



DEVELOPMENT OF RABBIT PRODUCTION IN COSTA RICA

Brenès-Soto Andrea

Abstract

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Development of Rabbit Production in Costa Rica

Andrea Brenes Soto

*Alternative Livestock and Zoo Animal Program, Animal Nutrition Research Center,
Animal Science Department, University of Costa Rica, San José, Costa Rica
Corresponding e-mail: brenes.andrea14@gmail.com*

ABSTRACT

Usually rabbits are thought as pet so, there is little tradition in consuming rabbit meat, and thereafter a restricted number of slaughterhouses cause incipient meat distribution and market alternatives. The Costa Rican rabbit production is carried out through small/average farms. Farms raise crossbred animal, mainly involving New Zealand White breed with Californian, Chinchilla, Palomino, Rex and English Spot. Also, rabbits have been used as laboratory animals and even pets, which caused new breeds introduction and new production goals in the country. The lack of official slaughterhouses is another reason for the unexpressive rabbit meat commercialization. The producers sometimes feel discouraged to invest in the activity. The absence of an efficient productive chain causes small or average producers to commercialize their products in informal markets. Family rabbit production is a strategy at small and middle scale. The growing of backyard rabbit rearing was started back in the 1900's. With this system, the farmer and his family can count on a better quality protein source and, at the same time, commercialize the surpluses in the markets and another part of the population mainly the urban has access to this. In 2000 was registered the largest export of rabbit meat in the entire decade, where the majority of the product was sent to Nicaragua and Hong Kong (38,05 and 26,58 ton per year respectively). By 2003, the commercialization of rabbit meat was controlled by one organized-group named Carnes Sanas, producing 300 kg meat/week and then increasing up to 25 ton/month. Therefore, another group, Ticonejo, made an alliance with Carnes Sanas and raised the production, but after one year the group stopped their activities. In 2008 the exports to Nicaragua were maintained with a volume of 16,67 ton, United States of America with 25,86 ton and small quantities to Colombia (1,82 ton) and Panama (0,85 ton). From that year to 2010, the producers started to abandon the production because of the lack of solutions to sustain the rabbit breeding activity. Several farms survived like small or mediums systems, and only one kept an important market in the country. Important difficulties related to the commercialization appeared because of the falling demand of rabbits for exportation and a domestic market without development. The target market in Costa Rica then changed trying to enhance the national consumption. At this moment, 20% of the total market belong to two big farms which sell meat to two big chains of supermarkets and keeping farms with an average of 300 does and a meat production around 450 kg meat/month; 60% of farms have between 25 to 60 does, distributing the product in restaurants, hotels and retail, meanwhile the remaining 20% belongs to small systems with 5-10 does. Medium and small farmers can obtain 20 -200 kg/month. Pet producers maintain from 30 to 240 does from different breeds, and genetics producers have from 20 to 60 does. The majority of rabbits' farms are located in rural areas far from San Jose, the capital. More than 80% of rabbit population is found in high lands of the country, characterized by moderate climates (except in the coast), fertile ground and agriculture based in small properties, predominantly familiar. Recently a flagrant demand from high cuisine and touristic industry claimed market organization and suggest production growth. Although there's not a national policy established to stimulate the rabbit production, the government through the National Service of Animal Health (SENASA), has the responsibility to supervise these farms working on the sanitary control and the implementation of a unique register of producers and breeders. As a high percentage of the farms are medium, many of them use alternative forages to supplement the concentrate basis diets and low costs. Species used include tropical forage sources with high percentage of soluble or insoluble fiber, like nacedero (*Trichanthera gigantea*), morera (*Morus alba*), churristate (*Ipomoea purpurea*), poro (*Erhthrina* sp.) and grazes like kikuyo (*Pennisetum clandestinum*), estrella (*Cynodon plectostachium*), transvala (*Digitaria decumbens*). Almost all systems transform rabbit manure in compost high in organic matter, nitrogen, calcium, iron, copper, zinc and manganese, using the compost in crops' fertilization, for example coffee, cabbage and potato, among others. The Costa Rican rabbit production system is a viable alternative to the high quality meat production at small and middle scale, with ecological management quite useful due to its application in other regions of the continent. The Animal Science Department started the Alternative Livestock Program in 2008, and since then it is developing research and extension projects about rabbit production in Costa Rica, as well as stimulating the rabbit meat consumption through tasting session, giving information about meat nutritional

