



Alma Mater Studiorum - UNIVERSITÀ DI BOLOGNA

DEIAGRA – DIPARTIMENTO DI ECONOMIA E INGEGNERIA AGRARIE  
Department of Agricultural Economics and Agricultural Engineering

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DEIAGRA

DEPARTMENT OF  
AGRICULTURAL ECONOMICS AND AGRICULTURAL ENGINEERING  
REPORT 2000-2003

**RURAL APPRAISAL AND ACCOUNTING SECTION**



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## 1. A research review

### 1.a) Present research activities

The research activity of the Section of Rural Appraisal and Accounting concerns four main areas:

- Rural appraisal and environmental assessment
- Marketing of agricultural products
- Farm management
- Rural development

#### *Rural appraisal and environmental assessment*

This area of research covers evaluation issues such as the appraisal of real estate, the estimation of production costs and farm profitability, fiscal issues in agriculture, the structural adjustment of agriculture and the analysis of real estate markets. The analysis of real estate markets took a systematic character in 1970, with the establishment of the “Bank of prices”, aimed at improving the transparency of the land market through a continuous survey of transactions. The growing attention to environmental and local development issues stimulated over years the widening and innovation of research activities. New themes were added to the more traditional ones, such as: landscape and environmental valuation, environmental impact assessment and environmental accounting, as well as the evaluation and management of agriculture-related resources.

#### *Marketing of agricultural products*

This area of research is devoted to the marketing of agricultural products, to the analysis of commercial structures and the forms of economic organisation of markets operators, and to the analysis of the food chains, including food processing. In particular, studies are under way concerning the competitiveness and the exchanges of horticultural products, the integration of agri-food chains and networks, electronic commerce, the valorisation of high quality and typical products, as well as the use of trademarks for horticultural products, the economics of organic farming and agriturismo.

#### *Farm management*

The research activity in this field concerns the study of models of economic optimisation of farm choices and the diffusion of innovation in fruit farms, the analysis of information in agriculture, the testing of optimisation at farm level and in the production of PC tools for farm management. Other researches concern the new societal forms in agriculture, the forms of organisation and analysis of production chains, the methodology for farm planning and the services to farm management. A traditional research field, still highly lively, is the economic and financial analysis as well as the analysis of production costs of enterprises operating in the agri-food system. Finally, as administration is concerned, studies are under way concerning the methodologies for farm accounting, the production and analysis of balance sheets, as well as the evaluation of the results of farm management. Such activity is particularly linked to that of the “Ufficio di contabilità agraria” (Farm accounting office) connected to the Section. At

present, research is under way for the construction of accounting models for agricultural co-operatives and for the re-definition of accounting methodologies by cost centres.

### *Rural development*

In the last years, rural development and agri-environmental policies have had a growing relevance in research activity. The studies under way concern in particular the impact of structural policies and agri-environmental schemes, as well as the analysis of organisational structures and contract formulation for the implementation of rural development measures. Some researches are also oriented to the study of rural development countries in transition in Eastern Europe and the Balkans, in particular Romania and Albania. The issue of research needs is also considered.

#### **1.b) Emerging issues and research strategies**

In the last years, a number of further research issues have arisen, in relation to the changing role of agriculture in society. According to these trends, the section is aiming at exploiting the expertise of its staff on new researches, focusing, in particular, on the following issues:

- Food safety and security
- Food quality and traceability
- Multifunctional agriculture
- Irrigation and water management
- GMO

Research in this fields is developed through a strong attention to international cooperation. At present the section is involved in 2 RTD research projects funded under the 5<sup>th</sup> and the 6<sup>th</sup> EU framework programmes, as well as development (EQUAL), international cooperation (TEMPUS) and bilateral exchange (VIGONI) projects.

Through these and other projects, the section can carry out its research activities within a wide international network including almost all EU countries, USA, and different eastern European countries. Links with China and Japan are also developing.

At present, the staff of the section is involved in at least 3 IPs, 2 STREPs and 1 CA under evaluation by the EU commission within the 6<sup>th</sup> framework programme.

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## 2. Completed research

### 2.a) Rural appraisal and accounting area – Rural appraisal and environmental assessment

**2.1)** Title: Aspetti politici e istituzionali connessi alla gestione forestale sostenibile (Policy and institutional issues connected with sustainable forestry management) - Programma Operativo Multiregionale “Attività di sostegno ai servizi di sviluppo per l’Agricoltura” - Misura 2 - “Innovazioni tecnologiche e trasferimento dei risultati” - Progetto B28 “Nuove Metodologie per la Gestione dei Sistemi Forestali Complessi nell’Italia Meridionale” (SISFOR)

Reference period: 1999-2001

Research staff: D. Regazzi, C. Malagoli, N. Stanzani

Aim and state of the research: Aim of the research was to survey the regulatory activity in favour of woodlands in the regions involved (Basilicata, Calabria, Campania, Sardegna e Sicilia), to analyse the state of the advisory and extension services, to analyse the state of funding for the exploitation of forests and to examine the activities connected with forestry.

Collaborations, contracts, funds: European Community (FEOGA) – Ministry of agricultural and forestry policies

Number of related publications: 1

- 1) C. Malagoli, N. Stanzani, Aspetti politici e istituzionali connessi alla gestione forestale sostenibile [Policy and institutional issues connected to sustainable forestry management]

**2.2)** Title: Evidenziazione dei risultati economici e delle prospettive di mercato degli investimenti in arboricoltura da legno (Highlighting of economic results and market perspectives of investments in woodland growing) - Programma Operativo Multiregionale “Attività di sostegno ai servizi di sviluppo per l’Agricoltura” - Misura 2 - “Innovazioni tecnologiche e trasferimento dei risultati” - Progetto A29 “ Modelli per un’arboricoltura da legno sostenibile nelle regioni dell’Italia Meridionale” (MARBOLEG)

Reference period: 1999-2001

Research staff: D. Regazzi, C. Malagoli, N. Stanzani

Aim and state of the research : The aim of the research is to collect data about cultivation costs and farm characteristics, to survey the market prices of woodland products, to study the modalities for technical advice and public funding, to study the way in which woodland products are marketed, including promotion activities and organisational strategies, and the simulation of financial results of single plantations.

