Improving poultry welfare through academic-industry partnership in research and education

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The European laying hen industry is currently facing considerable changes. Since 2012, conventional cages for laying hens are prohibited and hens must be kept in furnished cages or non-cage systems. From the perspective of poultry welfare, furnished cages and non-cage systems provide the birds with more space and more possibilities to display natural behaviours such as nesting, perching and foraging. On the other hand, undesired behaviours such as feather pecking and cannibalism, panic reactions and smothering are more difficult to control in these systems than in conventional cages. To reduce these welfare problems, several promising strategies have been developed by scientists but these have only to a limited extent been transformed to practical solutions for producers**.** Recent initiatives in The Netherlands and Norway focus on bridging the gap between university and industry research and training efforts with the common aim of improving poultry welfare. A good example is the Dutch project where we study strategies to reduce feather pecking in commercial flocks by optimising management in parent stock and rearing flocks, in collaboration with a large Dutch rearing company. In this research we found that an interruption of litter supply at five weeks of age resulted in increased feather damage: 12 of the 17 flocks that developed feather damage already during rearing experienced an interruption in litter supply (47 flocks in total). Similarly, a Norwegian research project funded by, and based on close collaboration with the industry and UFAW, has focused on the question whether or not it makes a difference to rear laying hens destined for furnished cages in cage or aviary housing. Here, no lasting differences in welfare during the laying period were found between birds from the two different rearing systems. This type of research offers practical solutions to common welfare problems, based on scientific research questions defined by producers. This information is also conferred to our students in animal and veterinary sciences, who are initially trained in collaboration with industry partners and may later conduct thesis research in collaboration with industry partners. This allows us to better prepare students with an interest in poultry welfare to bridge the gap between university and industry sectors and to develop solutions for relevant welfare problems.