



# PROCEEDINGS OF THE 11<sup>th</sup> WORLD RABBIT CONGRESS

Qingdao (China) - June 15-18, 2016

ISSN 2308-1910

## Session Management & Economy

***Kimsé M., Coulibaly K.A.S., Gnanda B.I, Otchoumou A.A.***

CHARACTERIZATION OF RABBIT'S PRODUCTIONS  
IN THE DISTRICT OF ABIDJAN, CÔTE D'IVOIRE.

**Full text of the communication**

*How to cite this paper :*

*Kimsé M., Coulibaly K.A.S., Gnanda B.I, Otchoumou A.A., 2016- Characterization of rabbit's productions in the district of Abidjan, Côte d'Ivoire. Proceedings 11th World Rabbit Congress - June 15-18, 2016 - Qingdao - China, 957-960.*



## CHARACTERIZATION OF RABBITS PRODUCTIONS IN THE DISTRICT OF ABIDJAN, CÔTE D'IVOIRE

**Kimsé M.<sup>\*1</sup>, Coulibaly K.A.S.<sup>1</sup>, Gnanda B.I.<sup>2</sup>, Otchoumou A.A.<sup>1</sup>**

<sup>1</sup> Pôle de Recherche Production Animale, Laboratoire de Biologie et de Cytologie Animale, UFR Sciences de la Nature, Université Nangui Abrogoua. 02 BP 801 Abidjan 02, Côte d'Ivoire

<sup>2</sup>Institut de l'Environnement et de Recherches Agricoles (INERA), 01 BP 476 Ouagadougou 01, Burkina Faso

\*Corresponding author mail: kimsemou\_sn@una.edu.ci

### ABSTRACT

The present study aimed to identify and characterize Rabbit's (*Oryctolagus cuniculus*) breeding systems in the district of Abidjan. An investigation based on a sampling of 198 rabbit's husbandries, has shown an activity in progress. However, it remains a secondary activity in 95% of cases and managed by the male gender at 94.76 %. Less than 20 heads of breeders are counted in 54.8 % of breeding considered. Some breeding (27.1% ) have an effective of 20 to 50 rabbits , 12.3 % between 50 to 100 rabbits and more than 100 rabbits in 5.9 % of cases. The most practiced mode of reproduction is the extensive one.

**Keyword:** Rabbit, Abidjan District, Beading system, characterization, reproduction

### INTRODUCTION

In Côte d'Ivoire, more than 60% of animal proteins consumption are imported (Achi et al., 2003). One of the solutions to reduce this deficit confer to Bocar (2011), is the development of prolific species that are well appreciated by populations. Although rabbit is reared around big cities of the country, few data are available about performances in some localities (Kimsé et al., 2013). This study contributes to a better knowledge of rabbit breeding in Abidjan. The main objective is to estimate the various systems of reproduction, then to accentuate the perspectives of improvement.

### MATERIAL AND METHODS

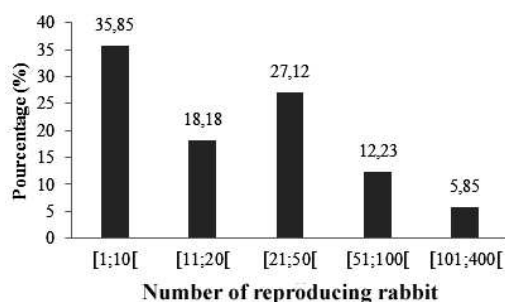
The study has been realized in the district of Abidjan which covers 2.120 km<sup>2</sup> within a population of 5.878.609 inhabitants in 2009 (Abraham, 2010). It includes an urban area and outlying suburbs. Data were collected following a preliminary inquiry from September to December 2011. This has been made according to the snowball technical investigation. Then we were able to collect information about the management of 198 rabbit *Oryctolagus cuniculus* breeding units.

A preliminary investigation was conducted before the actual study. Thus, an accent was placed on that information which can be verified and measured. Questionnaires focused on doe reproduction and young rabbit growth parameters. The number of breeding were recorded to describe the livestock size, along with the number of young rabbits, weaning age and number of birthing per year. Data were obtained through breeding records and the interviews carried in the farm. Some information has been independently verified counting animals or by weighing. These parameters were used to characterize the different farming systems. A descriptive analysis of data was made up within Excel 2010 software.

