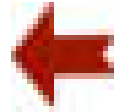


Fig. 11.4.



Coming back from the field....





Coming back from the field, collected leaves are brought to feed the animals in the backyard. This is a good opportunity to study how vegetal resources are utilised and to collect basic information to develop appropriate projects. Looking to the vegetation it is probable it is under-utilised.

Fig. 17.1.



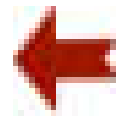
The well built earth wall of the house....



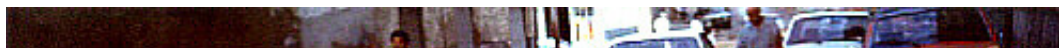


The well built earth wall of the house, the strongly framed wood fence, the clean backyard and the simple but proper palm leaves shelter of the brooding hen can be appreciated. Everything indicates a clever and keen owner. But before taking the photograph, permission must be asked. The small heap of earth that can be seen near the wall should be immediately recognised as a sacred Voodoo object. It is the place through which the soul of the departed communicates with the family and protects it. It is necessary to take care and to be respectful. Great is the risk to the unaware technician of being unwillingly not polite or even to commit a sacrilege. In fact, it looks convenient to seat on the heap to shut a good photograph to illustrate the simple way the nest is prepared for the brooding hen. It should be a big mistake.

Fig. 2.3.1.



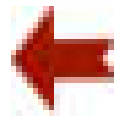
In an important African town....





In an important African town, rabbits (front), ducks (centre) and pigeons (bottom) are sold directly in the road. These are the main and most popular species among the small animals. It can be seen that local species are raised and very probably improved breeds are not yet worth to be utilised. Rabbits are fed with sweet potatoes leaves. These are a wastage that practically nullifies production costs. In this marketing conditions industrial production is not rational both because of lack of a cold-chain and difficulty of commercial competition with rural animal produced at a very low cost. In fact all trials in the area failed and great investments were lost. It is interesting, for the western observer, that animals remain very quite and not escaping around as we could suppose.

Fig. 3.1.2.



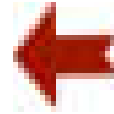
A nearly perfect hen-pen in an Asiatic Country



A nearly perfect hen-pen in an Asiatic Country (FAO/12648/F.McDougall, 1985). The rules illustrated in the chapter are here quite well respected. Local material are used (mud or adobe, palm leaves, palm wood). They are available, abundant, no cost, worked directly by the user in a simple but functional way. The higher floor avoids the rain to enter and the handicraft of the door and the wooden grate are perfect. The pen is well shadowed and the leaves on the roof are disposed to make the rain

flow away. The grate in the upper part avoids birds or big predators to enter and permits a good circulation of fresh air to dilute microbial concentration. This, together with accurate cleaning and low bird density, is promising a low mortality and a fair production.

Fig. 6.8.



A three-layer integrated cropping permits





A three-layer integrated cropping permits to optimize space utilisation in a small backyard*. The pumpkin climbed on the top of the arbour produces fruits and shadows the rabbits. Rabbits, in the underground shelter system, produce meat and faeces. Ducks feed on fallen pellet, if administered. Anyhow they find a very good protein source on insects attracted by faeces. Faeces manure pumpkins and pumpkin stems and leaves can be used to feed the rabbits.

Fig. 7.1.1.1.



The exotic double purpose breed Barred Plymouth Rock





The exotic double purpose breed Barred Plymouth Rock has been clearly chosen to enhance egg production (Errath, 1985). Everything looks good, but it is a deceiving image. It is obvious the unit has been just established (soil is not yet barren). The luxuriant vegetation indicates that probably the scenery is from a wet tropical area. Not the best for an exotic and rather heavy breed. In few months it will be possible to judge about fitness of the birds to the ambient, mainly to its climatic and sanitary components. Sex ratio is wrong (1:3), thus much feed will be wasted to nourish not useful males. The fence is not forbidding climbing predators to enter and will be oxidised in a short time due to the wet climate. Moreover it represents a cost that could be easily avoided. The utilisation of wood should be better because abundant and cheap, as it is shown also by the use of wood poles. To evaluate the chances of success it is necessary to analyse marketing conditions to calculate if egg production can compensate the cost of birds, fence and feeding mash, which were very probably subsidised.

