Accademia dei Georgofili



The Georgofili Academy

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Cover

Georgofili coat-of-arms (78 cm x 85 cm) in olive wood and Swiss pine (heraldic colours, gold and silver), made by the sculptor Mauro Pieroni for the Academy's 250^{th} anniversary

The Georgofili Academy, founded at the height of the Enlightenment in 1753, was organized by the intellectuals of the time and put forward to Grand Duke Peter Leopold of Lorraine who gave it his wholehearted support. The aim was to address the issues of a new society that was being drawn up and that a few decades later, following the American and French revolutions, gave rise to modern civilization.

At the beginning of the third millennium, the world has changed profoundly because of globalization, new technologies, and an economic system that seems ever more in crisis. The millenary history of agriculture and of the rural world of Italy's regions has brought about an incredible wealth of traditions and customs, not to mention agricultural and food products. To meet the challenge of globalization, the Georgofili intend to preserve and promote, in a modern perspective, those resources that represent the identity of the various communities throughout the country.

The economic model that led to industrialization, the change in the relationship between town and country, and such environmental problems as global climate changes, must probably be revised today to correct the negative aspects while maintaining the positive ones that have undoubtedly been achieved in the last two centuries.

In this context, agriculture is assuming a new importance today, while governments and the public – almost entirely urbanized – paid little attention to it during the last century due to the profound economic and social changes. In fact, we have realized that humankind's survival on the planet is tied to using resources in an enduring and sustainable way.

Agriculture is the only activity that uses natural processes in a renewable way. This is true not only as regards the production of food – a strategic issue in a world whose population has more than doubled in fifty years – but also for the production of raw materials that can replace synthetic or hydrocarbon-based products.

Today, as when it was founded, the Academy is tackling, through its member network and research and study initiatives, those issues that will most likely become the foundations of a new civilization.

Florence, 25 February 2015

Giampiero Maracchi



Main entrance to the Academy from the Loggiato degli Uffizi Corti

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The Salone dei Cinquecento during the 2014 opening ceremony. In the centre, table with council members; to the left, table with the presidents of the territorial sections

THE GEORGOFILI

he Georgofili Academy was founded in Florence in 1753 at the initiative of the Lateran Canon Ubaldo Montelatici, so as to "carry out continuous and properly controlled experiments, and observations, in order to perfect the very useful art of Tuscan cultivation".

The Lorraine grand ducal government soon made it a public institution (the first in the world), entrusting important missions to it. With the unification of Italy, the Georgofili Academy, whose importance actually already

extended beyond Tuscany, became a national institution also formally recognized as being in the public interest.

In 1932, it was established as a "non-profit foundation" and, that same year, obtained the right to the free use of the current state-owned premises.

The Georgofili Academy is the world's oldest institution of its kind to concern itself with agriculture, the environment, and food. It promotes the advancement of knowledge, the development of technical-economic activities



Georgofili is a compound word made up of two terms, georgo and filo. The custom of deriving words from ancient Greek began in the 16th century. GEORGO

I. γεωργέο (gheorghéo), verb: to be a peasant or a farmer (Plato, Xenophon, and others); II. γεωργικός (gheorghikòs): 1. masculine: agricultural; feminine: agriculture (Aristotle) 2. feminine: devoted to agriculture as an art (Plato). *FILO*

I. $\varphi(\lambda \circ \zeta)$ (philos): friend, dear, love (in Latin, amicus carus). When referring to things, it means welcome.

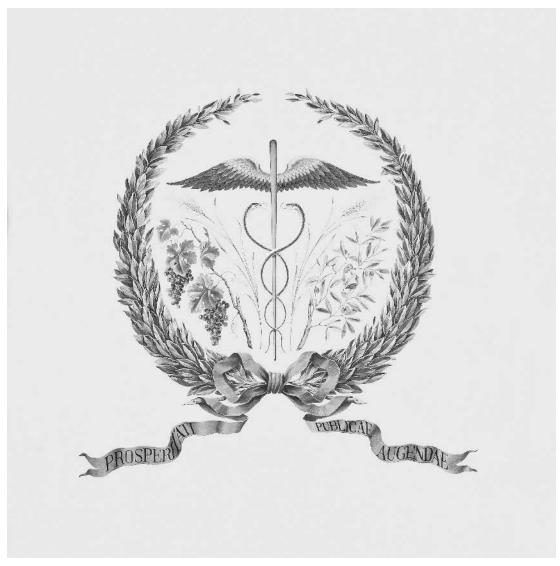
II. Neuter: dear = be thyself reft of thy dear life (Homer).

