

FARMERS' PERCEPTION OF USING BREEDING INDICES - NEW EWE PRODUCTIVITY INDEX



The goal was to find out how farmers use the indices and whether there is anything specific that could improve their usability.

63%

63 % of the farmers who answered the questionnaire thought lamb production important breeding criterium.



FARMERS FELT THAT THEY NEED MORE INFORMATION OF THE INDICES. IT TURNED OUT THAT THE GOOD KNOWLEDGE OF THE INDICES THEMSELVES AND THEIR BENEFITS INCREASES THEIR USE.

Ewe productivity as litter weight (kg/ewe) per year has been used in farm reports to describe management level of farm and also in ranking of the breeding animals. The new index for ewe productivity fits better for animal breeding than earlier used phenotypic measurement. Using of breeding index should increase accuracy and enable genetic gain.

In Finland, breeding indices and genomic breeding values are widely used in other species (cattle, pig) but less frequently in sheep, where only growth and meat production indices have been in use. The inclusion of relevant new traits in breeding evaluation is important for the sustainability of production. Looking at the genetic trends of already available breeding values, it is noticeable that selection is not always based on them. In the case study we wanted to find reasons, which cause the differences in farmer's willingness to use indices.



Farmers' perception of using breeding indices - new ewe productivity index

DIFFERENT BACKGROUND FACTORS MIGHT AFFECT INTEREST IN USING INDICES

FARMER QUESTIONNAIRE

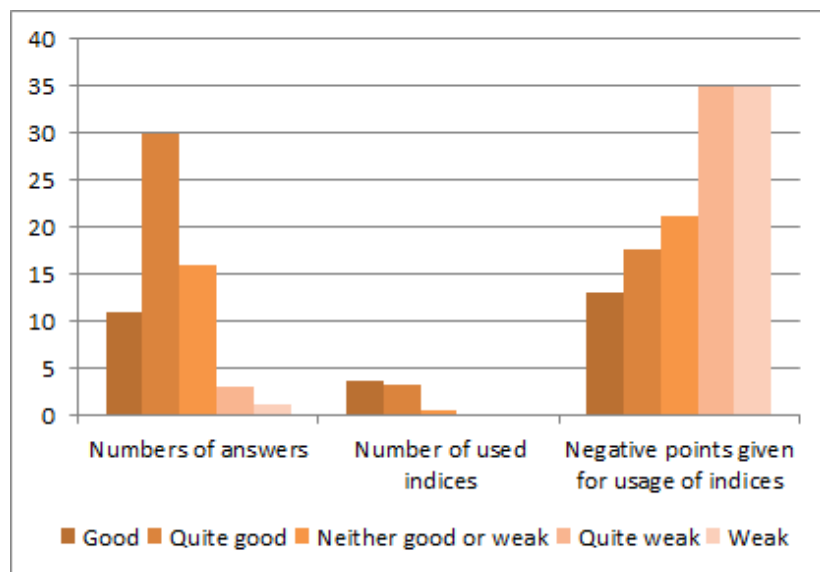
The link to questionnaire was emailed to all ProAgria's customer farms having sheep (663pcs), Link to the survey was also posted on Facebook in two sheep farmers groups. Paper version of the questionnaire was also given out..

The survey was designed to cover as closely as possible the farmers' background information and the factors affecting the use of the indices as well as answer the research question. We wanted to know, if farmers are:

- committed to sheep production
- aware about benefits of indices
- motivated to use indices
- familiar with the technical issues
- satisfied with the properties



Photo: Silja Alamikkotervo



RESPONDENTS WHO RATED THEIR KNOWLEDGE GOOD OR QUITE GOOD USED MORE INDEXES AND GAVE LESS NEGATIVE OPINIONS ABOUT USAGE OF THE INDEXES

ANALYZING OF ANSWERS

Together 61 responses were collected. At first the distribution of the respondents in different background groups was reviewed. The respondents represent widely different types of farms, locations and breeds.

Five variables were created to describe index information and usage. They were collected from responses on the same topic. The effect of various background factors to these five variables was studied by using variance analysis. Knowledge about the indices was treated as a categorizing factor and it's influence to the usage of the indices was also analyzed.

THE RESPONDENTS REPRESENT DIFFERENT TYPES OF FARMS, LOCATIONS AND BREEDS. HOWEVER, THE BACKGROUND FACTORS DID NOT HAVE A SIGNIFICANT IMPACT ON THE USE OF THE INDICES

The new ewe production index combines the litter size and the ability to rear lambs

FOR THE FARMERS , WHO DO NOT BELONG TO THE DATA RECORDING SYSTEM, THE USE OF INDICES IS LIMITED AND IN PRACTICE MAINLY POSSIBLE ONLY WHEN BUYING ANIMALS