characteristics, and showing to the consumers the differences between rabbits for meat production and rabbits for keeping as pets. Despite all the effective problems it is perfectly possible to exceed the current barriers starting with marketing politics for the sector and quality product improvement in the market, with added information for cooking. Rabbit production should be recognized as an activity with low ambient impact and that can be associated to other productive activities using agroindustry residues and other agricultural byproducts. In change, it will provide high speed of weight gain and expressive reproductive indices.

Key Words: Costa Rica, Rabbit, Meat, Pet, Production



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DEVELOPMENT OF RABBIT PRODUCTION IN COSTA RICA

Prof. Andrea Brenes S., MSc.

Animal Science Department, University of Costa Rica



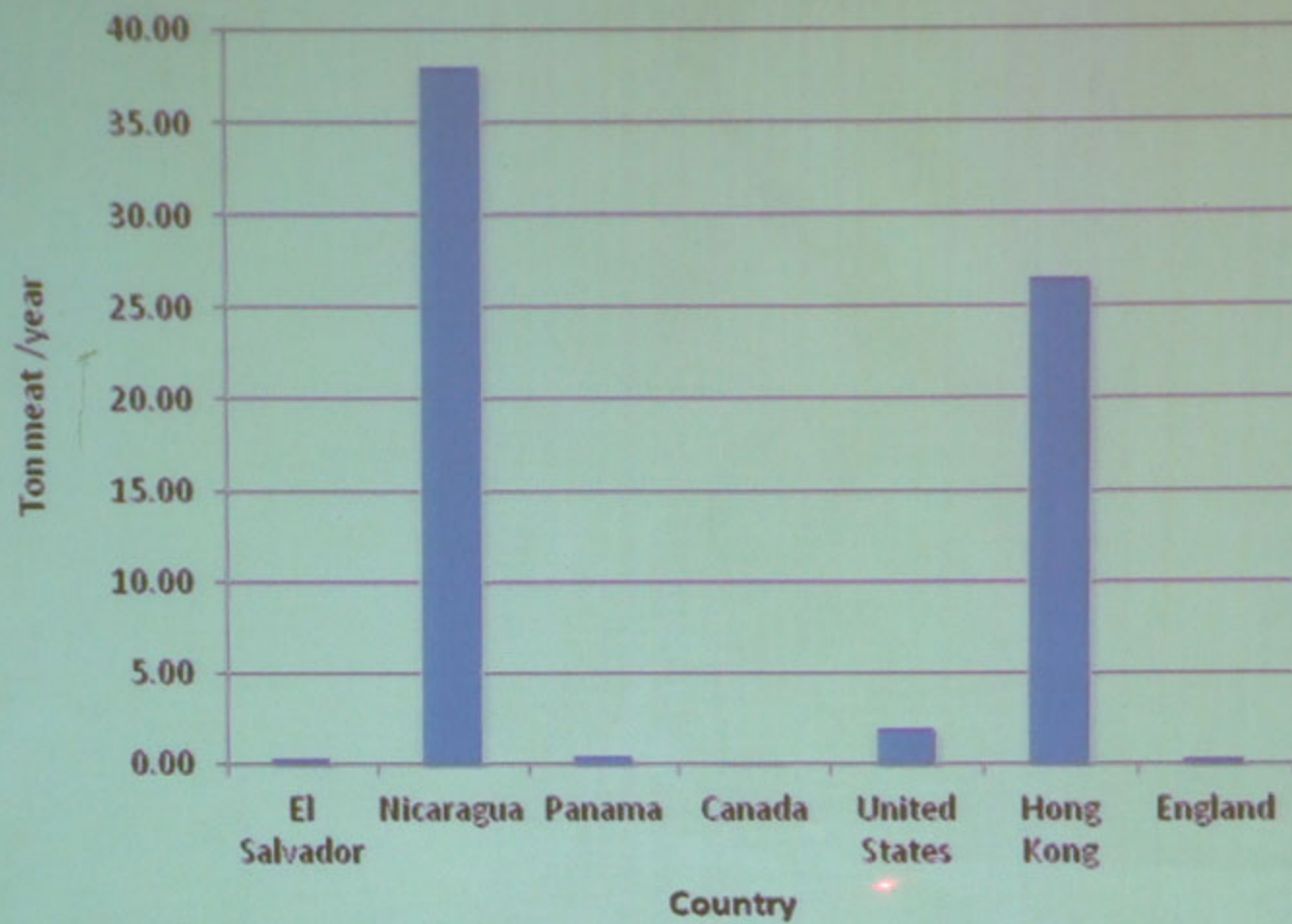




- Costa Rica – 51 100 km²
- Population 4 millions
- Little tradition in consuming rabbit meat
- Laboratory animals
- Pets
- Problems of commercialization
- Growing back-yard rabbits

