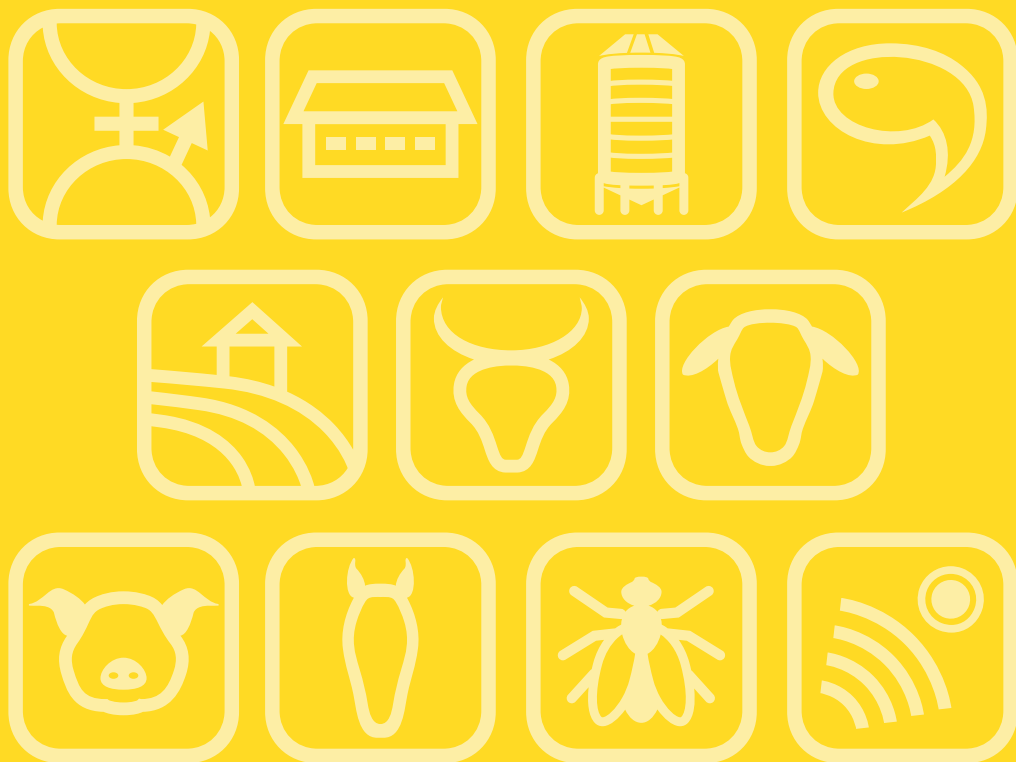


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Dietary supplementation of orange peel ingredient in lactating ewes: effect on yoghurt physicochemical characteristics

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Animal feed production is increasingly favoring efficient use of alternative feed sources, with significant potential for incorporating food industry by-products. The study investigated the impact of supplementing ewes' diet with dried ingredients produced from orange peels, a primary by-product of orange juice production, on the physicochemical traits of yoghurt. Ewes were divided into groups receiving either processed (enzymatically hydrolyzed) or unprocessed orange peels (11% DM inclusion level) (groups POP and UOP, respectively), while the control group (CON) followed a standard diet. Three batches of yogurt were prepared and on storage day 14, characteristics like colour (chroma & whiteness), syneresis, viscosity and hardness were evaluated. ANOVA test was used to compare groups. Supplementation of ewes' diets with dried orange peel affected chroma ($P < 0.05$) and firmness ($P < 0.001$). Yoghurts from the UOP treatment, displayed lower colour saturation and firmer texture compared to POP and CON groups, with no effect observed on the other characteristics. Enzymatically hydrolyzed dried orange peel ingredients can be effectively used in the diet of lactating ewes. Funding: EU PRIMA Program for Research, Technological Development & Demonstration-grant agreement n°2013/ (NEWFEED, <https://newfeed-prima.eu/>).

Session 39

Poster 18

Dietary supplementation of orange peel ingredient in lactating ewes: effect on yoghurt sensory characteristics

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Nowadays, animal feed production is increasingly favoring efficient use of alternative feedstuffs with significant potential for utilizing food industry by-products. The present study assessed the effect of dietary supplementation with dried ingredients produced from orange peels, a by-product of orange juice production, on the sensory characteristics of sheep yoghurt. Milk was collected from ewes receiving either processed (enzymatically hydrolyzed) or unprocessed orange peels (inclusion level 11% DM) (groups POP and UOP respectively) while the control group (CON) was fed a conventional diet. Three batches of yoghurt were evaluated by taste panelists, who frequently consumed sheep yoghurt. Parameters like overall appearance, colour, aroma intensity, aroma, taste intensity, taste, acidity, texture (mouth & spoon), aftertaste, and overall acceptability were assessed using a 7-point hedonic scale. ANOVA test was used to compare groups. In all groups, the scores for all parameters surpassed the acceptability threshold (score = 4), with no differences ($P > 0.05$) among treatments. In conclusion, supplementation of ewes' diet with dried orange peel, either processed or unprocessed, had no negative impact on yogurt's sensory characteristics. Funding: EU PRIMA Program for Research, Technological Development & Demonstration-grant agreement n°2013/ (NEWFEED, <https://newfeed-prima.eu/>).