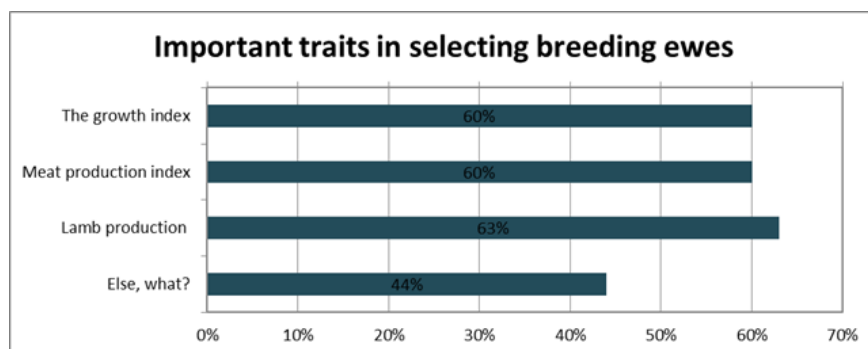
THE EWE PRODUCTION INDEX

Ewe production index is a combination of litter size at birth and litter weight at 6 weeks age. Until now, the phenotypic lamb yield of an ewe has been used both to measure farm performance and to select breeding animals. Fertility traits have a low heritability and traits are measurable only on ewes, although the role of rams in genetic gain is greater.

The use of the ewe production index improves genetic gain through two factors. The index is more accurate compared to the phenotypic observation. Also rams will get the breeding value for ewe production traits.

Te breeding goal is not to maximize litter size but to reach suitable level. Too large litters decrease productivity by increasing number of stillbirths and number of artificially fed lambs.

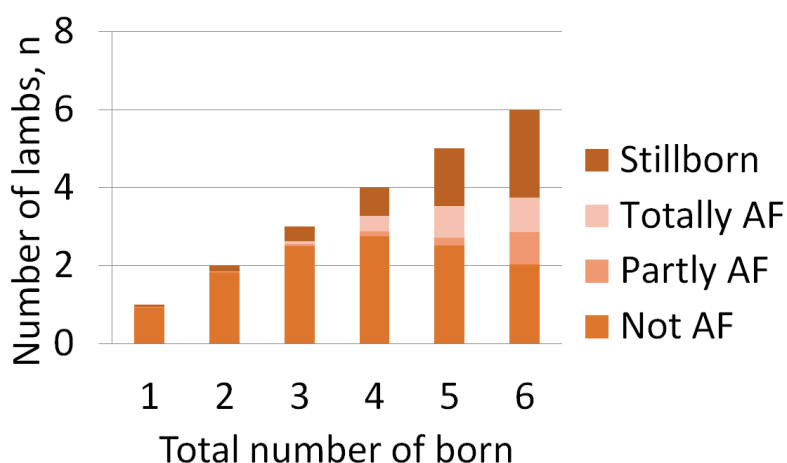
According to questionnaire, the farmers prefer litter size of three lambs.



ACCORDING TO THE QUESTIONNAIRE, SHEEP FARMERS WANT TO DEVELOP BOTH SHEEP MEAT PRODUCTION AND EWE PRODUCTIVITY IN A BALANCED WAY

DISTRIBUTION OF INDEX

The index is available for farmers on the internet via ProAgria's WebLammas application. Sheep clubs and an advisory organization play an important role in disseminating information. It is important to produce material on the index for sharing on the internet, and paper version to assist farmers and as an educational tool for advisors. The role of advisors in knowledge sharing was great.



WHEN THE TOTAL NUMBER OF LAMBS BORN INCREASES, MORTALITY RATES AND NUMBER OF LAMBS NEEDING ADDITIONAL FEEDING TEND TO INCREASE AS WELL

BY FAR THE MOST IMPORTANT MOTIVATOR FOR SHEEP FARMERS IS BETTER FINANCIAL PERFORMANCE. IF THE QUALITY OF THE PRODUCTION IS NOT AFFECTED, THE MOTIVATION TO USE THE NEW INNOVATION IS ALSO LOW.

The new ewe production index is favourable for the well-being of both ewes and lambs

OPTIMUM LITTER SIZE INCREASES PRODUCTIVITY

Increasing litter size is a normal goal in sheep breeding. In prolific Finnish sheep litters up to six lambs are not uncommon. Oversized litters increase lamb mortality and at the same time require more labor and expensive additional feeds. The new ewe production index doesn't benefit oversized litters and weight gain on artificially fed lambs.

It is not enough for the innovation to be good, but also clever ways are needed to disseminate the knowledge and understand the possible issues that limit the implementation of the new innovation.



Photo: Silja Alamikkotervo

1

The use of ewe production index has the clearest impact on the farm's economic profitability and animal welfare.

2

The ewe production index helps to select ewes of suitable litter size and good milk yield. It can be also used to avoid oversized litters.

3

The index is available for farmers on the internet via ProAgria's WebLammas application.

4

Profitability is improved when the resources used by the ewe are distributed over a larger amount of lamb meat. Also environmental recourses are used more efficiently.

FOR FARMERS, A CONSISTENT AND LONG-TERM USE OF EWE PRODUCTION INDEX HAS PERMANENT IMPACT ON FARM PROFITABILITY AND ANIMAL WELFARE.

THANKS: To the all farmers participating

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