Collaborations, contracts, funds: European Community (FEOGA) – Ministry of agricultural and forestry policies

Number of related publications: 4

- 1) N. Stanzani, Noce da legno, prospettive concrete, Terra e vita n. 13/2001 [Wood nuts, concrete perspectives]
- 2) F. Raddi, N. Stanzani, I parametri per valutare il prodotto legno sul mercato, L’Informatore Agrario n. 38/2001 [Parameters for the evaluation of wood product on the market]
- 3) AA.VV. (a cura di G. Minotta), L’arboricoltura da legno: un’attività produttiva al servizio dell’ambiente – “Libro Bianco” sulle produzioni legnose fuori foresta in Italia, Edizioni Avenue media, Bologna, 2003 [Woodland growing: a production servicing the environment]
- 4) D. Regazzi, C. Malagoli, N. Stanzani, Aspetti economici e commerciali dell’arboricoltura da legno [Economic and commercial aspects of woodland growing]

**2.3)** Title: Uso del suolo e valore dei fondi nell'Appennino Piacentino in età romana imperiale: una rilettura della Tabula alimentaria veleiate finalizzata alla ricostruzione del paesaggio e della strutture economiche. (Land use and value of real estate in the Placentia Appennine in roman imperial age: a reading of the Tabula alimentaria veleiate aimed at the re-construction of the landscape and the economic structures)

Reference period: 2001-2002

Research staff: D.Viaggi

Aim and state of the research : The aim of the research is to understand land use and real estate value determinants in the Placentia Appennine during the roman imperial age, through the analysis of the Tabula alimentaria veleiate. The analysis has been carried out through the construction of a GIS, descriptive statistics and a regression analysis.

Collaborations, contracts, funds: CNR Agenzia 2000, 4.000 euro

Number of related publications: 1

- 1) I. Di Cocco e D. Viaggi (2003): *Dalla scacchiera alla macchia. Il paesaggio agrario veleiate tra centuriazione e incolto*, Ante Quem, Studi e scavi - nuova serie, 2, Bologna. [From chessboard to 'macchia'. The Velleia landscape between centuriation and uncultivated land]

## **2.b) Rural appraisal and accounting area – Marketing of agricultural products**

**2.4)** Title: La tracciabilità nel settore frutticolo: analisi delle metodologie (Traceability in the fruit sector: analysis of methodologies)

Reference period: 2000

Research staff: D. Viaggi; A. Palmieri; R. Centonze; A. Castellini; S. Di Pasquale.

Aim and state of the research : The objective of the project is to verify whether traceability can represent a tool for the fruit-product supply chain management.

The methodology includes an overview of the existing systems of services to enterprises as well as a description of the current projects, in order to classify the existing market opportunities.

Collaborations, contracts, funds: Progetto giovani ricercatori; fondi Ministeriali, 2.044 Euro

Number of related publications: 0

**2.5)** Title: Agroalimentare e flussi turistici: un modello di previsione (Agri-food and Tourism flows: a forecasting model)

Reference period: 1999-2002

Research staff: D. Regazzi, C. Pirazzoli, M. Canavari, A. Castellini, A. Ragazzoni, R. Spadoni, R. Centonze, S. Rivaroli

The purpose was to identify and analyse synergies and intereactions among the agri-food supply and the development of tourism in the areas considered. A special attention was devoted to the quality products more linked with the local tradition

Collaborations, contracts, funds: 17.000 euro

Number of related publications: 2

- 1) Ragazzoni A., Spadoni R. (2000), Agritourism and agro-environmental programmes in the Province of Modena, in: AA. VV ., 'Agritourism and Rural Tourism. A key option for the Rural Integrated and Sustainable Development Strategy', 1st World Forum on Agritourism and Rural Tourism, Perugia, Sept. 21-22, 2000. IAERT-*Informal International Association of Experts in Rural Tourism*, Perugia
- 2) Canavari M. *et al.* (2003), *Agroalimentare e turismo in Emilia-Romagna e Umbria*, Avenue Media, Bologna [Agri-food and tourism in Emilia-Romagna and Umbria]

**2.6) Title:** Analisi della MOC UNACOA (Analysis of the UNACOA Macro-trade-organisations)

Reference period: 1999-2000

Research staff: D. Regazzi, M. Canavari

The aim is to analyse the attitude of a sample of large retail buyers in Europe towards the range of produce supplied by the MOC UNACOA

Collaborations, contracts, funds: 4.000 euro

Number of related publications: private report

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**2.7) Title:** Osservatorio CSO sul posizionamento della frutta nella GD (Large retail monitoring of fruit positioning)

Reference period: 1999-2000

Research staff: D. Regazzi, M. Canavari

The task entrusted to the Department was to organise the weekly collection of data on the positioning of fruit and vegetables in outlets of large retailers in Italy and Europe, aimed at publishing a weekly report addressed to the professional users and to produce a final report considering a two-years time series.

Collaborations, contracts, funds: 7.000 euro

Number of related publications: 1

- 1) Pirazzoli C., Regazzi D., Canavari M., Spadoni R., Palmieri A., Bazzani G.M. (2001) Prezzi e competitività della filiera peschicola - un'analisi sui maggiori sistemi produttivi europei. CSO, Ferrara [Prices and competitiveness in the peach chain – an analysis of the main production systems in Europe]
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**2.8) Title:** Biofruit - Qualità e mercato della frutta ottenuta con sistemi biologici (Quality and market of the organic fruits)

Reference period: 2000-2002

Research staff: C. Pirazzoli, D. Regazzi, M. Canavari, R. Spadoni, A. Ragazzoni

Aim and state of the research : The aim of the project is to realize an economical comparison between the organic fruit chain and the conventional one. The organic fruits are cultivated under the rules of the Reg. 1991/2092/EC. A market survey shows the consumer preferences and opinion about these products and the purchase willingness for organic or conventional products.