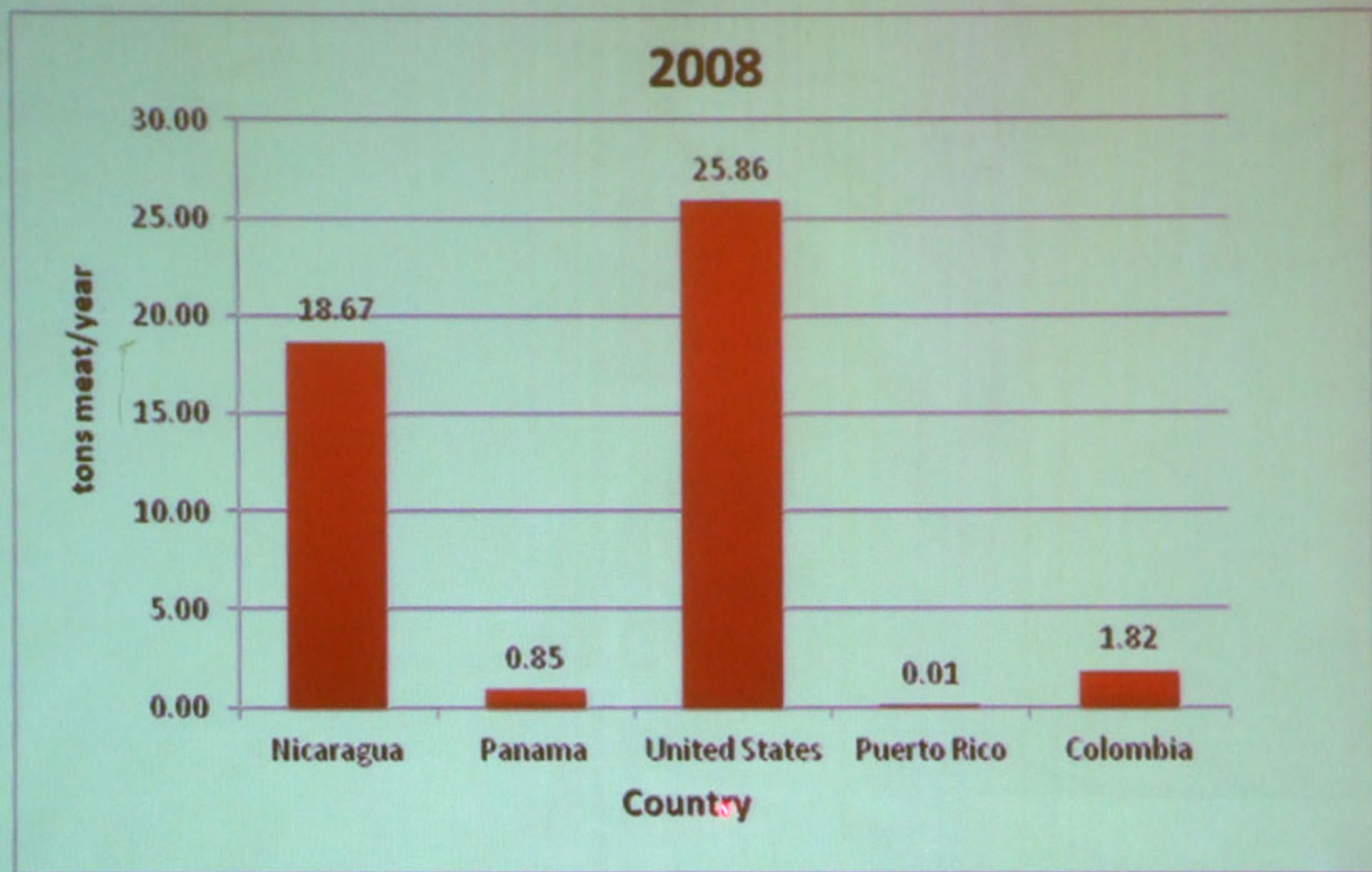
INTRODUCTION

- Usually rabbits are thought as pet
- There is a little tradition in consuming rabbit meat
- Farmers feel discouraged to invest in the activity because of the inestable markets
- 2000 – largest export of meat – sent to Nicaragua and Hong Kong
- 2003 - It was an organized group named “Carne Sanas” – producing 300 kg/week to 25 ton/month



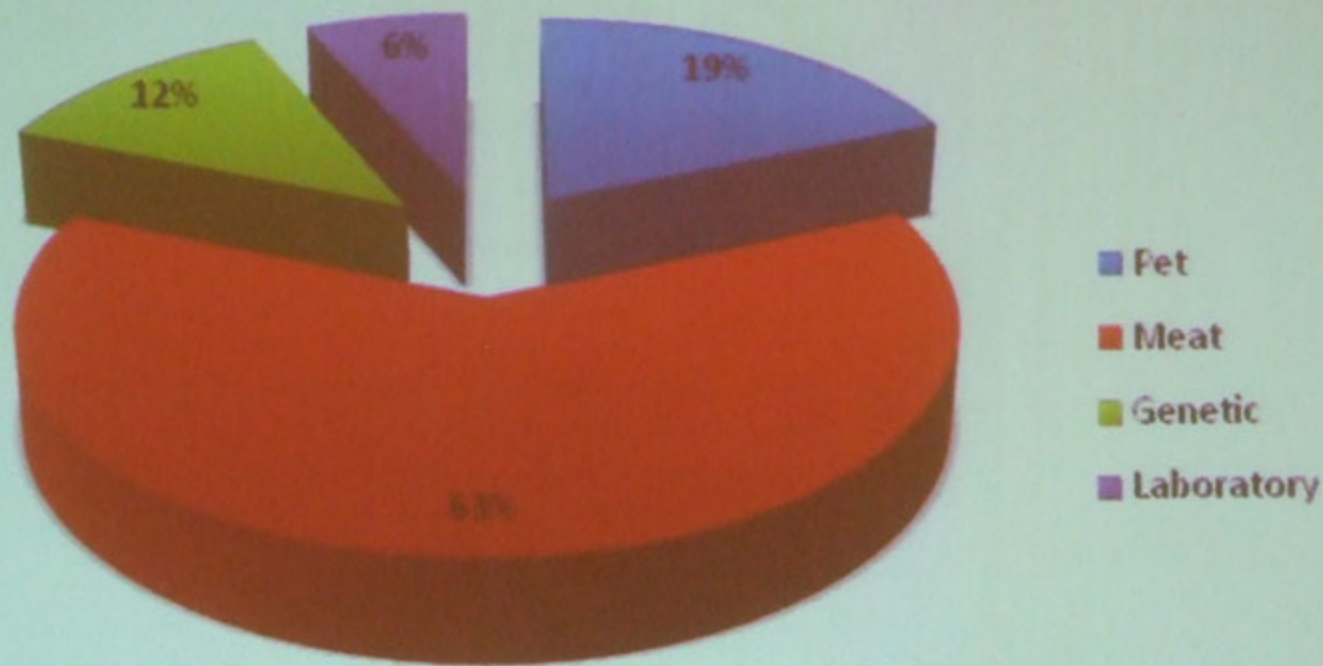
Exports - 2000

- Carnes Sanas made an alliance with Ticonejo – raised the production
- Small producers be convinced to be into the activity
- Investors gave them the food and the advisory
- Farmers built the farms, animals and equipment
- After 1 year company dissapeared – problem with the exportations
- Almost all the farmers abandoned the activity and closed their farms
- Lack of solutions to sustain the activity
- Few of them survived
- Oppened local markets and self - consumption