III. Adverb: affectionately, friendly, benevolently (for the good of man = philanthropy; where *antropos* = man).

The word *georgofili* may therefore mean "for the love of agriculture", "friends of agriculture", or "for the good of agriculture".

The Academy's emblem contains the symbols of agriculture dedicated to the goddess Ceres (an ear of wheat, an olive branch, and a bunch of grapes) as well as those associated with economic activity and commerce dedicated to the god Mercury (a caduceus: a winged wand with twined snakes). Even the motto *Prosperitati publicae augendae* highlights how the Georgofili Academy's activi-

ties have always focused on the public interest.



The Georgofili standard painted on canvas by Stefano Ficalbi and unveiled on 31 March, 2000

and social growth. By adjusting its organization, methodology, and tools to the times, the Academy has always maintained the role and objectives set out by its charter.

The work done by the Academy underscores agriculture's vital importance, which has always been rightly considered the primary sector, not only because of the time priority of its production activities, but also because it has been and is still the main source of our food. It was also the matrix for the development of the manufacturing industry (to which it supplied raw materials, labour, and capital) and is the fundamental balancing factor for the biosphere of which humans are an integral part and on which our very survival depends.

The Academy has led the development of agricultural sciences in the broadest sense. Following their evolution over time, it continues

to face new problems affecting agriculture and all relations between humans and the environment. It conducts studies and research, using the most modern methods, in order to promote concrete initiatives. The results are presented and discussed openly in special Public Meetings, which are then included in the Proceedings.

To address the study of each individual issue, the Academy freely makes use of the most qualified scientists and experts, wherever they are, even if affiliated with other public and private organizations.

Among the Academy's activities are other initiatives, such as training and refresher courses. The Georgofili have been and are a tool to compare and spread ideas, interrelating with the world, and helping to maintain the prestige of Italian culture.

Academy Council

The president and vice-presidents, designated by the Academy Board, are appointed by the Minister for Arts and Culture.

The council members are appointed by the president, who selects from among them a Secretary of the Proceedings, a director, a librarian and an archive curator.

The Academy Council consists of the president, two vice-presidents, and eight council members. Offices are held for four years and members may be reappointed.

At the president's request, the Academy Council is responsible for the Academy's institutional activities and its administration. Specifically,

- it prepares and determines the budget for the following fiscal year in the month of November, and the balance sheet for the previous fiscal year by the end of March, presenting them to the Academy Board for approval;
- it prepares the Academy's activity programs;
- it recommends nominations of academy members; and
- it organizes prospective sections or other structures.

PRESIDENT'S COMMITTEE

The president may make use of a President's Committee (composed of the vice-presidents and two council members).

ACADEMIC COUNCIL (UNTIL 2016)

HONORARY PRESIDENT Franco Scaramuzzi

PRESIDENT Giampiero Maracchi

VICE-PRESIDENTS Pietro Piccarolo, Federico Vecchioni

COUNCIL MEMBERS

Luigi Costato, Stefania De Pascale, Donato Matassino, Lapo Mazzei, Simone Orlandini, Antonio Patuelli, Antonio Michele Stanca, Massimo Vincenzini

Members of the Academy

The title of *Georgofilo* is awarded to honorary, emeritus, ordinary, correspondent, associate, supernumerary, and supporting academy members as well as to partner institutions.

Suggestions for nominations of academy members are made by the Academy Council and are subject to the approval of the Academy body.

All Academy members are nominated by the President of the Academy.

Ordinary and correspondent members are a limited number set by the charter.

ACADEMY BODY

The Academy body is made up of emeritus and ordinary members of the Academy.



