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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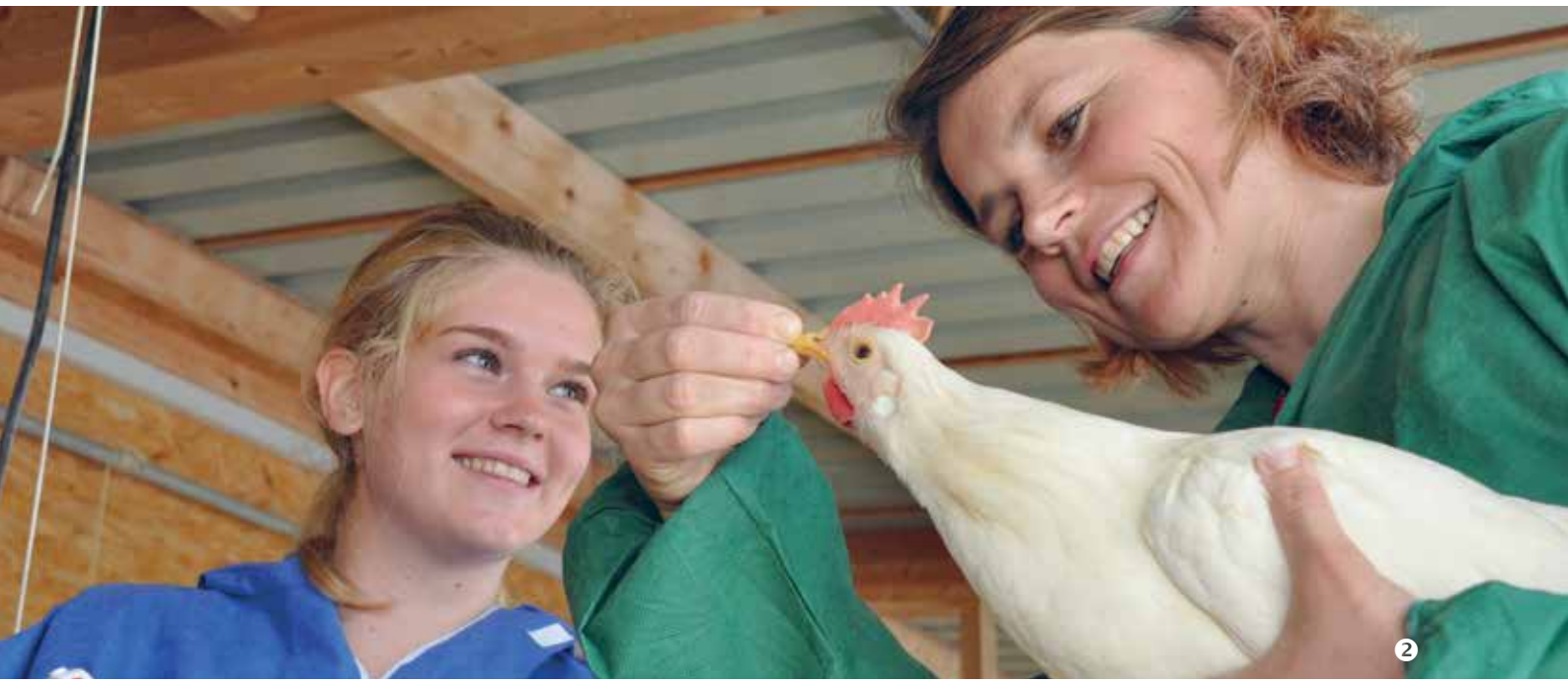
www.lowinputbreeds.org

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?*



Optimal solutions, not architects' dreams

Financial hard times, the ups and downs of markets, or changes in family circumstances: organic farmers must continuously realign their operations. In livestock management, this frequently involves construction-related changes. The FiBL stall construction extension service offers holistic solutions.

The clientele of FiBL agent Eric Meili consists not only of farms in difficult circumstances, but many innovative farmers as well. He has planned and carried out some 250 animal housing renovations and new constructions over the past twenty years. For the past year Stefan Schürmann has been assisting him in this work. In addition, FiBL agent Claudia Schneider offers solutions to farms planning to house cows with horns in their free stalls.

"The starting point of every consultation is the strategic orientation of the farm. The first thing we do is analyse the adjusted tax returns of the past three years," Meili explains. "On this basis we then formulate business goals and integrate them in the construction plans." The type of production, subsidies and investiture are used as a basis for setting the cost ceiling. Modular construction has proven effective. Designing stalls, hayricks, feed storage areas, etc. as separate modules is the best way to fulfill the requirements specific to each farm.