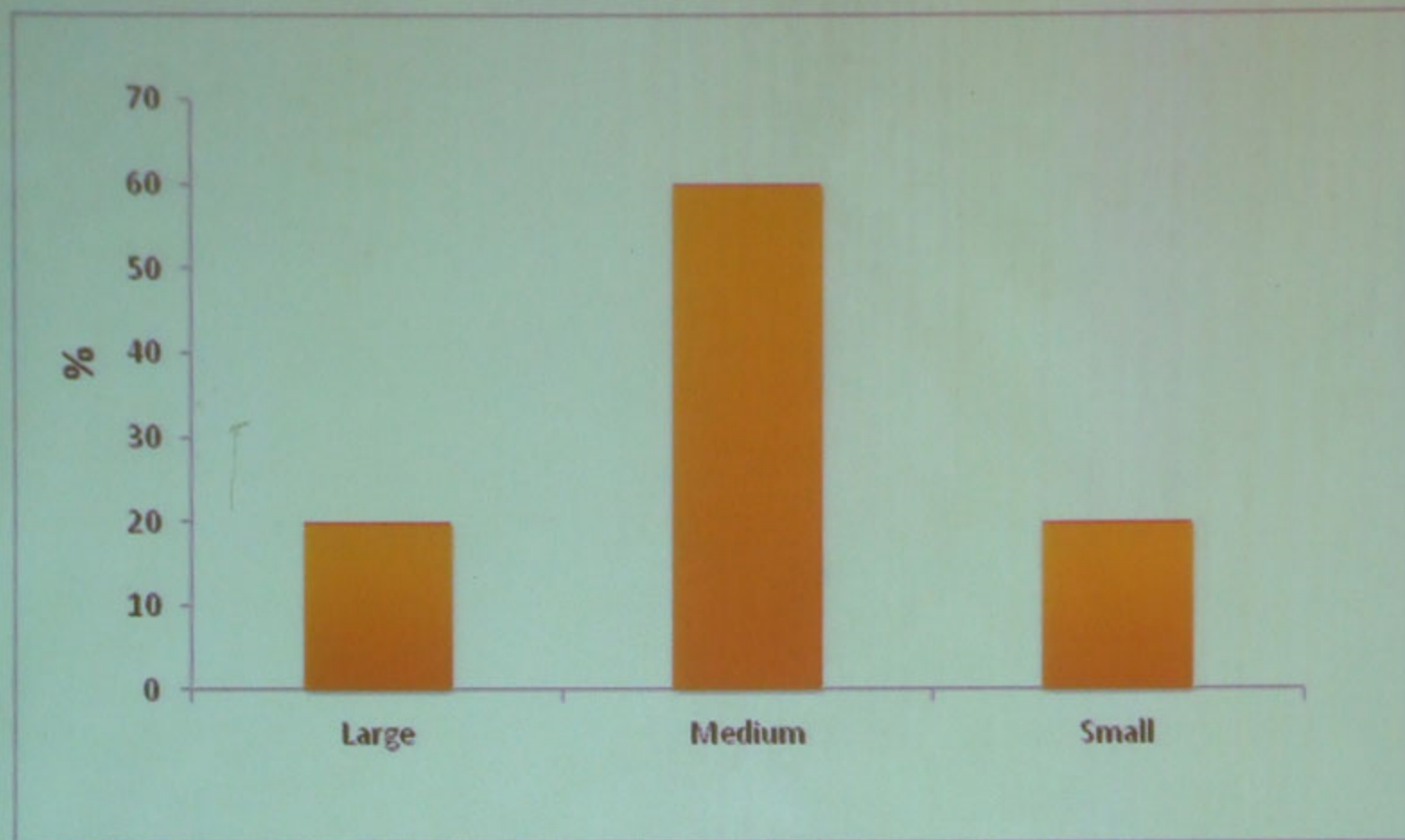


Exports - 2008

CURRENT SITUATION



According to National Animal Health Service and Animal Science Dpt. records: 25-30 rabbit farms in the country