Collaborations, contracts, funds: 19.000 euro

Number of related publications: internal seminars, the results will be published the next year

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**2.9)** Title: Il mercato delle erbe e dei fitoderivati per l'alimentazione e per la salute nella moderna società (The market of herbals for nutrition and in the modern society)

Reference period: 2001-2002

Research staff: A. Castellini, C. Pirazzoli

Aim and state of the research : Survey about the dimension, the operators and the characteristics of the herbals market for nutrition and, contemporary, for the health of the consumer. Analysis of enriched food and the new food concept.

Collaborations, contracts, funds: 20.000 euro, research contract with bank Foundation

Number of related publications: 1

- 1) A. Castellini, C. Pirazzoli, M. Canavari (2002), Functional foods in the European Union: an overview of the sector's main issues, Oral contributed prepared for the 8<sup>th</sup> Joint Conference on Food, Agriculture and the Environment, August, 2002 Red Cedar Lake, Wisconsin, USA, University of Minnesota, Working Paper WP02-12, october 2002

**2.10) Title:** Progetto Frutticoltura - Competitività economica di sistemi produttivi dell'Unione europea (Project Fruit cultures - Economical competitiveness of productive systems in European Union)

Reference period: 2001-2003

Research staff: D. Regazzi, C. Pirazzoli, M. Canavari, A. Ragazzoni, R. Spadoni, A. Castellini

Aim and state of the research : The objectives of this project are: 1) constitution and evaluation of new cultivars for some fruit species (apricot, peaches, etc.); study of production techniques and their improvement; 3) analysis of the production and conditioning costs in the main European competitors for these fruits and exam of the market. (in co-operation with other research institutes)

Collaborations, contracts, funds: 11.500 euro

Number of related publications: 4

- 1) C. Pirazzoli, D. Regazzi, A. Castellini, M. Canavari, A. Palmieri, R. Spadoni, V. Mazzotti (2002), La coltivazione dell'actinidia nell'Unione europea: comparazione economica tra i principali sistemi produttivi, Centro Servizi Ortofrutticoli, Ferrara.[The cultivation of kiwi in the European Union: economical comparison between the main productive systems]
- 2) C. Pirazzoli, M. Canavari, (2002), An economics analisys of the agricultural side of pear supply-chain in Souththern Europe and China, VIII International Symposium on Pear – ISHS Acta Horticulturae, n. 596, december 2002, Volume I.
- 3) C. Pirazzoli, A. Ragazzoni, A. Castellini (2003), Il nuovo sistema di imballaggio per l'ortofrutta CPR System, Rivista di Frutticoltura e di ortofloricoltura, n. 2, febbraio 2003, pagg. 23-26, Il Sole 24 Ore – Edagricole [New packaging system for fruit and vegetable products, the CPR system]
- 4) C. Pirazzoli, D. Regazzi, A. Castellini, M. Canavari, A. Palmieri, V. Mazzotti (2003), La coltivazione del pero nell'Unione europea: comparazione economica tra i principali sistemi produttivi, aprile 2003, Centro Servizi Ortofrutticoli, Ferrara. [The cultivation of pear in the European Union: economical comparison between the main productive systems]

**2.11) Title:** La tracciabilità come strumento di garanzia, di sicurezza e di miglioramento della qualità della produzione frutticola (Traceability as tool for warranty, security and improvement of fruit-products quality)

Reference period: 2002

Research staff: D. Regazzi; M. Canavari; R. Spadoni; A. Castellini; R. Centonze.

Aim and state of the research : The objective of the project is to design a management system able to follow the movement of the fruit-products at any stage of the supply chain. This allows the optimisation of the process as well as the security of the products.

The methodology includes direct interviews and the analysis of a case study to design a preliminary model of the traceability system to be proposed.

Collaborations, contracts, funds: Ricerca Fondamentale Orientata, 17.862,25 Euro

Number of related publications: forthcoming

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**2.12) Title:** Marketing e commercio elettronico in agricoltura: aspetti economici ed organizzativi. (Marketing and electronic commerce in agriculture: economic and organisational aspects)

Reference period: 2002

Research staff: V. Gallerani, D. Viaggi, M. Canavari, D. Miniucchi

Aim and state of the research : The aim of the research is to understand EC implementation level and its motivations, features and strategies, together with expectations about its future development and the successful strategies followed by EC adopters. The methodology is based on a survey carried out in Emilia-Romagna during 2002, coupled with the content analysis of a sample of web sites.

Collaborations, contracts, funds: Regione Emilia Romagna, L.R. 28, 5.040 euro

Number of related publications: 1

- 1) M. Canavari, D. Miniucchi, G. Nocella e D. Viaggi (2003): Electronic commerce in agriculture and agribusiness: the case of Emilia Romagna (Italy), *Proceedings of the EFITA 2003 Conference*, Debrecen, 5-9 luglio 2003.
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## **2.c) Rural appraisal and accounting area**

### **– Farm management**

**2.13)** Title: Integrazione nella filiera dei cereali e delle proteoleaginose. (Integration in the cereal and protein chain)

Reference period: 2000

Research staff: V.Gallerani, D. Viaggi, S. Di Pasquale,

Aim and state of the research : The aim of the research is to identify the factors affecting the choice of farmers to participate in cereal production contracts, in order to support farm advice in contract decisions. The analysis has been carried out through a survey of farmers in the province of Bologna and a cluster analysis. The results are groups of farmers that show different attitudes towards contract acceptance and towards different kinds of contracts.

Collaborations, contracts, funds: Regione Emilia Romagna, L.R. 28, 4.200

Number of related publications: 1

- 1) S. Di Pasquale e D. Viaggi (2001): Contratti di coltivazione e innovazione tecnologica nella filiera dei cereali: comportamento e strategie delle imprese agricole, in Pirazzoli C. (a cura di) (2001): *Innovazione e Ricerca nell'Agricoltura Italiana*, Atti del XXXVII Convegno SIDEA, Bologna, Avenue media, pp. 423-435.[Cultivation contracts and technological innovation in the cereal chain: farms' behaviour and strategies]

**2.14)** Title: Supporto alla filiera dei cereali e delle proteoleaginose - Azione 1. (Support to the cereal and protein chain)

Reference period: 2000

Research staff: V.Gallerani, D. Viaggi, S. Di Pasquale,

Aim and state of the research : The aim of there search is to design a PC decision support tool able to help farm advisers in strategic planning at farm level. The tool uses data bases provided by CSA and Consorzio agrario, and works through a guided linear programming modelling of farm constraints, decision variables and objectives.

