

The Economics of Horticultural Therapy: A European Perspective

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Abstract

Among the services that agriculture provides are healing and therapeutic benefits. In many European experiences to rehabilitate and socially integrate people with disabilities, agricultural activities have good effects. The paper presents some economic and social implication of horticultural, floricultural and nursery based rehabilitation programs for people with intellectual and psychological disabilities. It justifies policy measures to support therapeutic farming programs that foster the integration of disabled people. Italian case studies suggest that these programs reduce social exclusion, and contribute to the quality of life in rural areas.

INTRODUCTION

Horticultural Therapy (HT) studies the effects of plants on fragile people. This paper considers HT as part of 'therapeutic farming', including all activities related to agriculture and animal breeding that may improve the health and well-being of people with special needs (PSN). For a long time, therapeutic and rehabilitative programs based on agricultural activities have been run all over western Europe. An ample literature has analyzed the healing, therapeutic and rehabilitative properties of such programs. Less studied are the potentials of agriculture and related activities to contribute to the reduction of social exclusion in rural area. In general, the socioeconomic impact of HT programs deserves specific attention.

This paper outlines some of the issues concerning the economic impacts of HT programs on the 'multifunctional' role of agriculture (OECD, 1998), a topic under intensive debate in Europe. A case study of a therapeutic farm in Italy is briefly presented.

THE MULTIPLE FUNCTIONS OF EUROPEAN AGRICULTURE

The role of agriculture in European society is changing. From an industry oriented to the production of food and other goods, European agriculture is assuming new functions and moving toward being a sector responsible for the supply of several non-market services, including externalities and public goods. Some of these functions, such as environmental protection, landscape preservation, water management, food security, and conservation of rural heritage, have been widely discussed. But the role of farming as a therapeutic and rehabilitative tool for PSN, particularly those impaired for mental and psychological disabilities, has received scarce attention.

In the European Union (EU), increased awareness of the multifunctionality of agriculture has changed the Common Agricultural Policy (CAP). Within Agenda 2000, policy has shifted from market and price interventions toward rural development, the "second pillar" of support. This shift has increased attention to target resources on specific social goals, such as the fight against social exclusion in rural areas (Farrel et al., 2000). Some Rural Development Plans, designed by regional authorities according to Council Regulation 1257/99, include measures to support therapeutic farming¹.

¹ In particular, the Rural Development Plan approved by Lazio Region, in Italy, offer financial support to farms that provides therapeutic horseback riding services.

ECONOMIC ASPECTS OF THERAPEUTIC FARMING

Therapeutic farming may be studied in terms of costs and benefits. The outcomes of an agricultural based therapeutic and rehabilitative program can be represented as a non-market good. While the costs of therapeutic farming programs can be calculated relatively easily, a major problem arises in the choice of the best way to represent the value of therapeutic services. For the farm, the involvement of people with limited abilities generally reduces productivity and causes cost increases from specialized assistants and the adaptation of working areas, tools and production techniques. A typical constraint that therapeutic farms have concerns the set aside of chemicals and the adoption of organic methods of production. In the EU, such a constraint may become an opportunity because of financial supports that farmers receive when moving toward environmentally friendly production techniques.

In Western Europe an increasing number of farmers are joining the traditional productive functions with the care, rehabilitation and social integration of PSN, mainly intellectual and psychologically disabled persons. A recent study in the Netherlands (Hassink, 2002) shows social care has increased to more than 300 farms in 2001. Some of these 'sheltered' farms are independent; others are part of health institutions. In Italy, sheltered farms are present in almost every region (Franco and Senni, 2001b).

Both countries have a diversity of sheltered farms, a continuum of situations where the therapeutic or rehabilitative services prevail ('care-oriented') to situations where most production activities are market-oriented ('business-oriented') (Hassink, 2002). Most therapeutic programs studied by HT professionals concern care-oriented farms run either by public health institutions or by non-profit organizations (charities, social cooperatives, etc.) linked with health institutions. The business-oriented farms are more interesting for economists because they aim to combine the provision of a social service with economic efficiency.

Hassink has shown that the investments needed to set up a sheltered farm vary between 5,000 and 60,000 Euro, with the higher value the most care-oriented. Business-oriented sheltered farms may generate a positive net margin. Similar findings have been obtained in two Italian case studies (Franco and Senni, 2001a; De Santis, 2002)

Market-oriented sheltered farms may use social labeling of products. Social labels are "words or symbols associated with products or organizations that seek to influence the economic decisions of one set of stakeholders by describing the impact of a business process on another group of stakeholders" (Zadek et al., 1998). A farm that has therapeutic and rehabilitative purposes may increase price or quantity sold, particularly when products are directly sold to consumers. Some consumers pay higher prices for social labeled products. The extra price that these consumers are willing to pay may be considered a 'purchase of moral satisfaction' (Kahneman and Knetsch, 1992). Social labeling also may be associated with eco-labeling and the use of environmentally friendly methods of production.

