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# BOOK OF ABSTRACTS JORNADAS MED 2019





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**Use of Agro-industrial By-products in Animal Feed: Chemical Composition and Nutritional Value**

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Animal feed represents one of the main costs of livestock systems. The animal feed production industry consumes large quantities of imported raw materials, including cereals and oilseed cake, leading to a high dependence on products originated abroad, with great price and composition variation. Moreover, feed production, transportation and use contribute largely to environmental impact of livestock production. The use of by-products in animal diets, instead of conventional raw materials (cereals and oil seeds), is a strategy which, besides strong product valorization, can considerably reduce costs in the use of feed compound, allow recycle agro-industrial waste and reduce the environmental impact of livestock production. In Portugal the utilization of agro-industrial by-products in animal feed is still limited and essential information on availability, nutritional value and more favorable condition of agro-industrial by-products management for application in animal feed is scarce. Within SubProMais project (<http://www.subpromais.pt/>) is ongoing the evaluation of the availability, chemical composition and nutritional value of agro-industrial by-products. After initial survey of information on availability of agro-industrial by-products in Ribatejo and Alentejo regions, several by-products from cereals, fruit, legumes and tubers production and processing and dairy industry were collected and analyzed. Some of these agro-industrial by-products are sources of energy and nutrients, being suitable for animal nutrition particularly for ruminants, which has ability to use effectively many of these feed resources. Moreover, agro-industrial by-products showed to be good sources of bioactive compounds, such as phenolic compounds and vitamins, which can be useful for added-value applications in animal diets, promoting the animal health and the quality of products.

**Keywords:** by-products, bioactive compounds, animal nutrition, livestock production, sustainability

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