The meeting chamber. On the right-hand wall, painting by Cornelis Schut (Antwerp, 1597-1655). Behind the President's desk, the standard with the Georgofili emblem



The council chamber with the statue of Cosimo Ridolfi, a plaster model of the monument in Piazza Santo Spirito, donated to the Georgofili by its sculptor Raffaello Romanelli in 1898. Severely damaged in the explosion of 27 May, 1993, the statue was then restored





Organizational structure

Sections

For greater coverage of Georgofili activities nationally and internationally, the Academy has formed special sections.

NORTH-EAST SECTION

Established 27 June 2001 President: Giuliano Mosca

Council: Michele Cera, Anna Lante, Enrico

Piva, Piero Susmel, Arturo Zamorani.

NORTH-WEST SECTION

Established 20 March 2002 President: Dario Casati

Council: Remigio Berruto, Aldo Ferrero, Marco Fiala, Angelo Garibaldi, Federico

Radice Fossati, Claudia Sorlini.

EAST CENTRAL SECTION

Established 30 June 2005

President: Natale Giuseppe Frega

Council: Giuseppe Bertoni, Piero Cravedi, Donatantonio De Falcis, Giovanni Lercker,

Carlo Sagrini, Andrea Segré.

WEST CENTRAL SECTION

Established 30 June 2005 President: Filiberto Loreti

Council: Amedeo Alpi, Paolo Nanni, Marcello Pagliai, Giancarlo Rossi, Giuseppe Scarascia Mugnozza, Marco Vieri.

SOUTH-EAST SECTION

Established 7 September 2001 President: Vittorio Marzi

Council: Paolo Amirante, Angelo Caliandro, Dario Cianci, Vittorio Leone, Francesco Pao-

lo Nardelli, Antonio Rotundo.

SOUTH-WEST SECTION

Established 18 February 2002

President: Francesco Giulio Crescimanno Council: Giuseppe Asciuto, Salvatore Barbagallo, Stefania De Pascale, Rosario Di Lorenzo, Santi Longo, Giuseppe Nola.

BRUSSELS INTERNATIONAL SECTION

Established 18 June 2008

President: Michele Pasca-Raymondo

Council: Alessandro Albani, Daniele Bianchi, Enzo Chioccioli, Aldo Longo, Mauro Poinel-

li, Antonella Zona.

Committees

To identify and address priority issues within specific sectors, the Academy makes use of special advisory committees. Those currently in operation are:

Advisory Committee on Plant Protection Issues President: Piero Cravedi Members: Alberto Alma, Maurizio Conti, Gaetano Magnano di San Lio, Giovanni Paolo Martelli, Giovanni Vannacci.

Advisory Committee on Livestock and Livestock Products

President: Alessandro Nardone

Members: Nino Andena, Giovanni Bittante, Donato Matassino, Gianfranco Piva, Pierlorenzo Secchiari.

Advisory Committee on Cropping Systems
Coordinator: Marco Bindi
Members: Daniele Bassi, Angelo Caliandro,
Paolo Inglese, Tommaso Maggiore, Marco Aurelio Pasti, Pier Paolo Roggero, Claudia Sorlini.

Advisory Committee for the Agricultural Workplace Safety and Prevention President: Pietro Piccarolo Members: Angela Calvo, Roberto Deboli, Marco Masi, Danilo Monarca, Giampaolo Schillaci, Marco Vieri. Advisory Committee on Agricultural Biology Coordinator: Antonio Michele Stanca Members: Amedeo Alpi, Alessandro Camussi, Maurizio Cocucci, Mauro Cresti, Raffaello Giannini, Stefano Mancuso, Luigi Monti, Marco Nuti, Pierdomenico Perata, Mario Polsinelli, Paolo Sequi.

Advisory Committee for Protected Crops and Nursery Gardening

President: Stefania De Pascale

Members: Luca Altieri, Catello Cafiero, Antonio Ferrante, Francesco Ferrini, Cherubino Leonardi, Elisabetta Margheriti, Miro Mati, Alberto Pardossi, Giacomo Scarascia Mugnozza.

Editorial Board of the "Rivista di storia dell'agricoltura"

President: Giovanni Cherubini

Members: Zeffiro Ciuffoletti, Rinaldo Comba, Alfio Cortonesi, Gaetano Forni, Antonio Gabbrielli, Paulino Iradiel, Arnaldo Marcone, Massimo Montanari, Carlo Pazzagli, Gabriella Piccinini, Giuliano Pinto, Piero Luigi Pisani Barbacciani, Leonardo Rombai, Antonio Saltini, Paolo Nanni (*Managing Editor*).