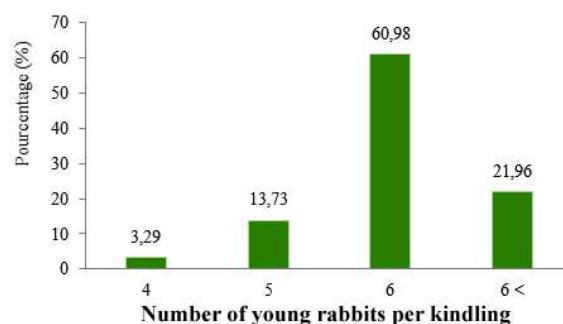
## RESULTS AND DISCUSSION

### Number of breeders and performances of reproduction

Husbandries with a number of breeding does lower than 20 heads was 54.78 % of total investigations. This result is commonly observed in some African and America countries such as Nigeria (Abu O.A. et al., 2008), Tunisia (Benlarbi M. et al., 2008) or in Mexico (Colin, 1995a; b). On the other hand, 27.1% possess a number of breeders between 20-50 females when 12.2 % represents 51 to 100 does. A few number of breeding investigated (5.9 %) possess more than 100 does (**Figure 1**). We have noticed an average of six (6) young rabbits per birth in 60.9 % and more than 6 in 22 % (**Figure 2**). A proportion of 13.7 % breeding does had four (4) and five (5) young rabbits per litter. These performances are similar to those observed by Zerrouki et al (2007) in Algeria and Akpo et al (2008) in Bénin, but less important than those obtained in Europe. These performances could be related to the genotypes of rabbit used, the environment or the thermal stress. Indeed, the local genotypes of rabbits came from uncontrolled crossings that give low performances because of consanguinity (Kimsé et al., 2013; Kimsé et al., 2014). High temperature caused the reduction in the rate of ovulation and increases the embryonic mortality. According to Lebas (2004), rabbits raised up under 23°C or 30°C as it is the case in Côte d'Ivoire, the number of ovules per ovulation is respectively 9.21 and 7.43.



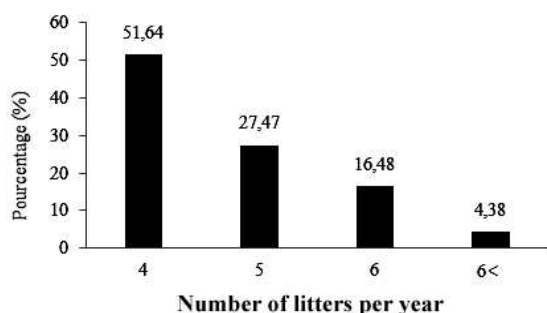
**Figure 1:** Distribution of breeding systems according to the number of reproductive rabbit



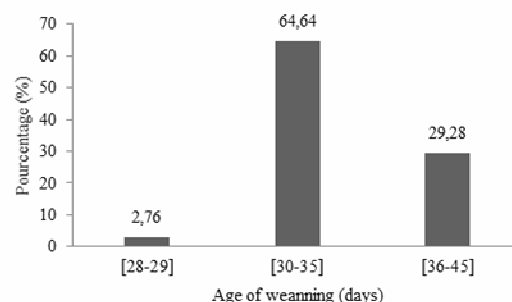
**Figure 2:** Distribution of breeding systems according to the number of rabbits per kindling

### Duration of lactation and cycle of reproduction

Natural mating is practiced at 100 % in the district of Abidjan and artificial insemination has not been yet done. Rabbit sexual reproduction activity is appreciated by the number of birth (litters) given annually (**Figure 3**). An extensive mode of reproduction with four (4) births is commonly met. It is practiced at the range of 51.6 %. The semi-intensive mode with five (5) litters is practiced in 27.5 % of the breeding units. The intensive mode of reproduction with 6 or more than six (6) births is observed in 20.9 % of the cases. The reproduction system practiced in Côte d'Ivoire is like those encountered in Senegal (Bocar, 2011) and in Benin (Kpodekon and Coudert, 1993). Weaning of young rabbits is made at 96.7 % according to the age and at 3.3 %, when weight are considered. Most of the time, weight of weaning is around 500 g. When young animals are weaned by the age, three (3) different stages are obtained on **figure 4**. Then the first part at 2.8 % is under 30 days of age, between 30-35 days of age in 64.7 % and 35-45 days in 29.3 % of investigations. The way breeding are managed in those cases, showed a lack of training of breeders. Also time between litter birth and new mating of a doe is too long reducing the number of birth to four (4) a year although the number of young rabbits is an average 6 per litter (Bergaoui and Kriaa, 2001).



