



BIRDe

The connected feeder

Moving poultry farming towards more agro-ecological methods is contingent on improving poultry feed efficiency. To continuously measure the individual weight and feed consumption of free-range chickens raised in groups, an electronic feeder has been developed by several entities belonging to the Carnot France Futur Elevage Institute.

Carnot France Futur Elevage Institute

Scientific/technological breakthrough

Animal feed efficiency is usually measured using the feed conversion ratio, i.e., the amount of feed consumed divided by the amount of meat produced. To measure this, we need to have individual animal growth and feed consumption data. To obtain these measurements under rearing conditions, researchers from Carnot France Futur Elevage (UMR BOA, ITAVI) and their partners from the UMT BIRD unit have developed an electronic feeder that allows these measurements to be taken once the animals are three days old. Each machine has 8 independent access points to the feed and can record data on between 100 and 120 animals. Animals are detected by the machine via an electronic chip. At each visit, the intake, animal weight, time and duration of the visit are recorded, providing not just feed efficiency data but information on feeding behaviour as well.



Competitive advantage for the economic stakeholders

Food efficiency has a big economic, environmental and social impact. Indeed, the transition to more agro-ecological poultry systems requires (i) developing diets that limit human/animal competition and incorporate more local raw materials, and (ii) using genetic selection to improve the capacity of animals to get more out of the feed formulated to meet these requirements. This feeder therefore opens up vast possibilities for animal nutrition studies and will make it possible to revisit food efficiency selection methods to improve the sustainability of poultry production.