

## REPRODUCTIVE RABBIT PARAMETERS OF BACKYARD PRODUCTION IN THE URBAN AND PERI-URBAN SPACES IN XOCHIMILCO REGION

CONTRERAS, J L., RIVERA J., LÓPEZ M., LOSADA H., SORIANO R.,  
AMBRIZ D., ARENAS C.

Research Area of assist animal reproduction. Department of Biology of Reproduction,  
Division of Biological and Health Sciences,  
Autonomous Metropolitan University-Iztapalapa,  
Av. San Rafael Atlixco No. 186. Col. Vicentina. Iztapalapa. CP 09340. México D.F.  
[jlcm@xanum.uam.mx](mailto:jlcm@xanum.uam.mx)

### ABSTRACT

In intensive systems, where the technology and requirements are updated, a high efficiency of reproductive parameters close to those cited in the literature is important. However this is not possible for traditional farmers where the rabbit production is part of the life opportunities that made their existence feasible. Usually the rabbit backyard production in most cases is for home consumption and, in some cases, the animals are traded at the local market or among farmers. Nevertheless, there are some rabbit producers that are intensifying the meat production focusing in supplying big markets such as the Valley of Mexico as well as the touristy corridor of the region. The present work analyses and characterizes the reproductive and technological system production rabbit backyard in the Xochimilco region. Thirty questionnaires that included social, technological and economic features were applied. The questionnaires included 62 questions, 11 were open and 51 were closed. The total rabbit population were 1050 animals that included breeds like Californian, Hybrids, Rex, Satin, Belier and Dwarf. The production is directed to meat (77.8%) and tan skin (22.2%) production.

**Key words:** reproductive, rabbit urban production systems.

### INTRODUCTION

The Mexican Valley is composed of cultural and ecologic units formed by flooded areas and mountain surroundings. The flooded zone was integrated for Zumpango and Xaltocan lakes to the North, Texcoco and Mexico to the centre and Xochimilco-Chalco to the South. Due to the similar cultural and environmental conditions the South is denominated Xochimilco region (López *et al.*, 1999). Few modifications have been introduced to the region agricultural systems which have their roots in the pre-Hispanic time, since then they have been modified and adapted with the introduction of metal tools, domestic animals and plants during the Spanish colony. The backyard production is an important part of the life style of local people and it is mixed with additional income activities such as peasant, salary worker, taxi driver, trader and retired. In order to make possible the rabbit production suitable as the main income there are some vital considerations to make the activity profitable. There is the necessity of records utilisation

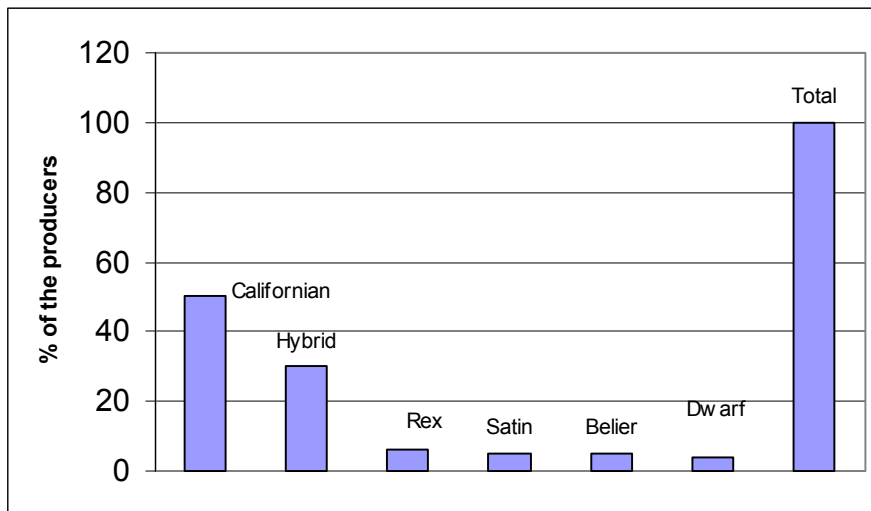
which considers the reproductive parameters that replace their empirical training. The objectives of the present work are to analyse and to characterize the reproductive parameters of the rabbit units in the urban and peri-urban area of Xochimilco region.

## MATERIAL AND METHODS

The information was obtained using 30 questionnaires and their structure considered social, technological and economic features. The enquiry number included 62 questions, 11 were open and 51 were closed. Before making the extensive survey an application was tested. The questionnaires were applied in the area known as Xochimilco region that included Tláhuac, Milpa Alta and Xochimilco delegations (Mexico City is divided in 16 delegations or wards). The rabbit producers were located in their house, handcraft fairs, local market, recommendation among them and visually. The questionnaires were analysed using conventional statistics such as average and percentages.

