# ****11th Asian Pacific poultry conference,****

# ****Bangkok, THAILAND, march 25-27, 2018****

META-ANALYSIS OF THE EFFECTS OF A PLANT EXTRACT FROM *FerULA SPP.* ON PRODUCTION RESPONSE OF LAYING HENS

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For layer producers, increase the persistency in lay appears to be the most logical approach to the efficient resources utilization. This abstract evaluates in a meta-analysis of 17 experiments organized in 28 trials the impact of the dietary inclusion of 100 ppm of a phytonutrient from *Ferula spp.* (**NEXT**) on laying hen performance

The effect of **NEXT** on Laying Index **(LI)**, Feed Intake **(FI)**, Feed Conversion Ratio **(FCR)**, Egg Weight **(EW)**, Mass of Eggs Produced **(MEP)** and difference of Body Weight **(∆BW)** was assessed using a mixed model, with the trial variable as random and the independent variable as fixed effect. Mean values were calculated weighting the data for the variance among trials.

Mean age at the end of the trial was 61.52 weeks, LI was 86.3 %, MEP was 52.9 g/hen/day and FCR was 2.378 g:g. NEXT improved MEP (+2.1%, *P*<0.001), FCR (-2.3%, *P*<0.01) and LI (+1.3%, *P*<0.01); FI and EW were unaffected. An effect of the age of the layers at the beginning of the trial on the response of ∆BW to treatment was highlighted (*P*<0.05). The effect of NEXT on MEP was stronger when the trial started after 50 weeks (*P*=0.126). Besides ∆BW and MEP, no other productive outcome was affected by the initial age of the layers.

This findings demonstrates that phytonutrient from *Ferula spp.* consistently improves laying hens performance. It suggests a better body condition of hens receiving phytonutrients and allowing a higher persistence of lay especially when supplementation occurred after 50 weeks of age.