RESULTS OF THE TECHNICAL MANAGEMENT OF FOUR RABBIT FARMS IN BENIN

KPODEKON MR.[1], DJAGO Y.[2], FAROUGOU S.[2], COUDERT P.[3], LEBAS F[4]

[1]Unité de Recherche Cunicole et Cavicole (URCC) ; BP 2009 RP Cotonou Bénin
kpodekon@bj.refer.org
[2]Centre Cunicole de Recherche et d'Information (CECURI),
01 BP 2009 RP Cotonou Bénin.
[3]Laboratoire de Pathologie du Lapin, Institut National de la Recherche Agronomique (INRA), Centre de Tours-Nouzilly, France.
[4]Station de Recherches Cunicoles, Institut National de la Recherche Agronomique (INRA), Centre de Toulouse, France

ABSTRACT

A study was carried out in 2000 in four rabbit units to evaluate the level of the technical management of the rabbit farms of south - Benin. The data collected by the farmers themselves made it possible to note a mean level of the zootechnical performances. The average size of the whole litter is 6. An average of 5,6 young rabbits are born alive of which 4,8 are weaned. The interval between littering is evaluated to 73 days, that is to say an average of 6 littering per annum. from one farm to another considerable variations are observed among some zootechnical parameters such that the number of born alive per litter. It show that there is an exploitable genetic characteristic on the level of the rabbit breeding in Benin.

Key words: rabbit, benin, productivity, management.

INTRODUCTION

After the outbreak of viral hemorrhagic disease (Vhd) in 1995 (KPODEKON and ALOGNINOUWA, 1998) which decimated nearly all the rabbit of south-Benign, rabbit production took a new departure. An investigation carried out already in 1998 made it possible to count in this area 188 rabbit farm of which approximately 25 % were of type semi-commercial or commercial (KPODEKON *et al.* 2000). The combined efforts of framing through the Association of the Rabbit breeders (ABeC) helped by the Centre Cunicole de Recherche et d'Information (CeCuRI) allowed these last years to maintain and reinforce this positive tendency. The objective of this work is to review some

zootechnical parameters through the follow-up of the technical management of four rabbit farm in Benin.

MATERIAL AND METHODS

Data-gathering . The exploitations selected are those which have relatively good equipment such as metal cages and automatic drinking-nipple. The number of does in each farm was between 50 and 100. For recording of the zootechnical data, it was given to each farmer a breeding card for each doe. The recorded parameters are: total the number of new born rabbits, the number of young rabbits born alive, the number of weaned rabbits, the dates of mating, littering and weaning.

Data processing

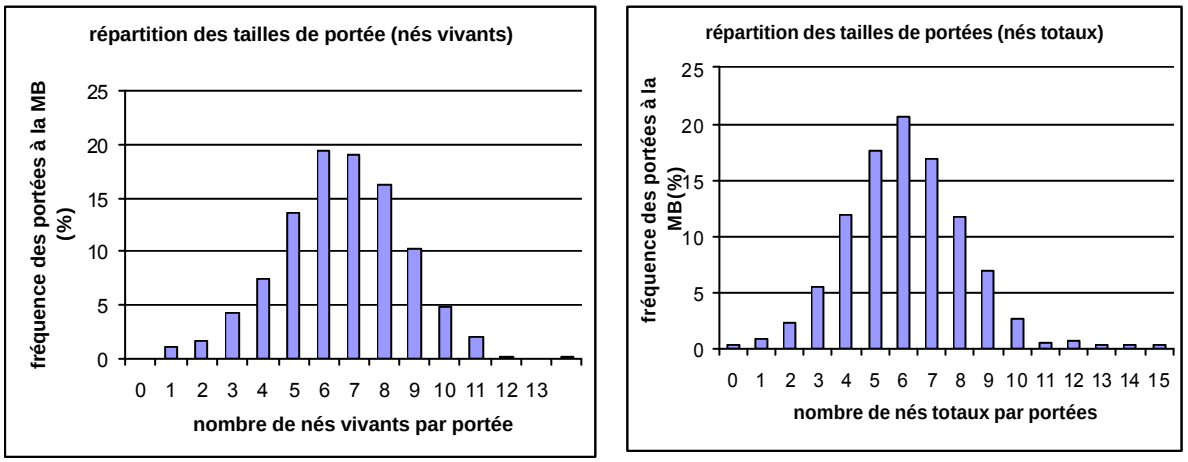
The data collected from the 4 farmer were recorded on Excel datasheet

RESULTS

The results will be presented globally for the 4 farms and separately when the number of data is sufficient for a significant exploitation.