## RESULTS

The total number of rabbits was 1050 animals including breeds such as Californian (50%), Hybrids (30%), Rex (6%), Satin (5%), Belier (5%) and Dwarf (4%) (Figure 1). The length of time that producers reported that they were breeding rabbits was 1 year (31.6%), 2 years (26.3%), 3 years (21.1%), 4, 6 and 9 years (10.5%) and more than 10 years (21.1%).



**Figure 1. Representative breeds among local producers in the urban and peri-urban area of Xochimilco region**

The rabbit production has several purposes and it is mixed with meat production (32.6%), reproduction (18.3%), sell as live animals or in carcass among the neighbours or restaurants (26.5%) and home consumption (22.4%).

The rabbit population was distributed as follow: females (22.5% = 237 animals), stud rabbit (2.5% = 26 animals) and between growth and baby rabbits (75% = 787 animals) (Table 1).

The number of sold rabbits per week depends on the season. Producers reported to sell (live or in carcass) more animals during the different festivities of the year, thus Easter and Christmas were the months of more trade animals. The rabbit producers reported to prevent the diseases instead of veterinary consulting (77.8%). The digestive problems were the most common disease, followed by respiratory problems.

**Table 1. Distribution of the rabbit population by sex and breed in the urban and peri-urban area of Xochimilco region of the Mexican Valley**

Breed	Female	Male	Subtotal	%
Californian	123	8	131	12.4
Hybrids	74	5	79	7.6
Rex	12	4	16	1.5
Satin	10	3	13	1.2
Belier	10	3	13	1.2
Dwarf	8	3	11	1.1
Growth			525	50
Baby rabbit			262	25
Total	237	26	1050	100

The age of the first service reported was between the ranges of 3 to 6 months with a mode of 5 months. Number of born rabbits is between the ranges of 7 to 13 with an average of 8 per litter and 30 days was the weaning time reported. The mating period varied between 7 to 12 days with a mode of 7 days. Rabbit producers reported 0 to 1.7 mortality animals during the fattening period (Table 2).

**Table 2. Example of reproductive parameters and management of the rabbit units in the urban and peri-urban area of Xochimilco region in the Valley of Mexico**

Variable/producer	Data 1	2	3	4	Central Tendency
First service	5 months	3 months	6 months	5 months	Mode 5
2.- No deliveries/ year/female	5 deliveries	7 deliveries	6 deliveries	6 deliveries	Mode 6
3.- No small rabbits/delivery	8 small rabbits	7 small rabbits	13 small rabbits	8 small rabbits	Mode 8
4.- Days of lactation	30 days	30 days	30 days	30 days	Mode 30
5.- Small rabbits/Weaning	7 small rabbits	7 small rabbits	12 small rabbits	8 small rabbits	Mode 7
6.- Fattening mortality	1 rabbit	0 rabbit	0 rabbit	1 rabbit	Average 0.5

The breed purity among the rabbit population reported by the producers was the follow: 21% consider their rabbits with 50%, 15.8% reported 70% of purity, 26.4% said 80% of purity, 15.8% account for 90% and 21% of rabbit producers said 100% (Table 3).

**Table 3 Producers criterion of the breed purity percentage of the rabbit population in the urban and peri-urban area of Xochimilco region in the Valley of Mexico**

<b>% of breed purity</b>	<b>% of the producer</b>
50	21
70	15.8
80	26.4
90	15.8
100	21

The number of animals sells/week (as alive or carcass) registered by rabbit producers were 6% to 8% (20%) and 10 animals more than 80% of the breeders (Table 4).

**Table 4. Number of rabbits sold per week reported by the producers in the urban and peri-urban area of Xochimilco region in the Valley of Mexico**

<b>Number of rabbit sold/week</b>	<b>% of producers</b>
6	6.7
7	6.7
8	6.7
10	80

## DISCUSSION AND CONCLUSIONS

The existence of rabbit production in the region is complex the relationship between social and cultural aspects decide the dynamic of their consumption. It is clear that the reproduction is not the problem for the rabbit producers, they have been producing in their “rustic” way even after the hemorrhagic viral rabbit disease in the late 80’s. The valley of Mexico presents the ideal conditions for breed rabbit, the average temperature (18-22°C) show the potential to avoid respiratory diseases and reduce potential problems of reproduction.

## ACKNOWLEDGEMENTS

The authors thank the authorities of UAM for the facilities granted to carry out the research.

## REFERENCES

LÓPEZ, M., LOSADA, H., SANDOVAL, S., BENNETT, R., ARIAS, L., RANGEL, J., SORIANO, R., CORTÉS, J. 1999. The influence of urban tourism on backyard agriculture: the rabbit

as a new guest in the southeast of the Metropolitan area of Mexico City. *Livestock Research for Rural Development*, **11**, 126-132.