Collaborations, contracts, funds: Regione Emilia Romagna, L.R. 28, 5.000 euro

Number of related publications: 0

**2.15) Title:** Nuove forme contrattuali sul lavoro in agricoltura (New contractual forms for the work in agriculture)

Reference period: 2000-2001

Research staff: C. Pirazzoli, R. Ghelfi

Aim and state of the research : The main objective of the project is looking for new contractual forms in agriculture in order to employ EU and Extra-EU labour with more profitable costs. This serve to improve some phases of the fruit production cycle which employ several operators, in particular the harvest.

Collaborations, contracts, funds: in collaboration with the Centro Servizi Ortofrutticoli, Ferrara

Number of related publications: 2

- 1) C. Pirazzoli, R. Ghelfi (2001), New contractual form for Italian fruit-farm workers, in *Economics of contract in agriculture and the food supply chain*, 78<sup>th</sup> European Association of Agriculture Economists (EAAE) Seminar, NJF seminar Nr. 330, Copenhagen, pagg. 15
- 2) C. Pirazzoli, R. Ghelfi (2003), Nuove forme contrattuali nell'ortofrutta, Comunicazione presentata in occasione del XXXIX Convegno di Studio SIDEA *Nuove tipologie di impresa nell'agricoltura italiana*, Firenze, 12-14 settembre 2002, Centro Stampa 2P, Firenze Pontassieve, settembre 2003 [New contractual form in the fruit chain]

**2.16) Title:** Progetto orticoltura – Sottoprogetto: Sistemi e tecnologie di produzioni in piena aria – Ricerca: Analisi tecnico-economica di sistemi produttivi a ridotto impatto ambientale attuati in aziende orticole del nord Italia (Project Horticulture – Sub-project: Systems and technologies of agricultural production open air – Research title: Technical-economical analysis of production systems with a low environmental impact in horticultural farms in Northern Italy)

Reference period: 2000-2002

Research staff: C. Pirazzoli, D. Regazzi A. Ragazzoni, R. Ghelfi, A. Castellini, A. Palmieri

Aim and state of the research : The aims of this project are: 1) technical-economical analysis of the sustainable production in agriculture (specifically for the most representative horticultural species in some Italian areas) and computation of the production costs and of the profitability; 2) analysis of the commercialization forms and the main channels of distribution used; 3) planning actions for the economical valorisation of these agricultural products, promoting their environmental sustainability

Collaborations, contracts, funds: 11.000 euro

Number of related publications: 2

- 1) C. Pirazzoli, A. Castellini, A. Palmieri (2002): Analisi economica di sistemi produttivi a ridotto impatto ambientale nel Nord Italia, Atti del seminario di studio su *Sostenibilità dei sistemi produttivi e valorizzazione dei prodotti orticoli*, ISPORT del MIPAF, Sez. Orticoltura della SOI, DEIAGRA dell'Università di Bologna, Edizioni AvenueMedia, Bologna. [Economic analysis of productive systems with a low environmental impact in Northern Italy]
- 2) C. Pirazzoli (2000), A decision support system for the economic-environmental assessment of crop production, in *Tomorrow's Agriculture: Incentives, Institutions, Infrastructure and Innovations*, XXIV<sup>th</sup> IAAE – Berlin 13-18 august 2000, Edited by G.H. Peters, International Development Centre, Queen Elizabeth House, University of Oxford, England and Prabhu Pingali, International Wheat and Maize Improvement Centre, Mexico City, (2001) Mexico

## 2.d) Rural appraisal and accounting area – Rural development

**2.17)** Title: Economia dei beni e servizi ambientali in rapporto alle attività produttive tradizionali nelle aree agroforestali, montane e collinari (The economy of the environmental goods and services referred to the traditional activities presents in the agri-forestal areas of the hill and the mountain).

Reference period: 1997-2000

Research staff: C. Pirazzoli, A. Castellini, A. Palmieri

Aim and state of the research : Analysis of the agricultural processes which could be relevant in hill and mountain areas of the Northern Italy for the economic valorisation of these sites linked to an environmental sustainability. Furthermore, the development of profitable activities aids to maintain and, sometimes, to attract entrepreneurs and farmers in areas threatened by the depopulation.

Collaborations, contracts, funds: Ministerial funds, 8.000 euro

Number of related publications: 1

- 1) C. Pirazzoli, A. Castellini (2000): Application of a model for evaluating the environmental sustainability of cultures in hill and mountain areas – The case of berries and fruit chestnuts in Northern Italy, in *Agricultural Economics Review*, n. 1, pag. 57-70

**2.18) Title:** La definizione di modelli economico-ambientali di simulazione aziendale per la previsione dei consumi idrici. (The definition of economic-environmental farm-level models for the forecasting of water use)

Reference period: 2000

Research staff: D. Viaggi, S. Di Pasquale

Aim and state of the research : The aim of the research is the definition of economic-environmental farm-level models for the forecasting of water demand and impact assessment of possible policy scenario. The methodology adopted is mathematical programming, assuming a multicriteria objective function.

Collaborations, contracts, funds: Progetto Giovani Ricercatori, 3.500 euro

Number of related publications: 2+1 poster

- 1) G. Bazzani, S. Di Pasquale, V. Gallerani, D. Viaggi, A. D'Amore, A. Fabbri e M. Gomez Barbero (2001): La agricultura de regadio en Italia y el impacto de la Directiva Marco de Aguas, *Seminario internazionale "La agricultura de regadio europea y la Directiva Marco de Aguas*, Madrid, 27 settembre 2001.[The irrigated agriculture in Italy and the impact of Marco de Aguas Directive]
- 2) G. M. Bazzani, S. Di Pasquale, V. Gallerani, C. Rosselli del Turco, D.Viaggi (2001): Strumenti per la regolazione dell'uso dell'acqua irrigua alla luce della direttiva quadro sull'acqua, *XXXVIII convegno SIDEA*, Catania, 27-29 settembre 2001 (in pub.). [Instruments for the regulation of irrigation water use under the water framework directive]

Posters

- 1) G.M. Bazzani, S. Di Pasquale, V. Gallerani, C. Rosselli Del Turco (2001): A decision support system for the evaluation of water policy instruments in agriculture after the Water Framework Directive, *World Water Congress*, International Water Association, Berlin 15th-19th October 2001.