GOBAL RESULTS

Prolificity. In the four farms, 547 litters were recorded (3357 young rabbits). The mean litter size was 6,1 rabbits, with 8,5% still-born and 5,6 born alive. The distributions of the litter size was normal (Figure 1a 1b)

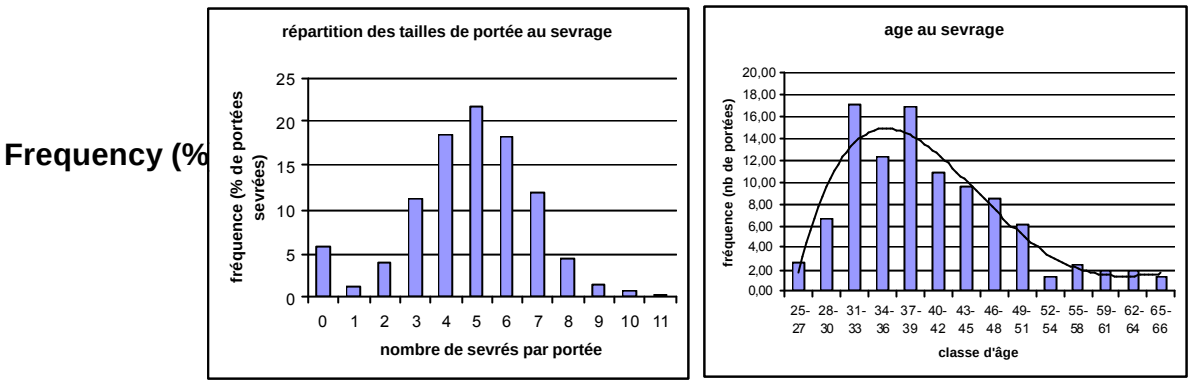


a/ Born alive per litter **b/ Born per litter**

Figure 1 Distribution of the sizes of the litters

Global results at weaning. 395 analysable weaning were exploited. The average number of weanlings per litter is of 4,8 young rabbits. At birth the average number of nursed young rabbits (alive + fostered - withdrawn) was 5,9. The average mortality from birth to weaning is 19 %. The distribution of the sizes of the litters at weaning spread out over a broad range showing that significant progress is possible if a breeding program were set up (Figure 2a).

The chronological age at weaning (Figure 2b) is on average 40,4 days, but is also spread out over a long period. This average chronological age vary from 35 to 45 days according to the farmers.



a/ Number of weanlings/litter **b/ Age when weaned**

Figure 2 Distribution of the litter sizes and a ges at weaning

The average weight of the young rabbits at weaning is 500 g at 35 days (Figure 3)

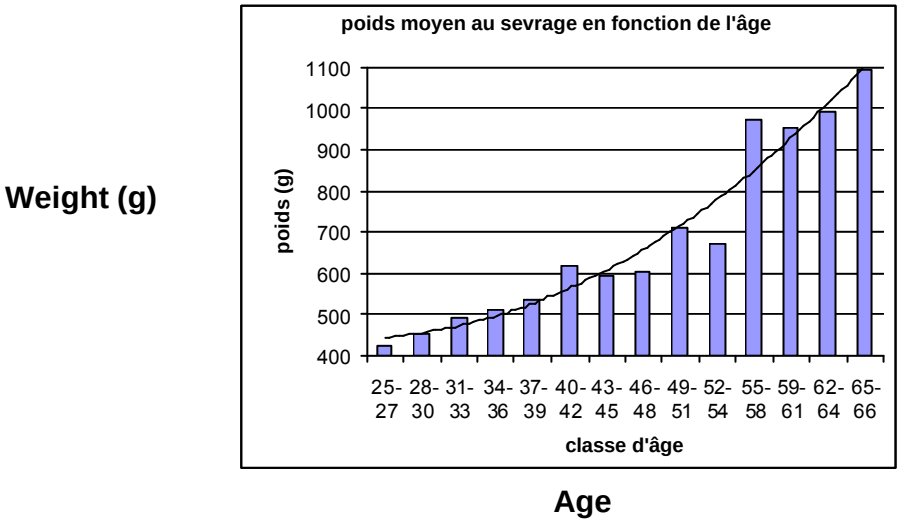


Figure 3 Weight and age at weaning

Interval between littering. On 542 littering, the average interval is 73 days, which corresponds to 6 littering per annum.

COMPARISON BETWEEN FARMS

The four farm are not comparable between them, because the total number of data available per farm is very variable. Also, in farm 4, only one litter per female was recorded. However, it is possible, without a great risk of error, to compare between them breedings 1 and 3.

Prolificity . There are significant differences between farmers. One of most significant is the number of total born rabbit in farm 1. This "genetic" potential is time-lag by the percentage of still-born children. Nevertheless the difference with farm 4 is enormous. Ultimately, farms 1 and 3 remain comparable in term of number of nursed rabbits (table 1).

