

THE ROLE OF THE STATE IN SUPPORTING THE APIARIAN EXPLOITATIONS POLLINATION SERVICES PROVIDERS

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The pollination of entomophilous plants is a well-know example of positive externality offered by the apiarian exploitations for the farms growing entomophilous plants and for the entomophilous spontaneous flora. In this study, the authors aim to substantiate the legitimacy and the necessity of the support that must be given by the organisms of the State to the pollination services providers` apiarian exploitations. The research method utilized consists in determining the additional profit due to pollination by bees and the necessary of bees` families for the pollination of the principal entomophilous cultures existent at national level. The obtained results indicated the necessity of the support from the State for the diversification of the outputs with pollination services at the level of the exploitations with low rentability and for establishing apiarian exploitations specialized on supplying pollination services.

Key words: apiculture, pollination, agriculture policy

Establishing the legitimacy of the support that may be granted by the State to beekeepers as pollination services providers both as voluntary activity and as a collateral result of the apiarian activity involves quantifying the effect of the bee pollination on the national economy. [5]

It is also necessary to identify the ways to support efficiently and timely according the socio-economic particularities of the apiculture.

MATERIAL AND METHOD

Developing the research methodology was based on the following objectives:

- The determination of the necessary bee families for the pollination of the main entomophilous cultures existent at national level;
- The determination of the supplementary profit determined by the bee pollination.

The determination of the necessary bee families for the pollination of the main entomophilous cultures existent at national level has been realized through:

- The documentation for official sources (FAOSTAT 2009) of the species structure of the main entomophilous cultures existent at national level in 2007[4];

- Establishing the necessary bee families for the pollination of the main entomophilous cultures [1,2];
- The determination of the total number of bee families' necessary of the pollination of the main entomophilous cultures.

The determination of the supplementary profit determined by the bee pollination has been realized as a difference between the results achieved due to increased economic production produced by the bee pollination and the supplementary costs realized by the beneficiary of this service.

RESULTS AND DISCUSSIONS

The legitimacy of the apiculture support measures as a pollination services provider is given by the fact that in the 1991-2006 period the value of the marginal production due to major entomophilous crop pollination was of 1.605 mil. \$ with an annual average of 100 mil. \$. In return, if at these crops would have been made a complete pollination, the value of the supplementary production registered by the agriculture would have been of 9.970 mil \$ with an average of 623 mil \$/year.

In the framework of these assessments, it cannot be quantified the effect of sustaining biodiversity through bee pollination who holds invaluable direct and indirect effects.

The ways to support beekeeping to ensure the pollination of entomophilous crops and for sustaining the biodiversity of entomophilous species in the spontaneous flora can hold different forms:

1. Realizing an investment fund for starting apiarian farms with the primary objective of pollination services provider;
2. Realizing an investment fund for the establishment of domestic apiaries evenly distributed under a spatial issue for the complete coverage of the pollination need;
3. The elaboration of a subsidization model for pollination reported to the bee family effective whether they participate or not at the entomophilous crops pollination;
4. The subsidization of apiarian farms pollination services providers (per bee family);
5. The subsidization of pollination as a production factor in the vegetable farms;
6. Financing scientific research in apiculture for mapping and monitoring on a medium and long term of the melliferous resources and of pollinators necessary in order to achieve an efficient effect-resource balance.

1. Realizing an investment fund for starting apiarian with a primary objective of the activity of providing pollination services requires the existence of some advantages and disadvantages.

A primary advantage of this measure consists in the accelerate growth of the pollination services provider farms and, also, of the bee families number that are being utilized in this purpose through the breeding of the existent flock. [3]For the

realization of the investment, the beekeepers will acquire from the other apiarian farms or/and will breed the own flock of families.

In these conditions, a pollination services market will develop that will allow the operation of the laws of supply and demand and of competition.

Another advantage is given by the growth of the interest of the pollination services providers for the promotion of this service.

However, these type of measures have an reduced impact on the beneficiaries of pollination services that consider that anyway their cultures are being pollinated through the insects in the spontaneous fauna or through the bees in the vicinity of the farms.

In addition, upon the establishment of the apiarian farms pollination services providers remain unsolved the problems tied to the rentability and the economic viability. So, no answer is given to the redistribution need of the results obtained by society from the positive externality specific to beekeeping.

In any case, this measure can lead to increased interest from beekeepers to provide pollination services, and the dimension of the investment fund would be reduced to the investments to increase the herd of bee families that participate in pollination with approximately 520 thousands and the investment in apiarian equipment.

2. Realizing an investment fund for starting domestic apiaries distributed evenly under a spatial issue for a complete coverage of the pollination need represents an ideal way for reaching the two targets: the appropriate pollination of entomophilous crops and sustaining biodiversity.

To ensure an appropriate distribution of the bee families it would be necessary the realization of some agricultural policy levers to determine beekeepers to place the bee families evenly and to capitalize areas where there are no apiaries. This measure must be completed with detailed research regarding the volume, structure and evolution of the melliferous resources.

This measure has the same disadvantage as the previous measure because it doesn't contribute to the increase of economic competitiveness of beekeeping and in doesn't ensure the redistribution of positive externality offered voluntary or involuntary.

Also, there are not pollinated directly the entomophilous crops remaining the risk that the bees to be attracted to competitive plants species and, so, not to realize a satisfactory pollination.

3. The elaboration of a subsidization model for pollination reported to the bee families herd indifferent if these participate or not to the entomophilous crops pollination.

Such a measure is appropriate because it allows improving rentability and viability of apiarian exploitations, increasing bee farms, bee families' flock and, therefore, ensuring the pollination of the spontaneous and cultivated flora. It presents the disadvantage that a stimulation instrument for providing pollination services and reduces the beekeepers preoccupation for their farms rentability.

4. The subsidization of apiarian farms pollination providers (per bee families) determine increased interest from beekeepers for providing the pollination service accompanied by the support of apiarian vegetable exploitations.

Instead, the increase of the bee families' herd would occur slowly while the existent ones might concentrate at the level of apiarian farms in detriment of the spontaneous flora.

5. The subsidization of pollination as a production factor in the vegetable farms consists in ensuring the pollination tariff from budgetary sources. This measure might allow agricultural producers to know the pollination advantages and to recognize this service as an indispensable production factor. In this case, it is necessary the stimulation of the development of profile technical-economic consultancy and starting an intermediation department at the level of county beekeepers associations.

6. Funding scientific research in apiculture is necessary because the dimension and rentability of apiarian farms at national and international level doesn't allow the support of this activity.

Recognizing the importance of bee pollination by the actors of the economy must lead to realizing an integrated approach that would cumulate all the presented advantages for this type of measure and that can lead to the durable increase of the national economy.

CONCLUSIONS

The legitimacy and the necessity of the support given to beekeeping as a pollination provider is argued by the fact that in the 1991-2006 the value of the marginal production due to pollination at the main entomophilous crops was, on average, of 100 mil \$/year, and if at these cultures would have been realized a complete pollination the value of the average marginal production, it might have been of 623 mil \$/year.

The ways of supporting apiculture as pollination provide consist in funding investments in apiarian farms pollination services providers, stimulating the increase of the bee families flock, financial incentives to the beneficiary of this service and the funding of the scientific research applied in apiculture.

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