, dermatophilus infection, ringworm, mange and photosensitization are regularly seen. Ticks of the following genera are found in the Tihama, *Boophilus*, *Amblyomma*, *Hyalomma*, *Rhipicephalus* and *Ornithodoros*. However tick borne diseases are not of great consequence. Antibodies to ephemeral fever and bluetongue have been found. Endoparasites do not constitute a major problem to cattle because of their diet and management.



Photo 2. — Tihaman sheep. Note the thorn pen on the left and dried stover in the background.

### Sheep

Tihaman sheep are fat-tailed, short-haired and hornless. There are about 3,000,000 sheep and goats in the Tihama. The sheep are usually white and are reared primarily for meat though some are milked. Sheep are herded with goats and the % sheep in the mixed flocks is higher in the more fertile areas. Flocks seldom are larger than 50 animals and small flocks of 10 sheep are common.

Sheep graze throughout the Tihama and forage on stubbles. They may be fed some grain when being fattened. They breed throughout the year but lambing is more pronounced during the spring. Mutton is eaten in the Tihama and fat lambs are also sold into the highlands. Castration is not common.

Internal parasites (*Haemonchus contortus*, *Trichostrongyles*, *Oesophagostomum*, *Muellerius*, *Trichuris*, *Oestrus ovis*, *Dicrocoelium dendriticum* and *Monezia spp*) are a severe problem for sheep as is coccidiosis. Mortalities appear heaviest during the late dry season. Sheep pox, Sheep/Goat pox and ectoparasites are found also.

### Goats

The Tihaman goat is short haired, multi-coloured with shortish ears. A white goat type is found in the northern Tihama. They are reared for their milk, meat and skins. They are found throughout the area but are especially numerous in the drier areas. In these areas flocks of 100 animals are seen owned by semi-nomadic people who move with their flocks throughout the drier areas. Goats are also seen in mixed flocks with sheep in fertile areas and forage on stubbles and fallow land.

Goats breed throughout the year but mating may be controlled using a cord tying the prepuce to the scrotum. This cord deflects the penis ventrally and so intromission is impossible. Goats milk is drunk fresh and goat meat is widely eaten. Many goats are sold out of the Tihama into the highlands.

Contagious caprine pleuro-pneumonia is the most important disease of goats. Pox, infectious conjunctivitis, psoroptic mange and dermatophilus infection are also seen.

### **Camels**

The camel found in the Tihama is a large transport type dromedary. They are herded in two ways. Large herds of breeding animals up to 50 strong are kept in the drier areas of the region whilst many families own one or two animals for transport purposes. Camels milk is drunk and camel meat is eaten in the larger towns.

Camels breed every second year the calves being born between October and March. Male camels rut during the winter months. Animals in the large herds browse but individual transport animals are fed stover. Surplus camels are sold into the highlands for slaughter and also for draught purposes. Camel pox and sarcoptic mange has been seen in camels.

### **Donkeys**

Two type of donkeys are seen, a large white type and a smaller brown type. They are used as draught animals and are commonly ridden. They are used to draw water out of wells.

They are very fertile and foals are cheap. Donkeys are fed stover and grains. They appear healthy but saddle sores and lamenesses are seen regularly.

### **Chickens and Pigeons**

The local chicken is a small multicoloured type. They scavenge and are fed waste and some grain. They are kept for eggs and meat and are sold regularly in the markets. Productivity is low and the birds and eggs are small.

Pigeons are kept in cotes and are used as a source of meat. Newcastle disease and chicken pox are common throughout the area.

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