



Adding a touch of spice to improve animal health

In Greece, a project has found that adding aromatic plants such as oregano, sage and rosemary to sheep feed has a number of benefits. The sheep are healthier and the anti-oxidant properties of the meat produced is improved, giving it a longer shelf life.

Alternatives to antibiotics for animal health

Greece is one of Europe's biggest producers of sheep and goat meat. According to [EU statistics](#), Greece, UK, Spain, and France collectively represent 68% of the EU's total production.



Dr. Evdokia Krystallidou told us: "The increasing number of antibiotic-resistant bacteria in animal and human populations from the use of antibiotics as an ingredient in animal feeds has raised the awareness on the need to find alternatives to antibiotic growth promoters (AGPs) to maintain health and performance." In order to increase both sustainability and productivity, farmers are constantly looking for innovative techniques. Dr. Krystallidou said "aromatic plants and their extracts have considerable potential to fulfil such demands."

Oregano is already used in poultry feed for its antibiotic properties and scientists in Greece decided to analyse the benefits of aromatic plants for sheep. The agricultural research department of the Hellenic agricultural organisation (DEMETER) and the animal research institute (ARI) in Greece have been running a project testing the effects of combinations of oregano (*Origanum vulgare* L.), sage (*Salvia officinalis* L.) and rosemary (*Rosmarinus officinalis*) added to sheep feed. These plants are widely grown in Mediterranean countries.

Adding aromatic plants to sheep feed

The scientists ran the tests with nearly 50 lambs on a farm in Greece. The potential impact of each aromatic plant was examined separately and in various combinations. The same tests were made using essential oils.

The tests gave positive results, the lambs showed an 8% weight increase, and the plants demonstrated their anti-microbial effect. Dr. Krystallidou said "These plants can help to increase productivity by promoting development, such as increasing the rate of feed conversion and daily weight gain. Their antioxidant activity may contribute to the improvement of quality and shelf life of animal products due to reduced oxidation."

Putting it into practice

The project has produced a report and a booklet (in Greek) and has transferred their findings to farmers, businesses, members of public administration and other stakeholders involved in sheep meat production through seminars and educational meetings. The technique is already being taken up by a number of farmers in Greece.

Dr. Krystallidou is now working on creating a small pilot cluster with sheep producers for training, research and new product development.

“This project adds value to meat production through the use of natural ingredients which have multiple benefits.” - Dr. Krystallidou

The project was funded by **AgroETAK**.

[Download the booklet](#) (in Greek).

Contact: Dr. Evdokia Krystalidou: ekryst@afs.edu.gr
<http://www.dioscurides.gr/>

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