Study centres

CESIA

Centre for the Study of the Application of Computer Science in Agriculture President: Giampiero Maracchi

Director: Claudio Conese

CESQUA

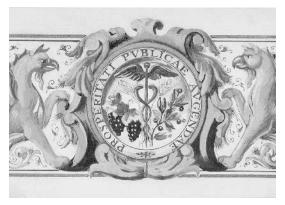
Study Centre for Quality President: Claudio Peri

GAIA

Economic Studies on Rural Development Work-

shop

President: Alessandro Pacciani





Postcard printed by the Georgofili Academy reproduced on the stamp issued by the Italian Postal Service and the special commemorative cancellation made on the day when the restored headquarters was inaugurated. It represents the logo of the Academy as depicted on the frame of an old handwritten poster by A. Albani in tempera and pencil with decorative ornaments in tempera and gold. It was damaged by the bomb attack of 27 May 1993, which left it in pieces and with a detached paint layer. It was also restored.

Presidents

UBALDO MONTELATICI – *founder* (4 June 1753)

Emanuele of Richecourt (1753-1757)

GIOVAN GUALBERTO FRANCESCHI (1757-1758)

Roberto Pucci (1758-1767)

Francesco Orsini di Rosemberg (1767-1797)

GIUSEPPE ROSPIGLIOSI (1797-1801)

UBALDO FERONI (1801-1821)

Paolo Garzoni Venturi (1821-1842)

Cosimo Ridolfi (1842-1865)

Raffaello Lambruschini (1865-1871)

Luigi Ridolfi (1871-1909)

Francesco Guicciardini (1909-1915)

Carlo Ridolfi (1915-1918)

RICCARDO DALLA VOLTA (1918-1926)

Arrigo Serpieri (1926-1944)

Francesco Bertolino – commissioner (1944-1946)

Renzo Giuliani (1946-1962)

Marino Gasparini (1963-1977)

Giuseppe Stefanelli (1977-1986)

Franco Scaramuzzi (1986-2014)

GIAMPIERO MARACCHI (2014-...)



On 30 July 1753, the Georgofili Academy's first rules were approved. Later, in October, the Count of Richecourt, President of the Regency Council of the Grand Duchy, "wanted to personally give it direction and patronage". In 1757, Giovan Gualberto Franceschi was elected with the title of "Prince" of the Academy. It was only beginning in 1758, with the election of Roberto Pucci, that the title of "president" was definitively used.

CULTURAL HERITAGE



Via dei Georgofili: the Torre de' Pulci restored after the bombing on 27 May 1993. Restoration work was completed on 11 March 1996

Headquarters

From 1753 to 1767, the meetings of the Georgofili were held in various places, including the Magliabechiana Library.

Beginning in 1767, some rooms in the Palazzo Vecchio, including the Sala dei Leoni, were given to the Academy by Grand Duke Peter Leopold. The Academy remained there until 1802, when premises in Via Ricasoli were given to the Georgofili. Enlarged several times, the Academy remained there for more than a century.

Since 1932, it has been housed in the ancient Torre de' Pulci, and is entered from the Loggiato degli Uffizi Corti.

In 1944, it was damaged by explosions meant to destroy buildings around the Ponte Vecchio. Restorations were made by the civil engineering department.

The disastrous flood of 4 November 1966 caused extensive damage to the entire property, but it was mainly the library, with its ancient books, that was most affected. Thanks to President Gasparini's commitment, who enlisted the aid of several admirable "Mud

Angels", especially students, it was soon returned to being fully operational.

In 1985, the headquarters was enlarged at the main entrance, to permit a more rational organization of the library.

