

Small, healthy, high-yielding

The years of war have led to a rapid decline in the nutritional status of people in the Democratic Republic of Congo. To cover their protein requirements, the rural population in the Kivu region in the east of the country have turned to raising guinea pigs. For many families these rodents are nowadays not just a vital element of their food security, but also an essential source of income.

Since the beginning of the great wars – which began in Kivu towards 1992 and gained in intensity between the years 1996 and 2003 – the production of cattle, small ruminants and swine paid a heavy toll, having served as rations for the various armed groups. Since then, the path has been cleared for guinea pig production and prejudices formerly held against this animal have been swept away (see box). It is not surprising, therefore, to note that guinea pig meat, until then reserved for very young children in the province of South Kivu, is currently consumed by men, women and children of all ages.

■ A wide range of advantages

The growing interest in raising guinea pigs can be explained by some of the following reasons :

- Guinea pigs grow very fast and multiply rapidly (four to five litters a year);
- They rarely suffer from diseases when raised under minimally hygienic conditions;
- They are a source of low-fat, protein-rich meat;

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- Guinea pigs are a source of readily available meat and income for producers who raise them in large quantities;
- They supply good-quality organic fertiliser for the fields;
- Minimum startup capital is required;
- Feeding them is very cheap and does not compete with food for humans (fodder, kitchen waste, etc.);
- Guinea pig husbandry is easy, the animals can be raised by children, even from poor families;
- Poor households who wish to re-establish their livestock production can begin with guinea pigs and the income obtained from selling them can facilitate access to other animals such as goats, sheep, swine and even cows.

■ Guinea pigs play a role in food security ...

Guinea pig production in South Kivu is a supplementary agricultural activity, generally practised in a rustic, traditional way. It is mainly intended for home consumption. Today, guinea pig production is widespread and is practised in almost every poor household. The surveys we conducted in July/August 2010 among 625 households in South Kivu demonstrate – together with those carried out by the NGOs Malteser International in 2007 and Women for Women International in 2008 during evaluations of their food security projects in the intervention zones – that eight out

of every ten households in rural areas breed guinea pigs in herds, varying in number from six to thirty, depending on whether they are in the territories of Fizi, Mwenga and Shabunda, or in Kabare and Walungu, the two latter territories, experiencing a strong demographic explosion, being large production areas. Guinea pigs are mainly raised by women and children (83 % of all cases). They guarantee their food security. For low-income populations, who barely have any access to other types of meat (beef, goat or mutton, etc.) or fish, guinea pig meat is cheap and provides them with their chief source of animal protein.

■ ... and as a source of income

Demand still far exceeds supply. At the small local markets, in particular in



Mugogo (25 km to the west of Bukavu on the Bukavu to Shabunda road), there has been a proliferation of small restaurants that sell guinea pig meat. School-age children come to these to cook their guinea pig meat lunches. They either breed the guinea pigs themselves or buy them at the market. Their mothers help them prepare the starchy food (bananas, potatoes, manioc fufu, etc.) that is eaten with it. Market stallholders, of all ages and both sexes, come to them to satisfy their hunger in the middle of the day.

Moreover, guinea pigs generate a considerable income for poor families. A guinea pig fetches on average 1.5 US dollars (USD), and in certain circumstances (for example when sold at one of the mining sites) the price per guinea pig can reach 3 USD. A whole trading system has been built up around this animal. Traders come to the large production centres or markets to obtain their guinea pig stocks which they then take to places located more than two hundred kilometres away from the supply site, where the profit margin is considerably higher. Various players are involved in the process, namely producers/breeders, wholesalers, retailers/dealers and small restaurant owners. However, it should also be pointed out that producers themselves are at the same time the main retailers.



Photo: T. Mètre

Selling guinea pigs at Mugogo market.

Guinea pigs in the Democratic Republic of Congo

The guinea pig (*Cavia porcellus L.*) originated in the Andes. These monogastric herbivorous animals can digest fibres more efficiently than rabbits. In all the Andean regions of South America (mainly Ecuador, Peru and Bolivia) guinea pigs are bred for human consumption. Its white meat is lean and protein-rich.

Not much information is available about the arrival of guinea pigs in the Democratic Republic of Congo, but they were probably introduced by Western explorers and/or missionaries (Europeans), because the people who frequented Europeans were the first to breed these animals. At that time, society as a whole justifiably regarded these animals as a sort of rat or mouse, and guinea pigs were consequently subject to contempt and taboos of all sorts.

The results of our survey of 86 people (63 women and 23 men), conducted in July/August 2010 confirmed that the people who come to market to buy guinea pigs either wish to start breeding guinea pigs (38 % of all respondents) or purchase meat for their daily food requirements (55.7 % of all respondents), or indeed for resale (6.3 % of all respondents).

The income from the sale of these animals helps solve many everyday problems. These include paying for children's education, access to primary health care, buying clothes, sugar, cooking salt, etc. A particular feature is that some of the experienced guinea pig breeders then purchase other animals, such as goats and pigs, in exchange for a certain number of guinea pigs. A young she-goat costs USD 30, which is equivalent to 15 to 20 guinea pigs, and is precisely the annual offspring obtained from a guinea pig under good conditions; a piglet costs USD 20, which is exchanged for 10 to 14 guinea pigs.

