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The roles of breeding and husbandry for improving cavy production in Peru [O]

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Animal production is supported by four pillars: genetics, nutrition, livestock management and health. In Peru, the cavy program started making changes by handling the reproduction system. The population was organized for mating in groups with 1 male and 7 females; the feed was only forage, supplemented by a ration adding necessary nutrients. Cavies were selected for production characteristics that allowed the formation of breeds ('razas'). Biosafety management programs were applied to prevent animals from getting sick. The genetic improvement program began with selecting two essential characteristics, resulting in economic benefits to the producer. Precocity permits cavies to come to market in less time (56 days old – breed 'Peru'), with an efficient feed conversion ratio (2.68 : 1) and a carcass yield of 72%. Its relationship muscle : bone in the hind limb (hip, thigh and leg) is 5.6 : 1; and better muscle structure was determined by histological cuts. Prolificacy (breed 'Andina') determines a litter size of 3.9 offspring/delivery and the ability that 78% of the breeding present post-partum oestrus. Interracial crossbreeding allows a hybrid that improves productivity on farms by forming non-inbred populations. The optimum first breeding age was determined for females at 8 or 9 weeks and for males at 12 weeks. Oestrus synchronization allowed better management of nursing, with better environment and feed management. The mortality rate decreased achieving survival of larger litter size. In the highlands, improved productivity was attained by crossing improved cavies with the original native cavies, while preserving genetic diversity of the native animals. After years of research, producing cavies went from being just a domestic self-sustaining activity to a productive and large-scale activity that has generated jobs for rural women. Cavy meat consumption of children and pregnant women has helped to reduce malnutrition in Peru.

Keywords: Animal nutrition, breeding, genetics, guinea pig, livestock management, non-conventional livestock.