On 27 May 1993, a very powerful car bomb, placed in front of the Academy's secondary entrance on Via Georgofili, shook all of Florence. Widely reported internationally, the bomb attack resulted in five dead, many injured, and severe damage to the buildings and the artistic and book patrimony. Under the leadership of President Scaramuzzi, the restoration and reconstruction work lasted nearly three years, and was overseen by the Public Works Office and the Superintendency of Architectural and Environmental Heritage for the provinces of Florence, Prato, and Pistoia. On 11 March 1996, the complex and difficult restoration of Torre de' Pulci as well as of the oldest books, documents, works of art, and furniture recovered from the rubble was completed.



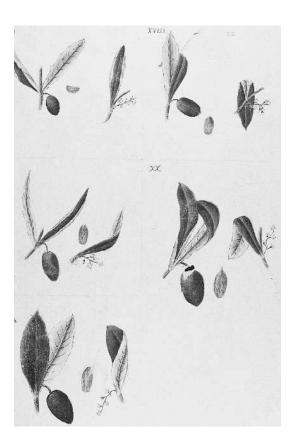
Well-staircase probably once part of the Torre de' Pulci, discovered and restored during work carried out after 1993

Archives

Between 1753 (the year of its foundation) and 1911, the Georgofili Historical Archives contained a total of over 12,000 manuscripts and approximately 8,000 letters. In addition to the memorandums sent to the Academy and exhibited at public meetings, also essays and documentation related to the opinions requested on various topics are preserved. Of particular interest are those on educating "people committed to agriculture" (i.e., peasants), the French Rural Code, the Tuscan Land Registry, specific crops, agricultural tools, etc.

The archives hold administrative documents as well as those relating to the competitions announced by the Georgofili since its foundation to open discussions on issues of the greatest importance in Tuscany between the 18th and 19th centuries.

When the Academy was merged with the Botanical Garden in 1783, the latter's archives and library became part of the Georgofili patrimony. Therefore, the Academy's historical archives also contain documents which belonged to the dissolved Botanical Society. The printed 1753-1911 inventory of the archives was published in Florence between 1970 and 1977. The archives' online catalogue is currently under development.



Watercoloured drawing contained in Giuseppe Tavanti's memorandum presented to the Georgofili Academy for the competition announced 7 July 1802 on the theme: "Describe the various species and varieties of olive trees cultivated in Tuscany and establish their synonymy". Tavanti's memorandum won the prize and, in 1819, was published in Florence in two volumes under the title Trattato teorico pratico completo sull'olivo



The President of the Italian Republic Luigi Einaudi, during a visit to the Academy in 1957, examining Basilius Besler, Hortus Eystettensis..., [Nurimbergae: s.n.], 1613, from the Ancient Books Collection of the Georgofili Library

CONTEMPORARY SECTION (1900-1960)

The contemporary section of the historical archives has collected all papers, meeting minutes, memorandums, and proceedings that the Academy produced during the first half of the $20^{\rm th}$ century.

Begun after the 27 May 1993 bombing, the cataloguing of documents produced until the 1960s has been completed. The related computerized *Catalogue* is also available on-line to scholars.



"Reciproco Insegnamento" il contributo dei Georgofili



Accademia dei Georgofili firenze 1996

Documents of the Society for the Dissemination of the Mutual Teaching Method are found at the Academy. This society was founded by Cosimo Ridolfi in 1819 while the documents, consisting of 1,614 files grouped in 16 large binders, were donated to the Georgofili Academy by Luigi Ridolfi in 1897.

The study published for the 1996 documentary exhibition held at the academy's headquarters represents the first research on this theme



The President of the Italian Republic Oscar Luigi Scalfaro unveiling the memorial plaque for the re-opening of the restored seat of the Georgofili Academy (11 March, 1996)

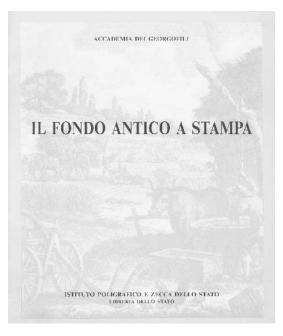
Library

The practice of preserving "papers and gazettes" to make them available "to anyone who wants to profit from them," has been carried forward by the Georgofili Academy from the beginning of its activity. From 1753 to 1767, Ubaldo Montelatici had already indicated a desire to compile an inventory of

books, papers, machines, furniture, fittings, and goods owned by the Academy. To better meet this aim, Giovanni Gaspero Menabuoni, vice-secretary of the Proceedings and librarian at the Magliabechiana Library, was entrusted, in 1775, with the responsibility for these records as well as with the task of main-



Newspaper library and research room



taining them in a place suitable for possible consultation.

