

NEOTROPICAL WILDLIFE PRODUCTION: PROTECTING THE ENVIRONMENT THROUGH SUSTAINABLE AGRICULTURE

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Summary

Neotropical wildlife has gained much interest in sustainable food production. The use of several indigoes species in food consumption. There is significant increase of food import from developed countries to developing countries. The cost of grains on the international market are increasing. Exportation of food from developed countries to developing countries are decreasing. So there is a need to investigate indigenous flora and fauna for food. The Caribbean is a net importer of food. It has an opportunity to develop local flora and fauna for food. Indigenous species of plant and animals are not fully understood/investigated. Indigenous species are well adapted to the environmental conditions of the tropics. The neotropics has 70% of world biodiversity, 604 species of birds, 502 species of reptiles, 140 species of amphibians and 89 species of mammals (Ojasti 1996; Garcia 2008). All the meat that are nowadays consumed, comes from animals that were once wild such as: the Muscovy duck, Turkey and Guinea Pig all originate in this part of the world.

The current situation:

Hunting is the most common method for getting wild meat. Most hunting is controlled by laws with high levels of poaching. People need to seek alternative methods for providing wild meat to meet the growing demands.

Tabel 1: Wild-Caught Animals Trinidad & Tobago, 2010 - 2012

| Year | Agouti | Deer | Lappe | Wild Hog |
|------|-----------|----------|----------|----------|
| 2010 | 22,441.00 | 1,939.00 | 3,796.00 | 348.00 |
| 2011 | 18,772.00 | 2,115.00 | 2,115.00 | 162.00 |
| 2012 | 23,911.00 | 2,331.00 | 4,250.00 | 387.00 |

Source: Hunter Return Cards, Forestry Division

There was an increase in wild caught animals between 2010 – 2012 as is shown in the table above for Agouti and Deer.

Animals in the neotropical wildlife are: the Black river conch; the Cascadura; Spectacled caiman; matte /salipinter; Agouti; Red brocket deer; Quenk/wild hog; Lappe/Labba; Green iguana; porcupine; nine banded Armadillo/tattoo; Opossum/manicou; Capybara; red tailed boa; guinea pigs.

The factors affecting animal production are among the physiological states such as housing & environment; feeding & nutrition; genetics & breeding; health & disease; social – economic factors. Still, Neotropical animals can be utilize for several opportunities such as: education, research, recreation and conservation. Some examples are: the agro-eco tourism opportunity e.g: Alligator farming in The Everglades, Florida; Snake farming in Asia; Butterfly farming at St. Martin.

According to table 2, wild meat has higher protein content then chicken and has also lower fats. So it is an ideal meat to consume for humans.

Tabel 2: The nutrient content of Neotropical animals compared to chicken

| ANIMAL | PROTEIN % | FATS % |
|-------------------|--------------|-------------|
| Agouti | 23 | 0.75 |
| Lappe | 25 | 1.23 |
| Tattoo | 20 | 1.43 |
| Quenk | 26 | 0.47 |
| Capybara | 26 | 0.45 |
| Guinea Pig | 21 | 2 |
| Iguana | 24 | 3.49 |
| Tegu/Matte | 23 | 4 |
| CHICKEN | 14 | ~30 |

Research with Agouti farming for food utilization:

Agouti are frugivores (eat fruits, berries, seeds, vegetables), so they were daily fed with feed available from fruits, vegetables, and forages (50 g/adult/day). Experiments have been carried out with Agouti of 7 different color: black, white, white, gold, brown with golden rump, white with golden rump, brown with white feet.

The housing and environment of Agouti farming are done in:

- Floor pens: breeding colonies (Male: female ratio- 1:5 or 1:10 / Gestation- 115 days, 2-3 young
- Wire cages with concrete floor
- Not wood- gnaw, not dirt- burrow and no sweat glands
- Wood to gnaw
- Feed trough/cup (metal) and provide clean fresh water (cups/troughs)

Conclusion:

There is a high demand for Neotropical animal meat and skin, so wildlife may be farmed to increase production and reduce the hunting pressure. For example, Caiman skin is one of the most durable, valuable and exotic leathers available on the market. Its savage beauty makes it the diamond star of the leather industry. Rhea feathers are used in many forms as ornamental, and Rhea meat is almost the same as beef. Other Neotropical animal utilization are: Peccary leather,

Caiman leather wallets, Armadillo and Tattoo shell are used for art and guitar housing. Neotropical animals have the potential to become a protein source in the neotropics, can reduce meat imports and develop sustainable food security.