

Production of alfalfa seed in Italy

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Keywords: Variety, breeder, certification, control, commercialization, national catalogue, productions.

Introduction

Alfalfa (*Medicago sativa*) is considered the largest cultivated forage species in the temperate areas in the world and in Italy covers about 700,000 ha. This species is important for the ability to produce a good quality forage with low input. Alfalfa seed production is spread throughout Italy, France and Spain (Fig. 1). In Italy, about 47% of forage area is planted with alfalfa and the Italian regions where alfalfa seed is mainly produced are Emilia Romagna, Marche and Tuscany (Fig. 2). In 2012 the area for the production of alfalfa seed was 20,906 ha with a seed production of 9,006 tons.

Discussion

The analysis of twenty years ranging from 1993 to 2012, has shown, since 1993, a substantial decrease in area of planting alfalfa seed (Fig. 3). This decrease is due to several causes such as decrease of cultivated land, expanding corn production in the same areas of alfalfa production, lower demand for forage legumes due to contraction of livestock and to the availability, at favorable prices, of protein concentrates. Since 2004, there has been a reversal of trend with increasing both sown areas and seed production (Fig. 4). This trend is attributable to several factors including the European Community's (EU) Policy and a higher specialization and greater professional skills of the seed companies. In fact, alfalfa has been affected in recent years by breeding programs with a considerable increase of breeders. Seed commercialization of alfalfa is regulated by the national laws in accordance with to European legislation, where all seed control and certification steps are regulated: listing to the National Catalogue of agricultural varieties, field inspections, seed cleaning, processing and labeling, laboratory tests, and post-trial control. The future development of EU agricultural policy poses growers and seed companies with changes that can be met only with skills, high quality production and identification of a development strategy which is able to make the sector competitive. In this context, some Italian seed companies have tried to increase the quality of their products by providing farmers with coated seed of alfalfa. The pelleting provides for the coating of seeds with inert materials such as bentonite, talc, and clays, for improving the chamfer and the seed shape to facilitate sowing. Seed pelleting decreases germination slightly. The process of

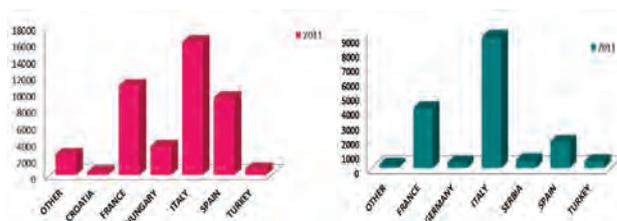


Figure 1. Alfalfa seed production in Europe: (left) ha and (right) tons.

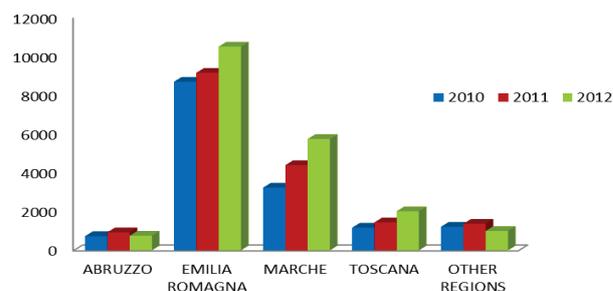


Figure 2. Geographical distribution of inspected areas for alfalfa seed production (ha) in Italy.

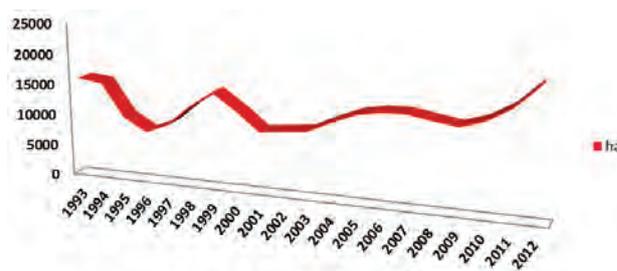


Figure 3. Alfalfa certified in Italy (ha) (1993-2012).

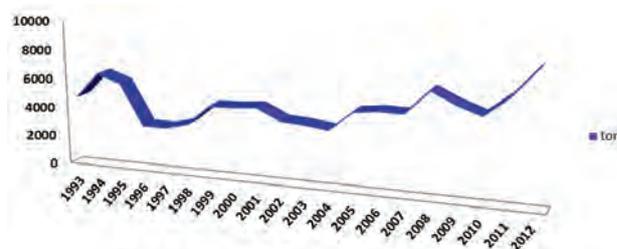


Figure 4. Alfalfa certified seed in Italy (tons) (1993-2012).

coating is performed to smooth the surface of each seed and incorporate *Rhizobium meliloti* (nitrogen-fixing bacteria) and products containing substances necessary to prevent fungal infections in the first stage of plant development.

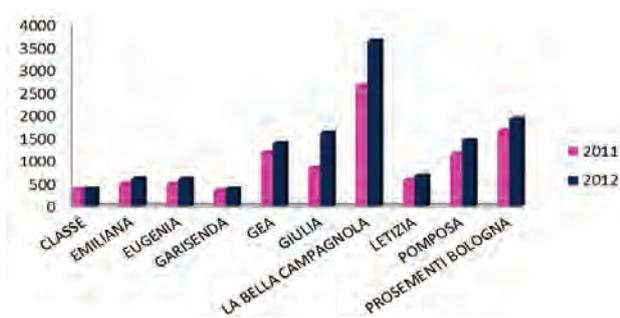


Figure 5. Widely grown alfalfa varieties in Italy (2011-2012) (ha)

Conclusion

Italy has confirmed its leadership for alfalfa seed marketing in Europe. In 2011, Italian alfalfa seed multiplication has been 19,982 hectares with a production of 8,988 tons (Fig. 1), followed by France

and Spain. The number of varieties officially certified in 2011 and 2012 have been very high (78). Ten varieties of these accounted for 60% of the varieties multiplied for seed production (Fig. 5).

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