In the succeeding years, the library's fortunes were closely related to the lack of stable and definitive premises. It was only in 1778 that the library was able to find a fitting accommodation and once again be reunited, when the Grand Duke granted the Academy a space adjacent to the Sala delle Adunanze in Palazzo Vecchio. With time, the library became increasingly organized. Printed in Florence in 1863, the first systematic catalogue of the library's collections is owed to Pietro Bigazzi.

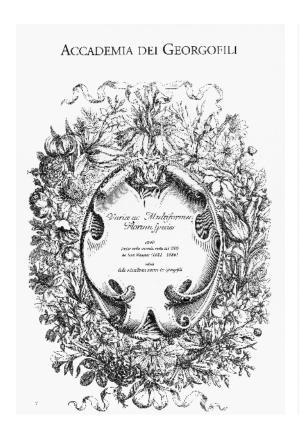
In 1993, a group of Florentine librarians oversaw the compilation of the catalogue for the Fondo Antico, the ancient books collection, published by the State Institute of Printing and Minting in 1994.

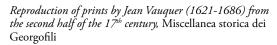
In 1996, after the liquidation of the assets of the former *Federconsorzi* (Italian Federation of Farmers' Cooperatives), the library of its publishing arm (REDA) and the photographic archives were purchased at auction for the Academy, thanks to the intervention of the Cassa di Risparmio di Firenze. The Academy thus acquired about eighteen thousand volumes and nearly a hundred thousand illustrations (including photos, slides, and drawings) on issues relating to agriculture.

Currently, the Library has a total of about 70,000 volumes including monographs, pamphlets, and periodicals. It has both a card and an on-line catalogue.

In addition to its location in the Academy's headquarters, the library has "branches", with an annex in Piazza Alberighi and in the offices of the Cassa di Risparmio Foundation.

Several book collections have been donated to the Academy. Of particular importance for its magnitude and value is the Georgica Library from the now deceased academy members Giorgio and Mario Garavini.







Pietro de' Crescenzi, Ruralia commoda, Spira, Peter Drach, 1490-1495, Georgofili Library, Rare Books Section



The President of the Italian Republic Carlo Azeglio Ciampi receiving from the Georgofili President Franco Scaramuzzi a gold medal specially struck as a sign of gratitude for his prompt support after the 1993 bomb attack when he was Prime Minister (27 May 2003)

Photo Archives

Officially invented in the first half of the 19th century, photography quickly evolved and established itself as an essential tool for recording technological and economic progress, scientific research, historical records, and cultural developments. It also became a means of artistic expression.

The use of nitrocellulose film rolls and handy cameras, equipped with increasingly specialized lenses, allowed making important innovations and popularized this equipment, with a recognition of the outstanding value of photography.

Today sophisticated technologies have been acquired, capable of taking and sending pictures remotely in real time. As it continues to evolve exponentially, scientific progress will quickly lead away from the current levels of technology.

In recognition of the historical value assumed by "traditional" photographic documentation through slides and negatives, the Georgofili have long collected these documents in their own files, creating a special photographic archives that includes a large number of photographic reproductions donated by private individuals and institutions. The preservation of such delicate material requires special care. Images are transferred to digital media which enables them to be viewed, reproduced, and used without handling the originals. A sample of images can be viewed on the Academy's website.

The REDA collections of drawings (carried out in part by Count Saverio Salimei) and of photographs number approximately 66,000 images (colour as well as black and white), in addition to another 26,000 slides, negatives (also on variously sized plates), drawings, and so on.

That these documents were acquired by the Georgofili Academy is of particular importance, given the fact that it is a thematic collection related to agriculture, thus having great value.

The Georgofili continue to draw attention to the need to properly collect and preserve the currently scattered photographic patrimony. The Academy will accept photographic collections, each bearing the name of its donor.