**2.19) Title:** ENTERPRISING - Creation of a Pilot Centre for the Development of the Co-operation University/Enterprise and the Improvement of Human Resources

Reference period: 2000-2001

Research staff: V. Gallerani, D. Viaggi, S. Di Pasquale, D. Miniucchi

Aim and state of the research : The aim of the project is to promote Human Resources and to improve high education's quality through the innovation in the university curricula and the creation of job placement institutions and job creation support systems, stemming from the knowledge of the territorial situation, the civil society needs and the demand for education and information. In particular, its objective is the creation of a Pilot Centre constantly interacting with the territory, integrating the skills available in order to answer to the needs of creating new productive activities as well as to the companies' demands of specialization and innovation.

Collaborations, contracts, funds: Tempus Phare Joint European Project AC\_JEP-14135-1999, 10.300 euro

Number of related publications: 4 books, newsletter (4 issues).

- 1) D. Viaggi (editor) (2001): *La cooperazione tra Università, impresa e lavoro: esperienze, problemi e prospettive in Italia ed Albania*, Enterprising, Bologna.[The co-operation between university, enterprise and labour: experiences and perspectives in Italy and Albania]
- 2) D. Viaggi (editor) (2001): *Imprese e sviluppo economico in Albania*, Enterprising, Bologna.[Enterprises and economic development in Albania]
- 3) D. Viaggi (editor) (2002): *Università e sviluppo delle imprese in Albania. Risultati di un'analisi territoriale*, Enterprising, Bologna.[University and enterprise development in Albania: results of a territorial analysis]
- 4) D. Viaggi (editor) (2002): *Qocun: a centre for University/enterprise co-operation in Albania*, Enterprising, Bologna.

**2.20) Title:** Strumenti contrattuali per l'applicazione delle politiche agroambientali. (Contract instruments for the application of agri-environmental policies)

Reference period: 2000

Research staff: V.Gallerani, D. Viaggi, S. Di Pasquale, A Ragazzoni

Aim and state of the research : The aim of the research is to develop innovative contract instruments for the application of agri-environmental policies. In particular, the use of auction of contracts have been modelled and tested on two case studies in Emilia-Romagna, comparing the result with standard flat rate policy mechanisms.

Collaborations, contracts, funds: Regione Emilia Romagna, L.R. 28, 6.000 euro

Number of related publications: 2+1 in publication

- 1) G. M. Bazzani e D. Viaggi (2001): Strumenti per l'applicazione delle politiche agroambientali: le aste di contratti, in Pirazzoli C. (a cura di) (2001): *Innovazione e Ricerca nell'Agricoltura Italiana*, Atti del XXXVII Convegno SIDEA, Bologna, Avenue media, pp. 533-546.[Instruments for the application of agri-environmental policies: the auctions of contracts]
- 2) G. M. Bazzani, A. Ragazzoni e D. Viaggi (2002): Application of agri-environmental programs in Emilia-Romagna Region, in Canavari M., Caggiati P., Easter K.W. (a cura di) (2002): *Economic Studies on Food, Agriculture and the Environment*, Kluwer Academic/Plenum Publishers, New York.
- 3) G. M. Bazzani e D. Viaggi, Theory of contracts and agri-environmental policies: contribution to the design of improved policy instruments, *Agricultural economics review* (in pub.).

**2.21)** Title: Valutazione delle condizioni di sviluppo rurale e di qualità della vita nelle aree rurali dell'Emilia-Romagna. (The evaluation of the conditions of rural development and of quality of life in rural areas of Emilia-Romagna)

Reference period: 2000

Research staff: V.Gallerani, D. Viaggi, S. Di Pasquale, G.Zanni

Aim and state of the research : The objective of the project is the evaluation of the conditions of rural development and of quality of life in rural areas of Emilia-Romagna. The evaluation has been carried out through multiobjective fuzzy logic. The methodology has allowed a classification of rural municipalities to be used as a support to the targeting of rural development measures.

Collaborations, contracts, funds: Regione Emilia Romagna, L.R. 28., 5.800 euro

Number of related publications: 2

- 1) G. Bazzani, S. Di Pasquale, D. Viaggi e G. Zanni (2002): Evaluation of the quality of life as a support to the management of interventions for rural development, in Arzeni A., Esposti R. e Sotte F. (a cura di) (2002): *Policy Experiences with Rural Development in a Diversified Europe*, Wissenschaftsverlag Vauk, Kiel.
- 2) G. Bazzani, S. Di Pasquale, D. Viaggi e G. Zanni (2002): La valutazione della qualità della vita come supporto alla gestione degli interventi di sviluppo rurale, in Arzeni A., Esposti R. e Sotte F. (a cura di) (2003): *Politiche di sviluppo rurale tra programmazione e valutazione*, FrancoAngeli, Milano.[Evaluation of the quality of life as a support to the management of interventions for rural development]

**2.22)** Title: Valorizzazione dei prodotti tipici e crescita dell'economia locale: studio di fattibilità per la realizzazione di un nuovo caseificio per la produzione di formaggio di fossa di Sogliano (Valorization of the typical products and increase of the local economics: feasibility study for the construction of a new dairy factory for the production of the "formaggio di fossa di Sogliano" cheese)

Reference period: 2002

Research staff: C. Pirazzoli, D. Regazzi, A. Venturi, P. Tassinari, D. Torregiani, E. Samonati

Aim and state of the research : to promote the valorization of the typical products of the territory and the increase of the local economics, through the realization of a new dairy factory for the production of the "formaggio di fossa" cheese. The project has been shared in three steps: - productive and territorial analysis; - planning a building logical solution; economic analysis.