Furthermore, guinea pigs produce good quality manure which is used as fertiliser for the fields, thus increasing agricultural production. In households where guinea pigs are bred the manure is mainly used in the kitchen gardens for growing vegetables (cab-

bage, amaranth, onions, tomatoes, etc.), some of which are consumed and the rest sold.

■ Guinea pig multiplication and selection centre

In view of the growing interest and considering the breeding techniques on this subject, we thought it would be appropriate to propose sustainable exploitation strategies in order to raise the productivity of these animals. With our own funds we constructed a reproduction and selection centre to breed guinea pigs with good reproductive potential, which has been in operation since March 2009. This centre is located in the province of South Kivu, in Nduba, in the territory of Walungu, 45 kilometres west of Bukavu. The centre's goal is, first, to study the performance of the guinea pigs from the region, identify the different diseases of these animals, select the best animals for breeding and then distribute these among interested local farmers, while disseminating good livestock husbandry practices, as well as to produce fattened guinea pigs (mainly males) to supply small restaurants.

Initially, the centre began with 110 guinea pigs (100 females and 10 males), obtained from various locations in the region. Today the centre houses more than 700 guinea pigs, after having sold at least 256 guinea pigs that did not meet the standards, and 100



Photo: T. Mèire

Many small restaurants offering guinea-pig dishes have emerged in rural communities.

Issues regarding diseases are not being followed up rationally so far, although, in general, guinea pigs do not suffer from diseases if bred and raised in good conditions.

■ Conclusion and outlook

Guinea pigs today provide a better opportunity to help poor households in South Kivu overcome the situation of severe food insecurity and poverty. At this stage, where the majority of the population already breeds and consumes this meat, the main pending task consists in setting up sustainable strategies to improve the guinea pigs breeding system. In Latin America, 2 to 3-kg guinea pigs are already produced, as a result of long years of selection, compared to South Kivu where the weight of an adult animal hardly exceeds 1 kilogramme!

parent animals from the research centre of the *Institut Supérieur Agrovétérinaire* (ISAV) of Kinshasa.

At present we are only at the stage of reproducing and selecting breeding animals. The work that remains to

be done is still enormous, but given the lack of any kind of support, work cannot proceed at the pace that one might wish. For example, we would like to obtain breeding stock from Latin America (Peru) in order to organise crossbreeding with the local strains.

Zusammenfassung

Süd-Kivu ist eine der elf Provinzen der Demokratischen Republik Kongo, die wiederholt durch den Krieg im Land gelitten haben. Armut und Nahrungsunsicherheit haben dramatisch zugenommen. Diese Notlage ebnete den Weg für die Produktion von Meerschweinchen. Die früheren Vorbehalte und Tabus gegenüber diesen Tieren, die einst mit Ratten und Mäusen gleichgestellt wurden und deren Fleisch als ungeeignet für den menschlichen Verzehr galt, wurden dadurch ausgeräumt. Heute sind Meerschweinchen in vielen armen Haushalten der Region die einzige Quelle für tierisches Protein. Sie werden praktisch von jedermann verzehrt, unabhängig von Alter und Geschlecht. In den lokalen Marktgemeinden sind zahlreiche Restaurants entstanden, die Meerschweinchenfleisch anbieten. Darüber hinaus stellen Meerschweinchen heute eine wichtige Einkommensquelle für die Haushalte dar; das Geld wird für die Ausbildung der Kinder, den Zugang zur Basisgesundheitsversorgung, den Kauf von Kleidung usw.

genutzt. Mit dem hochwertigen Dung werden die Felder, vor allem Gemüsegärten, gedüngt. Die Nachfrage nach Meerschweinchen steigt ständig, das Angebot ist aber immer noch niedrig. Die Zucht findet außerdem immer noch auf traditionelle Weise, d. h. mit einem hohen Maß an Inzucht, statt. Daher wurde ein kleines Zentrum für die gezielte Zucht und Auswahl hochwertiger Elterntiere eingerichtet, das gesunde Zuchtpaare für den lokalen Bedarf anbietet.

Resumen

South Kivu es una de las once provincias de la República Democrática del Congo que ha sido afectada repetidamente por conflictos internos. La pobreza y la inseguridad alimentaria se han incrementado dramáticamente. Esta situación ha allanado el camino para la producción de cobayas y ha acabado con el desdén y los prejuicios de los consumidores hacia estos animales. Se les veía como equivalentes a las ratas o los ratones, y su carne era considerada como no apta

para el consumo. Hoy en día, las cobayas son la única fuente de proteína animal en los hogares pobres de la región. De hecho, su carne es consumida por todos los pobladores, sin importar la edad o el sexo. Este hecho también explica la proliferación de pequeños restaurantes donde se sirve carne de cobaya en los mercados locales. Es más: las cobayas se han convertido en una significativa fuente de ingresos para los hogares, y este dinero se invierte en la educación de los niños, en servicios primarios de atención a la salud, en la compra de prendas de vestir, etc. El estiércol, de muy buena calidad, se usa para fertilizar los sembríos, en especial los huertos familiares. La demanda de cobayas crece constantemente, pero la oferta sigue siendo baja. Adicionalmente, la reproducción todavía se practica de manera tradicional, con altos niveles de endogamia. Por lo tanto, se ha establecido un pequeño centro de crianza y selección de reproductores de alta calidad, a fin de abastecer el mercado local con parejas reproductoras.