

FreeBirds final project summary



Project purpose

The goal for FreeBirds is to develop more successful husbandry practices in organic poultry production in order to make the chickens be more outdoor, in accordance with the intentions of the organic concept.

The outdoor stay improves the bird welfare and consolidates consumer acceptance and marketing of the organic products.

The welfare of organic broiler and egg production can be improved all over Europe.

Final project summary

The FreeBirds project has generated more insight in the relation between birds' free-range use and health and welfare of layers and broilers, as well as to the consequences for the nutrient load of the soil. Furthermore, health and welfare of different strains of layers and broilers in organic systems was we investigated.

In both broiler chickens and layers there was considerable individual variation in range use, and those "consistent rangers" could be distinguished from "inconsistent rangers", who only visited the range on some days. Furthermore, it was found that broilers walked longer distances in the willow zone than in the grass zone of the range, which may indicate that the birds preferred the willow. When studying the ranging of layers, most of hens were found in the barn, but they also visited the other areas frequently. No relationships were found between welfare problems and range use in individuals.

Manure and soil samples were analysed for parasite egg from 40 farms in Italy, Sweden and the Netherlands. Eggs from Ascaridia/Heterakis, the most common roundworms, were found in 71% of the farms. Furthermore, eggs from Capillaria (commonly called hair worm) were found in 7% of the manure samples. Very low levels or no parasite eggs were found in the soil samples in all countries. No relationship was found between parasite infection and free-range use,



production or mortality in the hens. Flocks that had been treated with anti-parasite drugs had the same levels of parasites compared to the non-treated flocks.

Nutrient load of the soil was studied in Italy and Belgium. On the Italian farms, high values were found for nitrate and phosphorus, and the highest concentrations were found close to the house and then in the superficial layer of the soil. Furthermore, differences were found in concentrations of total nitrogen and organic carbon in the surface soil layers and deeper layers. A decrease in soil pH was found in all the farms when sampling was moved away from the houses. In the Belgian farm outdoor runs with willow were found to have more mineralised nitrogen, than runs with hazelnut. This was probably due to that the runs with hazelnut had a regular grass mowing between the trees, and mowing was not performed in the runs with willow.

The studies on the suitability of different strains of laying hens and broilers for organic production revealed that there were differences between hybrids regarding welfare and production. The Polish studies showed that the local broiler breed, Green-Legged Partridge, was more robust than the Sasso hybrid, and thereby more suitable for outdoor systems. In the Turkish study, white Atabey hens had higher egg production and a better feed utilisation than brown Atak-S hens. The Danish study found that Bovans Brown layers were either superior or equal to DeKalb White layers (DW) regarding all bird welfare and egg quality indicators. Furthermore, shelters in the range were highly used by the layers, and they seemed even more important for DW birds. The Swedish study found that gait score was significantly better in broilers in the outdoor range than in birds assessed indoors, although the number of chickens ranging at the time of visits was low in all flocks.

The FreeBirds project suggest that in order to promote bird welfare, as well as, to mitigate nutrient accumulation, the birds should be encouraged to range more extensively. Furthermore, rotation of the free-range areas are strongly recommended, to reduce the soil nutrients and parasite eggs. Moreover, to decrease the nutrients the outdoor run should be used more extensively, and the ground cover close to the house could be covered with material that can be periodically removed and refreshed.

It is important to note that both broiler and layer strains that are more suitable for organic production, in terms of welfare and range use, also are the strains that produce less.



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