EXTENSION ACTIVITIES FOR INDIVIDUAL RECORDING

MILK RECORDING - A WINNING FORMULA FOR DAIRY SHEEP FARMERS



How individual animal data recording and interpretation can improve management of dairy sheep farms

+ 22% milk production

Is the raise in total milk yield production, by milking on average **28% less ewes**; just one of the economic benefits of culling the less productive animals, after identifying their performance by individual measurements



INDIVIDUAL ANIMAL RECORDINGS CAN ENHANCE THE SUSTAINABILITY OF DAIRY SHEEP FLOCKS IN GREECE

Individual recording for animal management involves monitoring of each animal's performance and use that information in normal, day-to-day farm management. Keeping records of milk yield and composition helps farmers make more accurate decisions on breeding management and feeding practices.

Although in dairy cattle herds individual recording tends to be used routinely, dairy sheep farmers in Greece seem un-convinced about the benefits of keeping data, so they do not adopt this practice. They have not tried using any form of data in their flocks so far, because they believe it does not add any extra value, takes too long and is too expensive to start up.



Introducing individual data recording in 18 dairy sheep farms

Individual milk yield recording on a monthly basis, using portable milk meters

 Milk samples for fat & protein content measurement
 Milk samples for the measurement of somatic cells

Recording of udder morphology traits (teat position, teat size, udder depth, udder attachment)



During a two-year period, husbandry experts advised the farmers for the management of the data and their animals (grouping and culling strategy, nutrition plans, etc). All farmers received an annual report at the end of each milking period with the individual records





The consultants used all the above data to select the best ewes in each flock and advised farmers to keep the replacement lambs from those mothers; in all cases, the selected ewes were grouped together and mated or inseminated to rams of high genetic value

INDIVIDUAL RECORDINGS: DECISION MAKING TOOL

GREATER MILK YIELD

Monthly milk yield recordings helped farmers to measure the level of milk production of each ewe and identify the animals with high milk yield and persistency. High milking ewes were properly managed by farmers in terms of nutrition, as milk yield recording helped them to realize their real potentials

REDUCTION IN PRODUCTION COST

Farmers were guided to separate their milking ewes into two groups: the high-milking and the low-milking group. Through this management practice, each group was fed based on its energy and protein requirements for the production of the average milk yield. Moreover, farmers were more easily convinced to cull the less productive animals

BETTER FEEDING MANAGEMENT

Milk samples for the measurement of fat and protein content proved to be a practical tool for all farmers in the assessment of the quality of concentrates and hays that they provide to their ewes. The availability of such data, gave them the chance to change their feeding protocols or even the provided ration on time, avoiding penalties from the milking companies for low protein or fat content in the produced milk

DIAGNOSIS OF SUBCLINICAL MASTITIS

The measurement of somatic cells revealed the problem of subclinical mastitis in the majority of the flocks. Subclinical intramammary infection affects negatively the milk yield of dairy sheep. The veterinarians suggested the use of intramammary antibiotics during the dry period, in order to avoid further economic losses during the next lactation period Farmers saved at least 21 euros per low-productive ewe annually, due to the more rational provision of feed

Culling the less productive ewes as earlier as possible, farmers produced on average 22% more milk, by milking on average 28% less ewes, compared to previous years

 Keeping replacements from the most productive ewes with the better udder morphology, will enhance the sustainability & genetic improvement of the flocks

FARMERS REALIZED THE BENEFITS OF COLLABORATING WITH EXPERIENCED HUSBANDRY CONSULTANTS FOR THE MANAGEMENT & INTERPRETATION OF THE RECORDED DATA AND ARE WILLING TO CONTINUE COLLECTING DATA AFTER THE END OF THE PROJECT

INDIVIDUAL RECORDINGS: DECISION MAKING TOOL

HOW TO MAKE IT APPLICABLE TO A LARGER SCALE OF FLOCKS

- Promotion activities and demonstration days organized by cooperatives, to convince farmers about the benefits of keeping individual data
- Technical or even financial support by public institutions for training and motivation of the farmers
- Support and advisory services by experienced husbandry consultants on farm level, that will be provided independently or through the cooperatives
- Adequate and supportive policies and effective breeding strategies must be in force/place
- Farmers should be trained on the benefits of animal identification for breed improvement and management and effective extension services must convince them to adopt such tools
- Key partnerships, strong networks and collaboration should be developed among farmers, cooperatives, extension services and animal husbandry experts for the development of recording systems



INDIVIDUAL RECORDING PRACTICE IS THE BASIS FOR SETTING A BREEDING STRATEGY AND FOR FUTURE SUCCESSFUL IMPLEMENTATION OF GENETIC IMPROVEMENT PROGRAMMS IN GREEK FLOCKS

THANKS: Farmers of FRIZARTA and ACOP cooperatives for participating in this case study **WRITING**: Termatzidou S.-A., Antonakos G., Theodoridis A., Arsenos G.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 679302.

