

The use of draft horses in Ethiopia;

Focusing on the relations between works and feeds in Alaba Kulito, Southern Nations, Nationalities and People's Region

Year 2016

Country Ethiopia

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Keywords: draft horses, cart, feeding

Background

Ethiopia has the largest population of horses in Africa, and 8th in the world. In 1936-1941; the occupation period by Italy, the using for drawing carts of horses was spread in Ethiopia, especially, in the capital city and places of coffee production. Nowadays, the using is still kept in rural areas and outside the cities, because it can be the best way to transport things and people at low costs. Alaba Kulito, far away from Addis Ababa for about 240 km in down, a small city as a stopping point from each city through four national highways, also is used the cart drawn by horses. The cart is called *Gari* works as one of the transportation with other automobiles by moving people for a fee.

Research purpose and ways

In this research, the purpose is to clarify the relations between works and feeds of horses drawing *Gari*. The research site, Alaba Kolito, the altitude is 1,700m, the annual rainfalls is 600-1,200mm, the annual heats is 17.6-22.5°C, and the area is warm and semi-dry land.

I calculated the adult horses' weight by using the data which measured the length and the girth of 11 horses selected in randomly at a horse market.

I measured the size of each part of *Gari* in totally 7, at local manufactures and on the roads.

I ride on one *Gari*, and recorded the running speed and time by using GPS logger. In addition, I checked the feeds gave for this horse for 3 months. I considered about the relations between works and feeds in one day by calculating the nutritional requirement.

The weight of draft horses

Ethiopian horses are small and have a light weight as same as the racing horses that the ages are 3 months between 6 months in Japan. The average weight of adult horses is 188.3kg (N=11).

The construct of *Gari* and loadage

The width is 140cm of *Gari* can be sat 3 or 4 passengers including the driver. The loadage including passengers and baggage are 60kg to maximum 300kg.

The relations between works and feeds

1) The works and feeds in one day

One horse was running with attaching *Gari* in 7 hours in one day. He ran by a trot in 9.18km/h for about 4 hours. In assuming the horse is used in the moderate work, the required energy is 10,000kcal. The horse was given 6kg wheat bran, and the energy was 18,000kcal (Japan Racing Assoc. 1986). It is an enough energy level without considering the amount of energy to get by grazing for about 2 hours. Even granted that the horse is used in heavy work, the required energy is 13,000kcal, so it is enough feeds.

2) The feeding for 64 days

The horse' BCS (Body Condition Score) was improved to level 4 (the conditions of hair and fat to be good), at the end of the feeding for 64 days, however, he was level 3 when he was bought. This is result of the working control by the owner, 19 days (29.7%) rest day, 27 days (42.1%) light work, 18 days (28.1%) moderate work. The owner arranged the rest or light work's day after moderate working. I recorded the supplementally feeds, maize, green grass, sorghum, sugarcane, dried grass of *Teff* and salt. By checking the feed composition table, this feeding might be lack of calcium. However, there were any symptoms such as lacking calcium. It is considered to do well-balanced feeding in some solving way by the owner.

Conclusion

In this research, it is suggested that to improve BCS by arranging the working level of horses. It might be changed the component of feeds and nutrition in seasonal, because it depend on wild grass. Therefore, to clarify the relations between works and feeds, the annual research is needed.