

Subproject 4: Laying hens

Ferry Leenstra¹

LowInputBreeds for laying hens goes on farm²

After interviews with large numbers of free range and organic poultry farmers in France, Switzerland and The Netherlands and workshops to identify the ideal hen, farm visits have started on forty farms in each country. The farm visits follow a proven protocol and will provide additional data on best practice and performance of different genotypes under free range and organic systems.

A number of critical issues including feathering, incidence of twisted and broken keelbones and egg quality will be assessed. Quality of the feather cover and feather pecking are negatively related and both important for performance of free range systems. Twisted and broken keelbones are an indicator for overall skeletal problems and appear to be more of a problem in free ranging hens compared to cage systems. We want to explore differences between farms and identify possible explanations.

Egg quality reflects a number of issues, many of which can be assessed by information already available from records, like egg weight and percentage of second grade eggs. Moreover information will be collected on yolk colour and haugh units (an indicator of freshness and shelf life). If variation between farms is identified in feeding practices, especially relating to intake of grass from the range or supplementary algae that might cause changes in fatty acid composition of the eggs, samples will be taken for analysis. The relative proportion of omega-3 and -6 fatty acids are especially interesting.

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² The work packages of subproject 4, laying hen production systems:

Work package 4.1 Development of 'FARMER PARTICIPATORY' breeding systems to improve productivity, health and welfare and egg quality related traits; comparing standard with farmer participatory breeding systems

Work package 4.2 Effect of, and interactions between, laying hen genotypes, feeding regimes, 'welfare-friendly' moulting protocols and prolonged use of layers on performance, and animal health and welfare

Work package 4.3 Effect of, and interaction between, laying hen genotypes and management innovations on egg quality

The visits will also assess interest in, and potential for performance testing, a promising genotype, offered by Institut Sélection Animale, a Hendrix Genetics company. The farmers involved will be the core of the participatory farmers breeding network, although the network will also be open to others interested in free range and organic systems.

The farm visits will be carried out during 2011. In 2011 further workshops will be arranged depending on the topics the farmers indicate as necessary and/or interesting.



Mixed flocks of white and brown genotypes are typical for Swiss organic farms (Picture: Veronika Maurer, FiBL)



Feathering of hens is scored on 50 animals/flock during the farm visits (Picture: Monique Bestman, LBI)



Jeroen Visscher (ISA) and Esther Zeltner (FiBL) at a workshop with farmers in Frick (Picture: Hans-Peter Widmer, Schweizer Bauer)