Collaborations, contracts, funds: 20.658 euro

Number of related publications: 1

- 1) C. Pirazzoli, D. Regazzi, A. Venturi, P. Tassinari, D. Torregiani, E. Samonati (2002): Formaggio di fossa di Sogliano: studio di fattibilità di un progetto di razionalizzazione della filiera, pubblicato a cura del DEIAgra e del Comune di Sogliano. ["Formaggio di fossa di Sogliano" cheese: feasibility study of a project about the planning of this dairy chain]

**2.23) Title:** Il monitoraggio e la valutazione delle organizzazioni comuni di mercato e delle politiche strutturali (Monitoring and evaluation of agricultural policies)

Reference period: 2002

Research staff: A.Bertazzoli (responsabile scientifico), V.Gallerani, R.Ghelfi, C.Malagoli, D.Viaggi

Aim and state of the research : The objective of the project is the identification of new methodologies to evaluate agricultural market and structural policies

Collaborations, contracts, funds: Regione Emilia-Romagna, University of Bologna, € 18.000

Number of related publications: 2

- 1) Bertazzoli, A. Fiorini, R.Ghelfi, T.Schipani (2003): La valutazione del Reg. (CE) 950/97 nel periodo di programmazione 1994-1999, in Arzeni A., Esposti R. e Sotte F. (a cura di) (2003): *Politiche di sviluppo rurale tra programmazione e valutazione*, FrancoAngeli, Milano. [Evaluation of the Reg. 950/97/EC during the programming period 1994-1999]
- 2) G. Bazzani, S. Di Pasquale, D.Viaggi e G. Zanni (2003): La valutazione della qualità della vita come supporto alla gestione degli interventi di sviluppo rurale, in Arzeni A., Esposti R. e Sotte F. (a cura di) (2003): *Politiche di sviluppo rurale tra programmazione e valutazione*, FrancoAngeli, Milano. [Evaluation of the life quality as support to the management of the rural development actions]

**2.24) Title:** Organizzazione della domanda di ricerca 2002. (Organisation of research demand 2002)

Reference period: 2002

Research staff: V.Gallerani, D. Viaggi

Aim and state of the research : The aim of the research is to identify likely research requirements for agriculture in Emilia-Romagna, with the purpose to support the regional funding of applied research in the field, with particular reference to economic research. The study was conducted through interview to key actors, used to identify possible agricultural development scenarios and the consequent research needs by the sector.

Collaborations, contracts, funds: Regione Emilia Romagna, L.R. 28, 5.100 euro

Number of related publications: 0

**2.25) Title:** Monitoraggio e valutazione dell'OCM ortofrutta (Monitoring and evaluation of fruit and vegetables CMO)

Reference period: 2003

Research staff: A.Bertazzoli (responsabile scientifico), G.Nardone, P.Columba, C.Giacomini, A.Cioffi, G.Petriccione, L.Briamonte (INEA research)

Aim and state of the research : The objective of the project is the fine tuning of methodologies devoted to the evaluation of market policies, with respect to the CMO for fruit and vegetables. A case history will be developed referring to Italian producers organizations

Collaborations, contracts, funds: Inea, researchers of other Universities

Number of related publications: 0

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### **3. Technical activities**

#### **3.a) Ufficio di contabilità agraria (Farm accounting office)**

Address: viale Fanin, 50- 40127 Bologna - Italy.

Tel. (+39)0512096132, Fax (+39)0512096105

e-mail: [uffcont@pop.agrsci.unibo.it](mailto:uffcont@pop.agrsci.unibo.it)

The farm accounting office, working since 1961, has been the first accounting centre, based on rational accounting tools to be constructed in Italy.

The office is devoted to the study of methodologies for the farm accounting, for the formulation and analysis of balance sheets, as well as for the evaluation of the economic results of the farms. For its activity, the office benefits of the accounting information of a group of farms -about sixty - to which a management support services is provided. The farms, located in Emilia-Romagna and Tuscany regions seems to adequately represent the main type of farming: field crops, fruit-growing, wine-growing, husbandry.

This activity has allowed to generate a relevant information basis, from which it is possible to obtain articulated results deriving from both general and analytical accounting.

The centre owns a dedicated book - keeping software that is a freeware for the farms. Three people are involved in the activity of the centre.

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## 4. Research in progress

### 4.a) Rural appraisal and accounting area – Marketing of agricultural products

**4.1)** Title: Preferenze dei consumatori su problematiche riguardanti la sicurezza alimentare ed ambientale: prospettive circa l'utilizzo di internet come strumento di indagine (Consumer preferences with respect to food safety: a survey through Internet)

Reference period: 2003

Research staff: A.Bertazzoli (responsabile scientifico), G.Nocella, M.Lucchi

Aim and state of the research : The objective of the project is to verify whether traceability can represent a tool for the fruit-product supply chain management. The methodology includes an overview of the existing systems of services to enterprises as well as a description of the current projects, in order to classify the existing market opportunities.

Aim and state of the research : The objective of the project is the fine tuning of methodologies devoted to the evaluation of market policies, with respect to the CMO for fruit and vegetables. A case history will be developed referring to Italian producers

organizations

Collaborations, contracts, funds: Boecker Andreas, Dipartimento : Justus-Liebig-Universitaet Giessen, Vigoni Mobility Programme, CRUI-DAAD, € 5000

Number of related publications: 2

- 1) Canavari M., Miniucchi D., Nocella G., Viaggi D. (2003) Electronic Commerce in Agriculture and Agribusiness: the Case of Emilia-Romagna (Italy) in: Harnos Z., Herdon M., Wiwezaroski T.B. (a cura di), 'Information technology for a better agri-food sector, environment and rural living', Proceedings of the 4th Conference of the European Federation of Information Technology in Agriculture, Food and Environment, University of Debrecen, Debrecen.
- 2) Forthcoming: Canavari, M., Nocella, G., Scarpa, R. (2004) Stated willingness-to-pay for environment friendly production of apples and peaches: web-based versus in person surveys. *European Review of Agricultural Economics*

**4.2)** Title: Promuovere le risorse umane per valorizzare il patrimonio della Val Samoggia - Progetto EQUAL – AZIONE 2, PS Geografica n° IT-G-EMI-0011 (Promoting the human resources to enhance the common heritage of Valsamoggia)

Reference period: 2002-2004

Research staff: M. Canavari, R. Spadoni, S. Rivaroli

The study is included into a social equalising project. It is aimed at analysing the need of competences and skills of a territory, in order to help the design of further education interventions.