**Figure 3:** Characterization of reproduction systems according to cycles of reproduction / year



**Figure 4:** Characterization of breeding units according to age at weaning of young rabbits

## CONCLUSION

Rabbit breeding in the area of Abidjan is extensive mode. It is a secondary activity that brings an additional income to the population as observed in Senegal or in Bénin. Breeders possessed a small number of females (less than 50) in 80 % of cases. The duration of lactation is between 30 and 35 days. The number of young rabbits per kindling was six (6) in the majority of the rabbitries. The improvement of the performances of reproduction of these does requires the use of more successful genotypes and a better management. These data provide a basis for the characterization of farming systems in other regions of Côte d'Ivoire.

## ACKNOWLEDGEMENTS

The authors thank Okon Joel and Bony Gbeket lecturer at Université Nangui Abrogoua for their assistance.

## REFERENCES

- Abraham, O., 2010. Agriculture urbaine et stratégies de survie des ménages pauvres dans le complexe spatial du district d'Abidjan Vertigo - la revue électronique en sciences de l'environnement [En ligne], consulté le 13 août 2015. URL : <http://vertigo.revues.org/10005> ; DOI : 10.4000/vertigo.10005.
- Abu O.A., Onifade A.A., Abanikannda O.T.F., Obiyan R.I., 2008. Status and promotional strategies for rabbit production in Nigeria, In: Proceedings 9th World Rabbit Congress, Verona (Italy), 1499-1503
- Achi, Y., Zinsstag, J., Yéo, N., 2003. Les nématodes gastro-intestinaux des bovins de la région des savanes de la Côte d'Ivoire: enquête d'abattoir. Revue de médecine Vétérinaire 154, 105-112.
- Akpo Y., Kpodékon T.M., Tanimomo E., Djago A.Y., Youssao A.K.I., Coudert P., 2008. Evaluation of the reproductive performance of a local population of rabbits in south Bénin, In: Proceedings 9th World Rabbit Congress, Verona (Italy), 29-33
- Benlarbi M., Haddad B., Allalout S., 2008. Characterisation of traditional rabbit breeding system used in the south of Tunisia, In: Proceedings 9th World Rabbit Congress, Verona (Italy), 1505-1508.
- Bergaoui, R., Kriaa, S., 2001. Performances des élevages cynicoles modernes en Tunisie World Rabbit Science 9, 69-76.
- Bocar, H., 2011. Contribution à l'étude de la filière lapin de chair au Sénégal, Université Cheikh Anta Diop, Dakar-Senegal, p. 146.
- Colin, M., 1995a. La cyniculture Chinoise World Rabbit Science 3, 133-140.

- Colin, M., 1995b. La cuniculture Nord Américaine le Brésil. World Rabbit Science 3, 85-90.
- Kimsé, M., Gnanda, B.I., Beugré, G.A.M., Bodji, N.C., Fantodji, A., 2014. Effect of associated using of commercial feed supplementation and green forage on rabbit (*Oryctolagus cuniculus*) growth and health Scientia Agriculturae 2, 114-119
- Kimsé, M., Soro, D., Bléyé, M.N., Yapi, J.N., Fantodji, A., 2013. Apport d'un fourrage vert tropical, *Centrosema pubescens*, en complément au granulé : effet sur les performances de croissance et sanitaire du lapin (*Oryctolagus cuniculus*). Int. J. Biol. Chem. Sci. 7, 1234-1242.
- Kpodekon, M., Coudert, P., 1993. Impact d'un centre cunicole de recherche et d'information sur la recherche et le développement de la cuniculture au Bénin. World Rabbit Science 1, 25-30.
- Lebas, F., 2004. L'élevage du lapin en zone tropicale Cuniculture Magazine, 34, 3-10.
- Zerrouki, N., Hannachi, R., Lebas, F., Saoudi, A., 2007. Productivité des lapines d'une souche blanche de la région de Tizi-Ouzou en Algérie, 12èmes Journées de la Recherche Cunicole, Le Mans, France, 141-144.

=====