



Family poultry



The world would be a sadder place without poultry. In rural areas around the globe, every new day breaks to the shrill cry of roosters competing, apparently, in a celebration of their own existence. While Asian farmers bend in their rice paddies, their ducks cruise the ponds like perpetual holidaymakers. Hens pass the hours flapping lazily in luxurious dust-baths, conducting chirping chicks on scratch-and-peck expeditions, or announcing to their sisters, with an almost startled squawk: "I've laid an egg!" (researchers have recently discovered that clever cocks utter a "Look, I've found food!" cackle just to attract an inexperienced female within mating distance).

Entertainment value aside, "family poultry" - meaning traditional, low-input husbandry of domestic chickens, turkeys, ducks and geese, plus guinea fowl, pigeons, pheasants and quail - is vital to food security in much of the developing world. According to recent estimates, backyard-and free-range poultry accounts for as much as 70% of total egg and bird meat production in low-income, food-deficit countries. In environmentally fragile and economically marginal rural areas, family poultry is an ideal component of mixed farming systems - domestic birds are small, reproduce easily, require no large investments, and thrive on kitchen waste, broken grains, worms, insects and vegetation.

A credit card with feathers. "Poultry can be raised by farmers for many different reasons, from the need to create an income to the simple pleasure that some farmers take in watching their healthy birds walk around their houses," says Robyn Alder, author of a soon-to-be-published FAO guide on small-farmer diversification into poultry production. "In general, rural poultry provide scarce animal protein in the form of meat and eggs. But they are also a kind of 'credit card', instantly available for sale or barter in societies where cash is not abundant. Village poultry also fulfil a range of other functions for which it is difficult to assign a monetary value. They provide pest control and manure, are used in special festivals and to meet social obligations, and are essential for many traditional ceremonies."



"Sustainable rural poultry programmes should build on what already exists and match technological interventions with local situations," says Robyn Alder. She cites the success in Bangladesh of a smallholder poultry programme that targeted illiterate and destitute women with no land and no assets apart from their labour. Village groups of 30-40 women received training in savings and credit management, and learnt the basic techniques of poultry feeding, housing and disease control. Though a credit scheme, the women were provided with improved chicken breeds adapted to village conditions and capable of laying up to 200 eggs a year. At the same time, the programme funded a network of supporting village-based enterprises - chick-rearing units, feed suppliers, mini-hatcheries and egg collectors - and trained village-based para-veterinarians who provided house-to-house vaccination of the groups' birds against major diseases. Result: the women's welfare improved substantially, with 28% of family incomes rising above the national poverty line within 18 months and school enrolment rates increasing from 86% to 99% in beneficiary households.

Little wonder, therefore, that development of family poultry systems is a key strategy in FAO's Special Programme for Food Security, now under way in 66 countries. FAO points out that the productivity of most family poultry is very low compared to that of high input systems. A scavenging hen, for example, lays only 30 to 50

eggs a year or up to 90 eggs a year with improved feeding and husbandry, while a commercial hen will produce 280 eggs under "optimal conditions". For FAO, the improvement of rural poultry production requires introduction of appropriate management skills, husbandry inputs (such as supplementary feed and shelter), development of effective marketing strategies and, above all, better disease control.

In South Africa, the National Agricultural Research Council is sponsoring a chain "poultry supply centres", owned and managed by members of resource-poor communities, which sell all the materials needed by poultry producers, including birds, feed, health care supplies and materials to build chicken runs. Prospective producers who complete training courses receive certificates that secure accreditation with development banks or local government subsidiaries, an essential step toward future loans. They also receive, at a nominal fee, poultry first-aid kits. The programme has identified six breeds that are adapted to survive under harsh, low-input conditions, as long as shelter, feed, water and hygiene are satisfactory. They include standard European birds, such as the New Hampshire and Black Australorp, but also breeds from Malaysia and Namibia that are adapted to hot climates.

Rice, fish, weeds - and ducks... Meanwhile, in the Philippines, an FAO project has placed ducks at the centre of an farming system designed to control pests and increase production in lowland irrigated rice fields. Components of the system are a high-yielding rice variety, Nile Tilapia fish, the aquatic fern *Azolla*, and flocks of Mallard ducks which were integrated at a density of 400 birds per hectare. The *Azolla* serves as both a weed suppressant and feed for the ducks, which are allowed to forage in the rice fields during the fallow period before rice transplanting. A duck house made of cheap local materials was built over the fish-pond where the ducks were confined when they were not foraging. The herding of ducks not only economizes on feed costs, but is also very effective in controlling snails that damage young rice plants. And they produce double the national average of duck eggs.

Robyn Alder concludes: "If raising livestock were to be equated with the fashion world, then rural poultry production would be seen as the ultimate fashion garment. Rural poultry can be a sole enterprise, or it can mix and match with almost any farming activities done by smallholder farmers. A poultry programme designed to fit local conditions will result in some very satisfied customers."

Battery hens

While most laying hens in the developing world still scratch, peck, flap and cackle in relative freedom, their sisters in developed countries (*at right*) are highly "urbanized". In the USA alone, an estimated 300 million egg-layers are confined in battery cages so small that they can never stretch - let alone flap - their wings. While battery hens produce as many as 280 eggs a year (10 times more than their wild relatives), they are susceptible to osteoporosis, liver disease, dandruff and mouth ulcers. Animal welfare groups have persuaded the European Union to phase out the cages by 2012, in favour of free-range/barn production or "enriched cages" with nesting and perching facilities.