Fig. 7.1.1.2

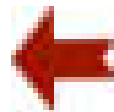
The image shows a typical barren and dirty backyard



The image shows a typical barren and dirty backyard (Errath, 1985). It is easy to observe the puzzling contrast between the well-framed poultry house and both, the poor fence and heterogeneous chickens. The owner who made the fence made also the poultry house? Probably not; someone was paid for. Was the house made only to protect scavenging local chickens or degenerated exotic ones? Certainly not, because it is very wide and costly. The best hypothesis is that the hut was built as a part of a project to house permanently exotic breeds. Looking to the border of the roof it is possible to deduce that some years have passed by and straw has been

added. As it happens frequently, at the end of the projects the owner was not able or did not want to buy the mash and was obliged to open the doors to allow the animal to scavenge. In these conditions the genetic regression was quick. In few years no remnant will remain to remember a project was there.

Fig. 7.1.1.3.



Half a petrol tank and some cement blocks



Half a petrol tank and some cement blocks form poor but solid and sure shelters to protect chickens during the night. Nothing wrong with them. What technicians should immediately perceive is that sex ratio is not correct. A common mistake in developing Countries. Clearly, exotic birds (Leghorn derived) were furnished by

some project, as it was ascertained. But this is not enough to improve the system. Fortunately the relatively light birds are able to scavenge and are less suffering for the unfavourable climatic and feeding conditions.

Fig. 11.4.



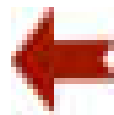
Coming back from the field....



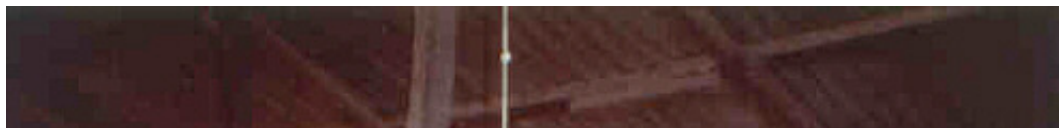


Coming back from the field, collected leaves are brought to feed the animals in the backyard. This is a good opportunity to study how vegetal resources are utilised and to collect basic information to develop appropriate projects. Looking to the vegetation it is probable it is under-utilised.

Fig. 7.1.1.5.



Lying hens are improved hybrids





Lying hens are improved hybrids. Birds are many hundreds and eggs are certainly produced for a market able to absorb them. Thus this unit in West Africa must be situated not far from a town. The bamboo walls and wooden stalls indicate that the owner correctly tried to reduce costs adopting local materials and simple technologies. In this way he made the system sustainable. The industrial drinker is a very efficient and expensive type. Its presence indicates that probably it was recycled from some failed industrial farm. The management looks good. When the system was analysed all the inferences showed to be true.

Fig. 7.1.1.7.



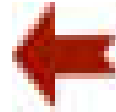
The raffia bamboo structure is strong





The raffia bamboo structure is strong and predators cannot pass through. The internal temperature is assured by a petrol lamp to which chickens can flock near or spread apart according to their physiological needs. The possibility to choose the right temperature at different distances from the lamp surrogates very well the impossibility of activating a feedback thermal regulation of the environment. In this way management of newly hatched chickens is enhanced and mortality is reduced. The water trough and feeders are too large, but the mash is also spread on the floor in order the chickens learn to feed (a paper or a cartoon leaf disposed on the bottom should be more convenient).

Fig.
7.2.1.11.