From the social point of view, sheltered farms have various positive effects. First are the cost savings from reduced reliance on institutional care. For example, in Italy patients in psychiatric hospitals represent financial burdens of 1,500-2,000 Euro per month. This value could be considered as an indirect measure of society's willingness to pay for psychological care. Moreover, the outcomes of therapeutic farming can be better than those obtained in more conventional treatment therapies.

Second, the labor market is affected by therapeutic farming. In Europe, policies designed to encourage the employment of the disabled have had poor results. A recent document released by the European Commission shows that the labor market position of disabled persons is weak: 52% of people with disabilities are economically inactive, while the same percentage for non-disabled people is just 28% (European Commission, 2001). One of the main reasons for ineffective employment policies concerns information. The work capacities of the disabled are not known, and these people tend to be considered unable to undertake anything beyond the most basic work.

Agriculture has been found, for some types of disability, particularly suitable to

the working capabilities of the disabled. Employment in primary industry is 40% higher for disabled than non-disabled individuals (European Commission, 2001). Similar results have been encountered in Tuscany (Italy) (Failoni and Vergari, 2000)².

Additional non-market benefits generated by therapeutic farming programs can be present. Some authors (Marocchi, 1999) argue that therapeutic farming could play a positive role in rural development. Such effects might convey further benefits to such type of programs not considered in private economic evaluation.

A CASE STUDY

The case study farm is located in central Italy, 85 km north of Rome. The farm is 3.6 hectares, flat, and used as shown in Table 1. The farm has buildings, including a retail shop and a greenhouse. The farm practices organic production. Five patients are supervised by two assistants. Agriculture and chicken rearing activities are directed by an agricultural worker. For olive oil production, disabled patients work 700 hours per year. They pick the fruit and help in bottling and packaging. The disabled participate in vineyard cultivation (mainly pruning), bottling and labeling, for 750 hours. Chicken rearing employs the patients a small amount (120 hours a year). Patients are much involved in horticulture and the greenhouse. Labor inputs are impossible to determine. Revenues and costs of these activities are assumed equivalent.

Farm revenues are linked with product prices. The organic characteristic and on-farm direct sale bring a considerable increment to the price, a premium of 50%. Table 2 reports the farm budget. The net margin is 1,520 Euro, representing 6% of farm revenues.

CONCLUDING REMARKS

Over the past decade, supports for health-care have come under pressure in European countries as costs have risen. This situation has increased interest in the net benefits of care programs. Preliminary research reveals that therapeutic programs based on agriculture may be profitable for the enterprise and society.

A new type of agricultural enterprise, the 'care' or 'sheltered' farm, is spreading in many European countries such as: Belgium, England, France, Italy, The Netherlands, Norway and Slovenia. The social care farming conjugate the traditional productive function with the provision of different types of health and care services.

The case study analyzed, coherently with other international research results, shows that therapeutic farming can combine care-oriented with market-oriented activities making the whole business economically and financially sustainable.

More research needs to be done in this area:

- The design of a methodological framework to evaluate the social benefits of the therapeutic farming programs;
- Measurement of productivity could reveal working capacities, too often unknown.

Promoting therapeutic programs based on farming could become part of agricultural policy in some European countries. The emphasis on multifunctionality and the gradual decrease in support for conventional farming may bring European policy makers to give specific attention to the healing properties of horticultural production activities.

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² Outside Europe, same evidence has been found in a study concerning the South Shore Valley Zone in Nova Scotia (Canada). For more information see:
http://www.ns.hrdc-drhc.gc.ca/english/LMI/AddLMI/zone_disabled.htm

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Tables

Table 1. Land use in the case study farm (hectares).

Olive growing	0.50
Vineyard	0.50
Chicken rearing	0.30
Grain	1.50
Greenhouse, vegetable garden, buildings	0.80
Total	3.60

Table 2. Case study yearly budget (Euro).

Revenues		
Olive oil	4,160	16.0%
Wine	7,000	26.9%
Chickens	12,660	48.7%
<i>Total value of productions</i>	23,820	91.6%
CAP compensatory payments	1,258	4.8%
CAP organic payments	932	3.6%
<i>Total CAP payments</i>	2,190	8.4%
TOTAL REVENUES	26,010	100.0%
Variable costs		
Olive oil production	2,745	10.6%
Wine production	3,475	13.4%
Chicken production	7,500	28.8%
External consulting	1,930	7.4%
<i>Total variable costs</i>	15,650	60.2%
Fixed costs		
Rent	780	3.0%
Mortgages	2,100	8.1%
Maintenance	1,520	5.8%
Certification costs	240	0.9%
General costs	480	1.8%
Therapeutic assistance	3,720	14.3%
<i>Total fixed costs</i>	8,840	34.0%
NET MARGIN	1,520	5.8%