Collaborations, contracts, funds: 68.000 euro

Number of related publications: 0

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**4.3)** Title: Sorsi e risorse – Ruolo della filiera vitivinicola allargata nei sistemi economici e territoriali italiani (Role of the wine supply chain to the local economic systems, in Italy)

Reference period: 2003-2005

Research staff: D. Regazzi; M. Canavari; R. Centonze; A. Castellini; R. Spadoni.

Aim and state of the research : The objectives of the project are: to update data related to the production and food-flows of the wine sector; to investigate existing and potential connections between enterprises and local institutions involved in the development of the local area; to quantify the resources required for the management of the bureaucratic requirements. The methodology includes direct interviews for data collection and the use of institutional analysis or cost analysis models depending on the objective to be pursued.

Collaborations, contracts, funds: Federvini (Federazione italiana industriali, produttori esportatori e importatori di vini, acqueviti, liquori, scioppi, aceti e affini); 45.000 Euro

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**4.4)** Title: Pesca responsabile e sostenibilità: implicazioni economiche e gestionali. Modelli di valutazione multicriteriale per attività di pesca responsabile (Responsible fishery and sustainability: economic and management implications. Models for multicriterial evaluation)

Reference period: 2003-2004

Research staff: D. Regazzi; M. Canavari; A. Ragazzoni; P . Melotti, G. Malorgio, A. Castellini; R. Spadoni.

Aim and state of the research : The objective of the project is to analyse the activities of fisheries through a model of evaluation either of the economic or the environmental aspects.

The methodology includes the adoption of multicriterial analysis to define sustainability indicators suitable for the evaluation of different activities.

Collaborations, contracts, funds: Ministero delle politiche agricole e forestali; 95.000 Euro

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**4.5)** Title: Creazione di fiducia in sistemi agroalimentari complessi con relazioni commerciali supportate da reti telematiche (Trust building in agri-food complex systems having trade relationships supported by electronic networks) VIGONI Programme

Reference period: 2003-2005

Research staff: M. Canavari, R. Spadoni, R. Centonze, S. Rivaroli

The study is aimed at analysing the factors able to generate and maintain trust into a transactions system, at identifying a hierarchy of trust elements and at studying the more suitable means to insert them into electronic platforms for complex agri-food systems.

Collaborations, contracts, funds: 5500 euro

Number of related publications: 0

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**4.6)** Title: OGM e agricoltura italiana (OGM and Italian agriculture)

Reference period: 2004

Research staff: C. Malagoli

Aim and state of the research : The objective of the project is to design a strategy for transgenic agriculture in Italy.

Collaborations, contracts, funds: Research in collaboration with the Istituto Nazionale per la nutrizione delle piante (National institute for plant nutrition), 60.000 Euro

Number of related publications: 10

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**4.7)** Title: OGM e brevetto (OGM and patent)

Reference period: 2004

Research staff: C. Malagoli

Aim and state of the research : The objective of the project is to describe the strategy of seed industry in case of patent of the seeds.

Collaborations, contracts, funds: Research in collaboration with the Consiglio dei Diritti Genetici (Council of Genetic Rights), 10.000 Euro

Number of related publications: forthcoming

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**4.8)** Title: OGM e consumatore (OGM and consumer)

Reference period: 2004

Research staff: C. Malagoli

Aim and state of the research : The objective of the project is to design a strategy of seal of the consumer in case of OGM food.

Collaborations, contracts, funds: Research in collaboration with COOP Italia, 20.000 Euro

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Number of related publications: 2

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#### **4.b) Rural appraisal and accounting area – Farm management**

**4.9)** Title: Rilevazione ed elaborazione della contabilità aziendale per una pianificazione della gestione (Relief and elaboration of the farm accounting data in order to obtain a management planning)

Reference period: 2003

Research staff: R. Ghelfi, C. Pirazzoli, S. Rivaroli, F. Baraldi, V. Gallerani

Aim and state of the research : The objective of the project is to survey the farm accounting data and results in some farms in several areas of Italy and, next, to elaborate, through specific methodologies and softwares, these data in order to obtain technical-economical and financial indexes to improve the farm management.

Collaborations, contracts, funds: 10.000 euro

Number of related publications: forthcoming

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#### 4.c) Rural appraisal and accounting area – Rural development

**4.10)** Title: WADI - Sustainability of European Irrigated Agriculture under Water Directive and Agenda 2000.

Reference period: 2001-2004

Research staff: V.Gallerani, D. Viaggi, S. Di Pasquale, S.Morganti, C.Valeri, M.Raggi, F.Bartolini, C.Pisano.

Aim and state of the research : The objective of the project is to analyze the sustainability of irrigated agriculture in Europe in the context of post Agenda 2000 CAP Reform and of the Water Framework Directive (EEC 2000/60). The methodology adopted is a combination of scenario analysis and mathematical programming based on MAUT. Also, a set of sustainability indicators are calculated in order to measure the impact of different scenarios.

