Wanted: "Robust and optimistic" hens

Many layer hybrids are not ideally suited to free range situations. The EU-funded "LowInputBreeds" project brings together the experience and expertise of egg producers and breeding companies. Joint breeding objectives have already been defined and cross-breeding work is now under way.

Globally there are only two major companies that engage in breeding layer hens. Both breed hens that perform best in cage systems where small groups of three to five hens share a tiny space. Conditions are optimized, at least in so far as a controlled climate and feeding are concerned. However, no account is taken of the birds' natural behaviour. It is not surprising therefore that such layers have trouble coping with living in large flocks in varied free-range conditions. For instance, FiBL has shown that such hybrids make insufficient use of their range, and when faced with attacks from birds of prey they either display no flight response at all or if they do they hardly dare to come out of hiding again.

As part of the EU-funded "LowInputBreeds" project, FiBL poultry experts Veronika Maurer and Zivile Amsler have therefore set out to search for hybrid lines that are suited to free-range conditions. They have joined forces with researchers from the Netherlands and the Institut de Sélection Animale ISA (Hendrix Genetics), one of the leading breeding companies for laying hens. "For us it is important to consider the experiences and needs of the keepers of layer hens", stresses Maurer. During the first phase of the project, she and her Dutch colleagues assessed the status quo on one hundred organic and non-organic free-range holdings each in France, the Netherlands and Switzerland.

Brown eggs carry the free-range image

The researchers found major differences in flock sizes on the holdings they studied, with an average of 2000 hens in Switzerland, 6000 in France and 12,000 in the Netherlands. In total the 300 farms are keeping 30 different types of hybrid layers or mixed groupings of hybrids. The most frequent lines kept are brown hybrids laying brown eggs, as French and Dutch consumers tend to associate brown eggs with free-range systems and white eggs with cage systems. In the Netherlands, "Silver" hens, a predominantly white-feathered breed laying brown eggs, are mostly kept by organic egg-producers. Pure white hybrids in free-range situations are only present in Switzerland and to a very limited extent in the Netherlands.

Based on their assessment of layer performance and mortality the researchers have found however that the not very common white hybrid layers are better suited to free-range conditions than the brown or "Silver" lines. They discussed their findings with the poultry farmers in national workshops and together defined breeding objectives for free-range laying hens. For example, a more even laying curve is more important to the producers than high peak performances. One producer summarized the commercial priorities as such: "What we need is a robust, optimistic hen that

can deal with unfamiliar situations and lays few floor eggs." Based on these specificiations, ISA have cross-bred new hybrids which are currently being tested in the Netherlands.

Fostering exchange

The researchers now carry out a detailed assessment of the layers' management, performance and health on 20 organic and non-organic free-range holdings in each of the three countries.

What had been missing so far was an exchange between breeding companies and egg producers on how the different layer lines are performing in free-range systems. In addition to the breeding work, the project also fosters an ongoing exchange of experiences between the producers, as they are very knowledgeable on disease and parasite control as well as feeding and general management. Veronika Maurer is convinced that this exchange between holdings and across country borders is crucial for successful layer management.

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❶ *The typical free range layers are still the "red hens".* ❷ *The researchers take a very close look at each bird: Are there any comb injuries? Are feathers missing from the necks or backs?* ❸ *Are all wing primaries and secondaries present and intact?* ❹ *Do the birds suffer from foot pad dermatitis or are any of the claws missing?*