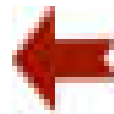
The floor of this cage is movable*



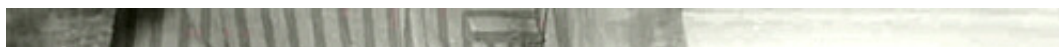


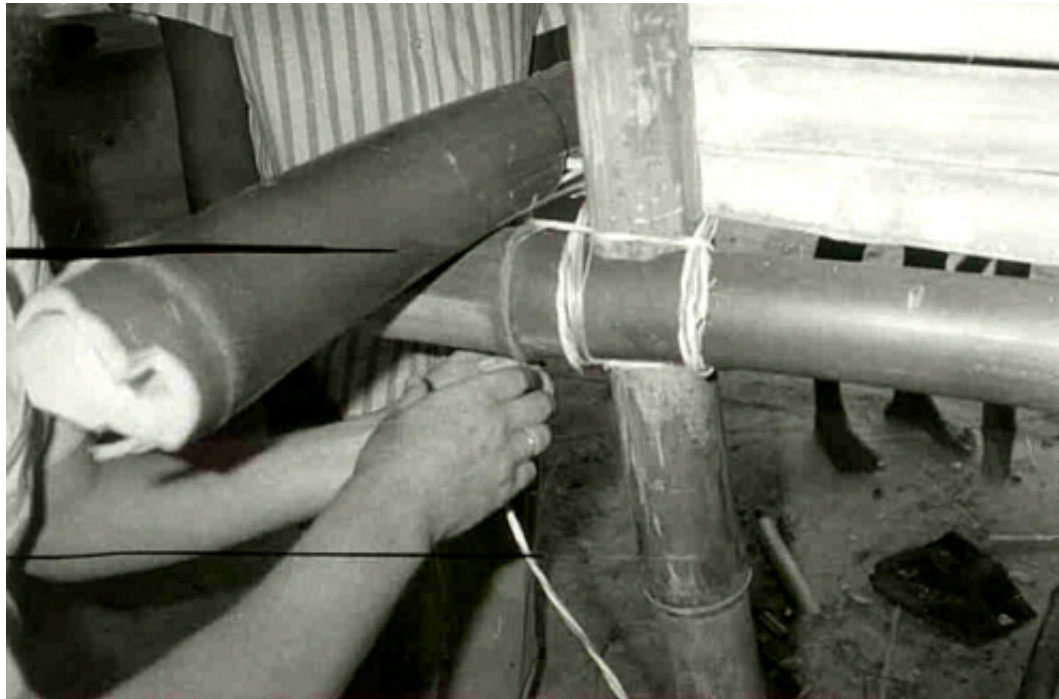
The floor of this cage is movable*, so it can be substituted with a clean one and then washed and exposed to the bactericide action of solar rays before being re-used. This is a great advantage. But floor slats are flat, while they should be slightly rounded. As a consequence it is easier drops sticks on them. They are also unequal and offer points to be nibbled by rabbits. The wire-net should be applied to the walls by the inside to protect the frame (the contrary, though very common, is a mistake).

Fig.
7.2.1.19.



Palm leaves have been tied to a stick





Palm leaves have been tied to a stick to avoid them to fall on the floor. A very common suitable technology. A tin box and a small pot have been correctly blocked in a cement base to avoid them to be overthrown. It must be remembered that tin becomes easily oxidised. The cage is a bit narrow and wood has been exposed to nibbling (Centre Africa).

Fig. 7.2.1.4.



Only a well-trained technician should be able to guess



Only a well-trained technician should be able to guess from far that the boy in the barren land is looking after a rabbit keeping. This sounds nearly unbelievable, considering the hot climate at the border of the Sahara desert. The hint is offered by the two overlaying pneumatics. They have the function to close a pit structure and to avoid the wind blows the sand inside.

Fig. 7.2.2.3.



Guinea pigs have become a not uncommon element

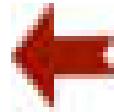




Guinea pigs have become a not uncommon element of the backyard systems of

many African countries, mainly when rich spontaneous vegetation is available (bottom). Children take care of guinea pigs more frequently than any other species. The presence of scavenging hens can be argued by the place to lay or brood eggs that can be seen in the bottom (right) of this unfenced yard.

Fig. 7.2.2.4.



A small poza inside a kitchen....



A small poza inside a kitchen. Another one can be partly seen at a higher level (left). Beside it alfalfa has been disposed as a feed reserve and not to administer it freshly collected. On the right rabbits are raised. In this case a poza is also utilised but wire-net walls complete it.

Under the rabbits there is a place to keep pottery. Everything looks proper and the space appears rationally exploited (Andean area). No doubt on sustainability of the system. The technician could ask the reason a white colour of fur has been preferred. A reference to ethnomedicine could be expected.