The Feeding Scheme of Extensive Animal Production Systems in Montado

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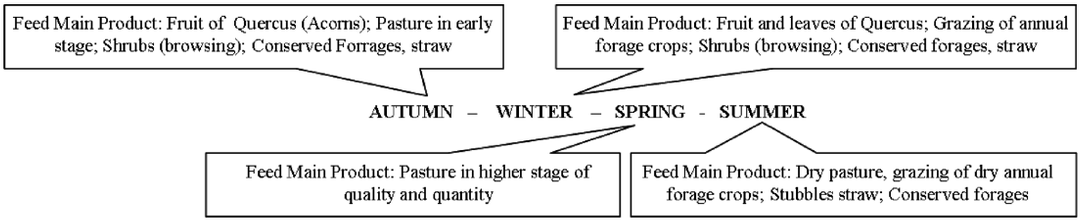
Key words : feeding ,extensive animal production ,systemic-approach .

Introduction The agro-silvo-pastoral system known as Montado" in Portugal and named Dehesas" in Spain is a characteristic of the landscape was built-up by Man and maintained for centuries by using natural resources complemented with farming activities to support the living of people .Potes et al (2003) characterized Montado" as an extensive production ecosystem very well adapted to the Mediterranean environnements with high levels of biodiversity in animals and plants and mainly based on three types of plant components : trees ,shrubs and pastures .The traditional management of the ecosystem consists on the control of shrubs and the integration of this operation into a crop rotation system getting a friendly management of environment .The most important contributions of the trees for the productive eco-system are cork ,as a source for industrial products ,fruits and leaves as complements for the complementation of the feeding scheme in extensive animal production systems .

Materials and methods Feed stuff material is based on natural resources (pasture ,shrubs and tree products) ,complemented with forage crops .The method used for built up the feeding scheme is seasonal approach :



Results and discussion Navas (2006) presented data for the seasonal variation of 1 .358 kg D .M ./ha in autumn to 2 .444 kg D . M ./ha in spring with 9 ,5 and 10 ,2% C .P .as an important contribution for carrying capacity of the systems from 250 to 300 kg L .W ./ha/year .The improvement of pasture production can be increased in C .P .contents by improving 50% on legumes frequency with lime and phosphorus fertilization (Potes et al ,2005) .All animal species use the fruit of Quercus ssp .but the Iberian pig is the more efficient in the conversion into meat products .There are some quimical differences between acorns of *Quercus rotundifolia Lam* .and *Quercus suber L* .but it is an important source of energy for such season with minim content of fatty acids required for extensive fattening of pigs .Shrubs and leaves of Quercus rotundifolia Lam analyzed when they were used by animals (autumn and winter) are feed stuffs with higher contents of fenolic compounds ,< 10% C .P .mainly as non disponible forms and useful as a natural resource complement but not as simple feed .As important complement in the feeding scheme is the forage crop included in management activities of Montado .The role of cereals in these forage crops (autumn/ winter grazing and summer consumption of regrouth) was introduced in breeding programs of ENMP and Maçãs et al (2006) presented results of 3 .540 kg D .M .for triticales and 3 .809 kg D .M .for oats on biomass production in autumn/winter .After regrouth these new varieties produced 5 .270 kg of grain ,12 .422kg of straw and 3 .323 kg of grain ,14 .495 kg of straw respectively for summer utilization .There are two types of supplements used always if necessary : conserved forages (more common hay than silage) as fibrous material for ruminants and concentrate feeds (commercial ,grains and by products) mainly for young animals and monogastrics .

Conclusions The feeding scheme of extensive animal production systems in Mediterranean environnements are based on natural resources and multifunctionality . New varieties of forage crops are essential for cover seasonal differences or interannual irregularity ; systemic approach is important to improve the use of integrated complements and subsidiary supplements in order to maximize internal products and minimize external in puts .

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