Table 1. Prolificity at littering

FARMS	LITTERING	BORN ALIVE	% STILL-BORN	BORN (TOTAL)	NURSED*
1 Agro - Vivi	190	5,9	12,1	6,7	5,7
2 Sylvie	40	4,5	12,2	5,1	4,5
3 Tossou	282	5,7	5,3	6,0	5,7
4 Phalanstery	35	4,9	8,5	5,4	5,1
Total	547	5,6	8,5	6,1	5,5

* Some new born rabbits are fostered

Weaning.

For already evoked reasons, the data at weaning are less reliable taking into account the number of littering without data at weaning. To allow a better comparison between the farms, we took into account only weaning with at least 1 weanlings (Table 2). The zootechnical data are thus exact, but not able to be extrapolated in economic terms.

It is impossible to compare farms 2 and 4 with the others. In effect, not only the number of data collected is too weak, but also there is at birth practically 1 nursed rabbit less; it partly explains the weak mortality in these farms. Mortality in farm1 is slightly high, perhaps in connection with a more intensive production. Between farms 1 and 3 the essential difference is the age at weaning which is 9 days earlier in farm 1. Sixty percent (60%) of the litters are weaned before 33 days compared with only 8 % in farm 3. In addition in farm 1 the litters are weaned with understanding according to the number of sucklings (Figure 4)

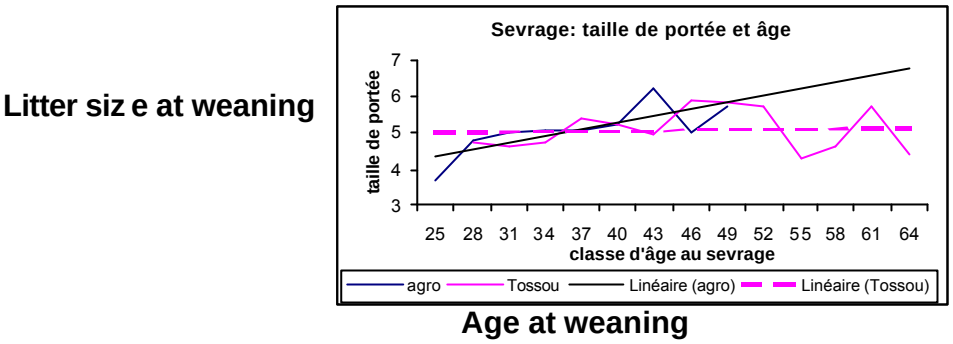


Figure 4 Litter size and age at weaning in farms 1 and 3

Interval between littering. If the interval between littering is considered as an indicator of good management of the herd, it is obvious that farmer 1 succeeds best (Table3). With the same interval, farmer 3 would have produced 34 additional litter, that is to say 12% more. There is probably a problem of management in farm 2.

Table 1 Intervals between bass singer settings ($cMb)

FARMS	NUMBER OF WEANING	INTERVAL BETWEEN LITTERING (DAYS)
1 Agro - Vivi	188	66
2 Sylvie	40	92
3 Tossou	279	74
4 Phalanstery	35	Only one littering recorded by female
Total	542	73

DISCUSSION

The size of litter recorded in the various farms shows data going up to 15 born and alive per litter with an average of 6. This reveals a genetic characteristic of this local strain likely to be exploited. In addition the frequency of the litters with more than 6 new-born would deserve a better use of the principle of the equalization of the litter at birth.

The average number of litter, which is 6 per annum, is higher than that obtained in most African western countries such as Ghana (4 litters) and Nigeria (2 to 3 litters) (HAKE and LEBAS, 1995). On the other hand the average number of 4,8 weaned rabbits is slightly lower than performances recorded in Nigeria (5 to 6) and in Ghana (6) (HAKE and LEBAS, 1995). The average weight at weaning is 500 G at 35 days; what represents an exceptional performance under tropical climate. More than 50% of the litters are weaned before 40 days and it is a considerable improvement compared to preceding observations (KPODEKON and COUDERT, 1993).

The average mortality before weaning is 19 %. This level is comparable with the results recorded in France (KOEHL, 1995; PONSOT, 1995), in Spain (RAFEL, 1996) and in Cuba (RIVERON, 2000).

The average interval between littering which is around 73 days, can be shortened. One of the farmers had an average interval of 66 days without seeming to harm its total performances. In Europe, the average interval is 50 days, taking into account the climatic conditions and of the diet of females (LUZI et al., 1995; PONSOT, 2000; RAFEL and AL 1995; RAMON and RAFEL, 2000. In Cuba, it is located between 45 and 60 days (RIVERON, 2000) and at 52 days in Algeria in the intensive breedings (GACEM and LEBAS, 2000)

CONCLUSION

The scarcity of reliable statistical data on the performances of the rabbit farming in the countries of Africa in the south of the Sahara is revealing work which it remains to make in this domain. The results which we obtained are thus significant, because not only they fix the potential of the rabbit production and its limits in tropical zone, but reflect also the degree of professionalism of the rabbit farming in Benign in year 2000. Therefore they represent a tool for teacher training essential for the farmers under the tropical climat.

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