Large: ≥ 300 does
Medium: 25-60 does
Small: 5-10 does



MEAT PRODUCTION

- 20-80 kg/month (small)
- 210-450 kg /month (medium and large)
- 2 large farms – two supermarket chains
- Hotels and restaurants
- Retail
- Self -consume
- Intensive management
- High production standards
- High disease control
- Nutrition: mainly based on concentrates



“Rabbit de Costa Rica” Farm





La Favorita Farm (Meat)

Breeds





Market and commercialization




Small – medium scale



Market and commercialization



Walmart 

AM
Auto Mercado
Supermercados de Calidad

Large scale





Pet Production

- 30 – 240 does
- Market: small animal's veterinary stores
- Agricultural fairs





“La Favorita” Pet Farm



Rabbits as Laboratory Animals

- Universities
- Clodomiro Picado Research Institute
- Production of antiofidic serum
- Tests in rabbits – effectivity of the serum



Feeds and Nutrition

- **Concentrates**

- Just one type (growing)
- Not for different life stages
- Expensive
- Corn and soybean based
- Wheat by-products
- Corn distillers



- **Forages**

- The farmers are looking for forages' options to include in the diets
- Low cost
- Improve eco farming systems

Browse alternatives available in Costa Rica



Trichanthera gigantea



Morus alba



Erythrina sp.



Arachis pintoi

Cratylia argentea





Graze alternatives available in Costa Rica



Pennisetum clandestinum
(Kikuyo)



Cynodon plectostachyus
(Estrella)



Bachiarias sp.

Manure management

- Organic fertilizer of good quality for crops
- Biogas – drop the cost of electricity
- Sustainable systems



Manure management



Chemical composition of organic fertilizer based in rabbit manure

Item	After 8 months composting	After 15 days composting
Dry matter (%)	48,00	51,00
Carbon (%)	18,85	37,18
Ratio C/N	8,53	13,57
Organic Matter (%)	26,95	53,17
pH	6,0	6,7
Nitrogen (%)	2,21	2,74
Phosphorus (%)	1,35	1,41
Calcium (%)	2,19	1,41
Magnesium (%)	0,83	0,74
Potassium (%)	1,65	0,96
Sulfur (%)	0,47	0,29
Iron (mg/kg)	40139	3434
Copper (mg/kg)	116	62
Zinc (mg/kg)	668	572
Manganese (mg/kg)	1578	511
Boron (mg/kg)	74	13



Actual Situation

- Lack of a government policies and support to improve the rabbit production
- Farmers are not organized
- Market is fluctuant
- Majority are small and medium farms
- Located in rural areas of the country
- Concern to explore news alternatives
- Lack of research

- **Alternative Livestock Area Animal Science Dpt. - University of Costa Rica**
 - Started in 2009
 - Improve the use of tropical forages
 - Research projects in nutrition and reproduction
 - Tasting sessions
 - Information about meat nutritional characteristics and benefits for human health
 - Showing the differences between rabbits used for meat production and rabbits for keeping as pets
 - Open the alternatives of sources of animal protein in the costarican's diet
 - Information about cooking
 - Activity with low environment impact
 - Associated with other productive activities
 - Recycling manure
 - Specie requires small areas and has excellent indices

INTERNATIONAL CONFERENCE ON RABBIT PRODUCTION IN INDONESIA
3rd CONFERENCE OF ASIAN RABBIT PRODUCTION ASSOCIATION

**"EMPOWERING RURAL ECONOMY THROUGH
SMALL - MEDIUM SCALE ECO RABBIT FARMING"**

Ramada Bintang Bali Resort, Bali, Indonesia, August 27th - 29th, 2013