"We sell ideas"

Rather than charging a fixed percentage of the construction volume as is customary in the stall design sector, FiBL agents charge an hourly rate. This is one of the key differences between us and other construction planners, Meili emphasizes. "This gives us the freedom to develop solutions that truly fit the needs of the farm rather than fulfilling architects' dreams and building everything as big as possible." Meili and Schürmann are renovation specialists and hence

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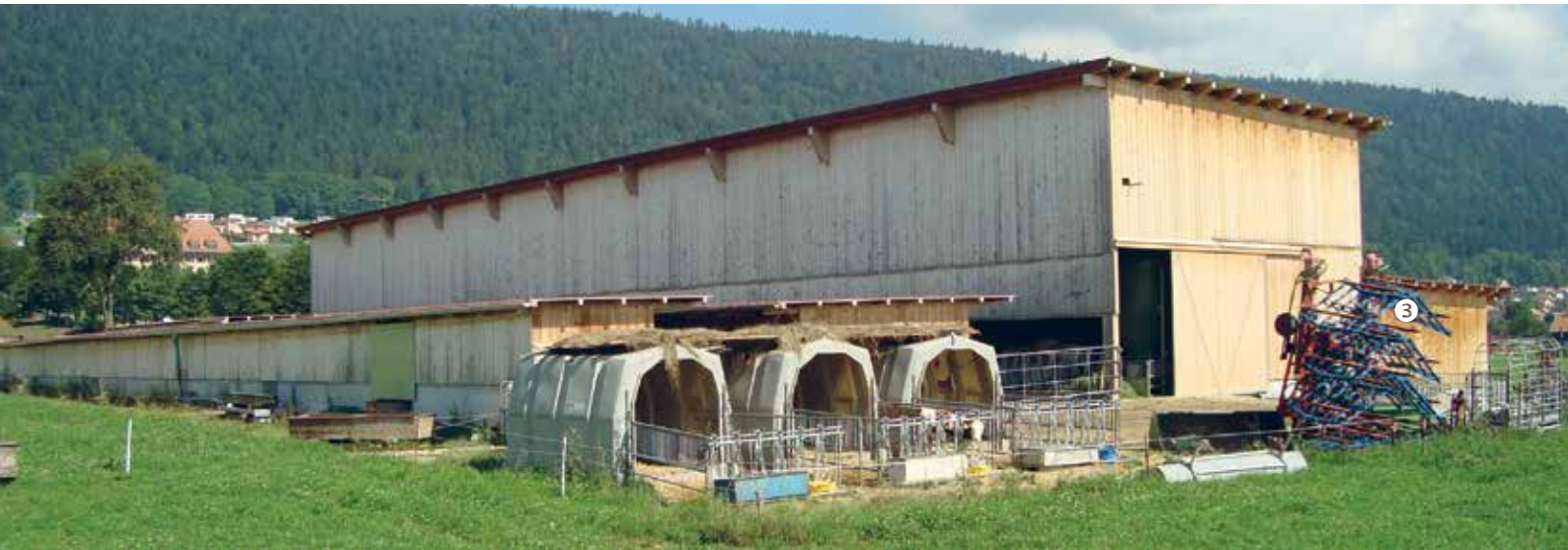

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they sell ideas and not stall equipment. Their approach, however, is not always met with understanding or appreciation. For instance, due to family circumstances a farmer recently wanted to switch from a dairy to a cow-calf operation. Meili and Schürmann proposed remodelling the existing barn and adding an exercise yard. This would have only required an investment of 100,000 francs rather than 250,000 francs for a new building. But the client insisted on a new building, like the ones that he saw at agricultural trade shows and that some of his fellow farmers had.

For Meili and Schürmann, however, economical construction is an absolute must. There are too many farming operations living off and consuming their own capital. Part-time farming, with 10-50% or even more than 50% of the total income earned off-farm, is also an option considered in the search for the optimal solution. "Wanting to maintain full-time farms at all costs limits the range of viable solutions too much," Schürmann insists.

Cut costs, but never at the expense of animal well-being

In cost-effective construction, it is essential not to sacrifice the welfare of the animals. FiBL thus provides solutions for free stalls that are tailored to the needs of cows with horns. "The higher costs are an investment in animal well-being and animal health," says Claudia Schneider. She is the expert when it comes to converting to free stalls and making structural adaptations to them.

In herds of cows with horns, it quickly becomes evident when the cows are not content: they injure each other in conflicts. Each stall corner and each piece of stall equipment therefore needs to be checked to make sure that it does not interfere with the species-typical behaviour of the cows or provoke conflict. In such cases the best solution is often something other than the most obvious stall design. "The conditions in the stall must be appropriate for the animals living in it and the persons working in it, and must also be adapted to the operation," says Claudia Schneider. *ta*

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❶ *Rebuilding after a fire: Housing for 22 horned cows with calves. Left: column-free hayrick with glue-laminated beams, hay crane. Right: Free stall with boxes.* ❷ *New construction for 36 horned cows with calves: Divided stall, feeding place with feeding barn, boxes for cows, deep litter for calves, feeding place in-between, liquid manure pit underneath.* ❸ *Stall for 80 dairy cows, Meili minimal stall, silage prohibition. Covered cubicles, feeding barn with hayrick, group igloos in the foreground.* ❹ *Remodeling: Free stall for cows with horns.*