Collaborations, contracts, funds: V RTD programme, European Union, 147.000 euro

Number of related publications: 2 + 5 articles in publication + 1 poster

- 1) G. Bazzani, S. Di Pasquale, V. Gallerani, D. Viaggi, A. D'Amore, A. Fabbri e M. Gomez Barbero (2001): La agricultura de regadio en Italia y el impacto de la Directiva Marco de Aguas, *Seminario internazionale "La agricultura de regadio europea y la Directiva Marco de Aguas*, Madrid, 27 settembre 2001. [The irrigated agriculture in Italy and the impact of Marco de Aguas Directive]
- 2) G. Bazzani, S. Di Pasquale, V. Gallerani, D. Viaggi (2002): Water policy and the sustainability of irrigated systems in Italy, Working paper Agecon.
- 3) G. Bazzani, S. Di Pasquale, V. Gallerani, D. Viaggi: Irrigated agriculture in Italy and water regulation under the EU Water Framework Directive, *Water resource research* (in pub.).
- 4) G. M. Bazzani, S. Di Pasquale, V. Gallerani, C. Rosselli del Turco, D.Viaggi (2001): Strumenti per la regolazione dell'uso dell'acqua irrigua alla luce della direttiva quadro sull'acqua, XXXVIII convegno SIDEA, Catania, 27-29 settembre 2001 (in pub.). [Instruments for the regulation of irrigation water use under the water framework directive]
- 5) G. Bazzani, S. Di Pasquale, V. Gallerani, M. Raggi, D. Viaggi: The impact of EU Water Framework Directive on irrigated agriculture in Italy: the case of the north east fruit district Agricultural economic review (in pub.)
- 6) Bazzani G. M, Di Pasquale S., Gallerani V., Morganti S. e Viaggi D. (2002): Lo stato dell'irrigazione in Italia: problemi attuali e prospettive, progetto Panda MIPAF (in pub.).[The state of irrigation in Italy: present problems and perspectives]
- 7) G. Bazzani, S. Di Pasquale, V. Gallerani, S. Morganti e D. Viaggi: The sustainability of irrigated agricultural systems under the Water Framework Directive: first results, *Environmental modelling and software* (in pub.)

Posters

- 1) G.M. Bazzani, S. Di Pasquale, V. Gallerani, C. Rosselli Del Turco (2001): A decision support system for the evaluation of water policy instruments in agriculture after the Water Framework Directive, *World Water Congress*, International Water Association, Berlin 15th-19th October 2001 (in pub.).
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**4.11)** Title: La sostenibilità dell'agricoltura irrigua dell'Emilia-Romagna negli scenari di gestione delle risorse idriche. (The sustainability of irrigated agriculture in Emilia-Romagna in the scenarios of water resource management)

Reference period: 2003

Research staff: V.Gallerani, D.Viaggi

Aim and state of the research : The objective of the project is to analyze the sustainability of irrigated agriculture in Emilia-Romagna in the context of post Agenda 2000 CAP Reform and of the Water Framework Directive (EEC 2000/60). The methodology adopted is a combination of scenario analysis and mathematical programming based on MAUT. The MAUT models are combined to a set of sustainability indicators aimed at measuring the impact of different scenarios.

Collaborations, contracts, funds: Regione Emilia Romagna, L.R. 28, 10.000 euro

Number of related publications:

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**4.12)** Title: STRIDE-one - Promozione di centri pilota per la formazione ed il supporto alle professionalità delle istituzioni pubbliche e private in Albania. (Promotion of pilot centres for the training and support to the professionalities of the public and private institutions in Albania)

Reference period: 2002-2005

Research staff: V.Gallerani, D. Viaggi, S. Di Pasquale, F.Minarelli

Aim and state of the research : «Stride-one » aims at supporting the process of democratisation and modernization of public institutions in Albania, through administrations and institutions' adaptation and consolidation with a view to economic development of the territory. The objective of the project is, therefore, to support the acquisition of competences, skills and new work processes within local governments and public and private institutions.

Collaborations, contracts, funds: TEMPUS programme, Unione Europea IB\_JEP-16132-2001, 20.000 euro

Number of related publications: 1 book + newsletter (2 issues)

- 1) D.Viaggi (editor) (2002): *Institutions and development: an analysis of local public administration in Albania*, STRIDE 1, Bologna.
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**4.13)** Title: Definizione di politiche per lo sviluppo rurale in Albania. (Design of policies for rural development in Albania)

Reference period: 2002-2004

Research staff: V.Gallerani, D.Viaggi, F.Minarelli

Aim and state of the research : The aim of the research is to design policies for rural development in Albania. The methodology is based on a survey of a sample of farms through questionnaires aimed at collecting the structure, income, problems and expectation of farmers.

Collaborations, contracts, funds: I Protocollo di cooperazione scientifica e tecnologica tra Italia e Albania, Ministries of foreign affair of Italy and Albania. Funding for travel and subsistence on demand.

Number of related publications: 0

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**4.14)** Title: Strumenti di valorizzazione economica della multifunzionalità dell'agricoltura. (Instruments of economic exploitation of multifunctionality in agriculture)

Reference period: 2003

Research staff: V.Gallerani, D.Viaggi

Aim and state of the research : The aim of the project is to evaluate possible policy instruments for the development and exploitation of multifunctionality in agriculture. The methodology is based on a principal-agent approach aimed at devising optimal contracts, combined with a territorial and institutional analysis of a representative area of Emilia-Romagna.

Collaborations, contracts, funds: Regione Emilia Romagna, L.R. 28, 12.000 euro

Number of related publications: 0

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**4.15)** Title: Organizzazione della domanda di ricerca 2003. (Organisation of research demand 2003)

Reference period: 2003

Research staff: V.Gallerani, D.Viaggi

Aim and state of the research : The aim of the research is to identify likely research requirements for agriculture in Emilia-Romagna, with the purpose to support the regional funding of applied research in the field, with particular reference to economic research. The study is to be conducted through focus groups composed by key actors. Within the focus groups, scenarios will be presented and discussed and the consequent research needs for the sector identified.

Collaborations, contracts, funds: Regione Emilia Romagna, L.R. 28, 10.000 euro

Number of related publications: 0

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**4.16) Title:** ITAES - Integrated tools to design and implement agro environmental schemes (contract proposal n° 502070).

Reference period: 2003-2006

Research staff: V.Gallerani, D.Viaggi

Aim and state of the research : This proposal is aimed at supporting the design of optimal Agro Environmental Schemes (AESs). It emphasises a series of crucial issues among which, expected environmental impacts, transaction costs and institutional arrangements deserving an intensive research effort. The project is carried out through a comprehensive comparison of case-study areas in order to link institutional and contractual arrangements with farmers' uptake and the total cost of AESs.

Collaborations, contracts, funds: 6th framework programme, European Union, 122.500 euro

Number of related publications: 0

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