

## Operating systems of the meadows in semi-arid region of Algeria

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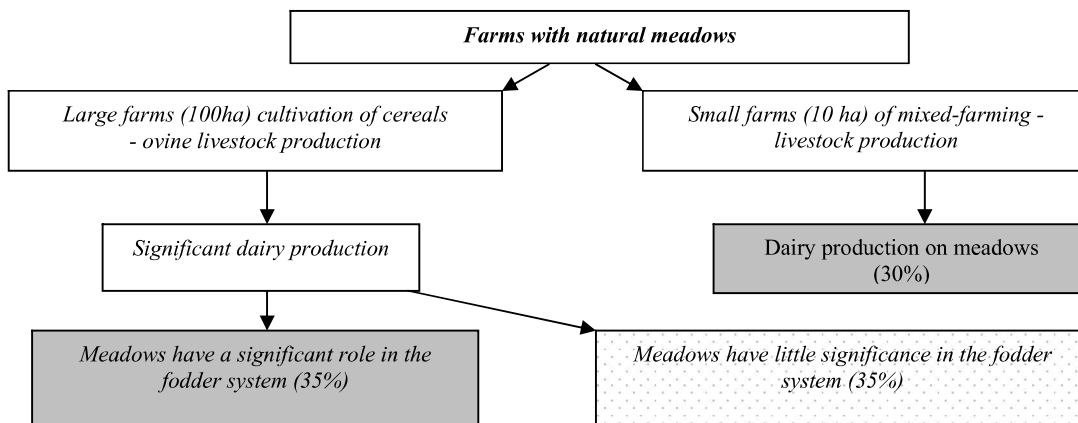
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**Introduction** Permanent meadows are the base of the fodder resources and also provide environmental services (MAP France, 2002). The function of fodder production is no longer solely to ensure bulk agricultural production. It must also allow the development of livestock products of good quality, contribute to environmental protection, the quality of the landscape and ensure a viable economic activity in the rural areas. These areas have decreased greatly (from 1 million ha at the beginning of the century (Lapeyronie, 1982) to less than 300,000 ha in 2000), in particular in the semi-arid zones at high altitude; however they contribute very effectively to natural diversity and the fight against desertification (Faye & Alary, 2001). The lack of a global solution to agricultural development and the intensification of production in certain sectors (cultivation of cereals) have induced a continued loss of meadow areas. This paper is the first study of the diversity of production systems comprising natural meadows in a small area of Algeria on a randomly selected sample of farms.

**Results** Meadow are exploited by production systems combining dryland cultivation of cereals with sheep production and of mixed farming – livestock production systems generally having irrigation resources. It constitutes a significant support for dairy production only in two situations:

- small-scale mixed-farming – dairy production
- cereal production that includes sheep and dairy production, but particularly when meadows play a significant role in the fodder system.

In these two types of production system, the quality of the meadows appears suitable for extensive pasture systems – mowing supported by irrigation and organic manure. Unfortunately these situations account for only 25% of the studied sample, showing overall that the meadows depend on dairy production and the future of state farms.



**Figure 1** Diagrammatic representation of the diversity of the exploitations having meadows

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