When the President of the Italian Republic Giorgio Napolitano visited the Academy and the exhibition held there to celebrate the 150th anniversary of the Unification of Italy, the President of the Georgofili Franco Scaramuzzi gave him an original, pristine copy of the by-then rare pamphlet of Vincenzo Gioberti's Admission to the Georgofili Academy (29 June 1848), held in a special parchment folder.

At the centre of the photo, Matteo Renzi, mayor of Florence at the time.

ACTIVITIES

I GEORGOFILI

Atti della Accademia dei Georgofili



Anno 2013 Serie VIII – Vol. 10 (189° dall'inizio)

Tomo II

Firenze, 2014

Publications

Proceedings and Supplements

"I GEORGOFILI.

ATTI DELL'ACCADEMIA DEI GEORGOFILI"

To promote and spread better techniques, the Georgofili decided, beginning in 1791,

THE ENTIRE COLLECTION OF THE "ATTI DEI GEORGOFILI", THE PROCEEDINGS OF THE GEORGOFILI ACADEMY, IS SUBDIVIDED INTO INDIVIDUAL SERIES:

- «Atti della Real Società economica di Firenze ossia de' Georgofili», (1791-1817);
- «Continuazione degli Atti dell'Imp. e Reale Accademia dei Georgofili di Firenze», (1818-1853);
- «Continuazione degli Atti della R. Accademia dei Georgofili», Nuova Serie, (1854-1870);
- «Atti della R. Accademia dei Georgofili», Quarta serie, (1871-1903);
- «Atti della R. Accademia dei Georgofili», Quinta Serie, (1904-1934);
- «Atti della R. Accademia dei Georgofili», Sesta Serie, (1935-1953);
- «I Georgofili. Atti dell'Accademia dei Georgofili», Settima Serie, (1954-2003);
- «I Georgofili. Atti dell'Accademia dei Georgofili», Ottava Serie, in corso dal 2004.

to publish their "efforts in series, and not as individual booklets, as was the custom of the most famous societies in Europe". Thus began the publication of the "Georgofili Proceedings", which still continues today.

For more than two and a half centuries, the Proceedings have been entrusted with the historical memory of the research, experiments and innovations promoted by the Georgofili Academy, not just as regards agriculture, but also in the social, environmental, political and economic fields.

"I GEORGOFILI. QUADERNI"

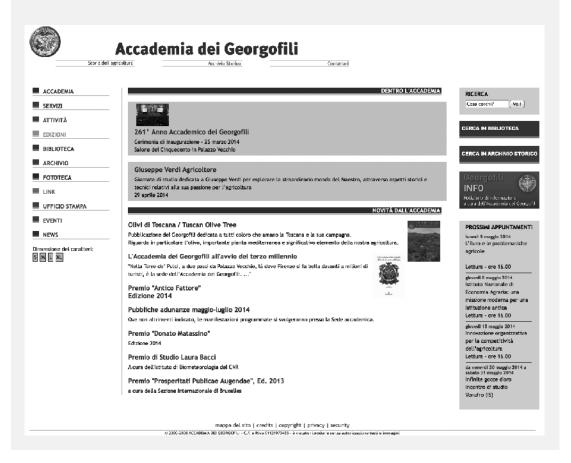
Since 1989 the annual volume of the Proceedings has been accompanied by the "Quaderni" printed as supplements, in which are published the results of the study days, conferences and round tables carried out by special study commissions appointed by the Georgofili Academy.

In the "Quaderni", concise *Considerazioni* conclusive or final remarks can be found, written to highlight what has emerged as the most appropriate actions to be undertaken.

WEBSITE

On the website of the Georgofili Academy (www.georgofili.it) you will find an information service platform which also includes the catalogue of the "Atti", "Quaderni", and other Academy publications. By registering, users can search and consult the digital versions of the Academy's periodicals free of charge.

A newsletter service on the latest Georgofili Academy publications is also available.



I GEORGOFILI

Quaderni 2013-III



ASSEMBLEA GENERALE DEI GEORGOFILI

Tirenze, 2014

EDIZIONI POLISTAMPA

"NOTIZIARIO" (BULLETIN)

Also among the services available to its members is the Georgofili Academy's Notiziario, a bulletin with news, information and communications related to the Academy's activities. Published ten times a year, the Notiziario is distributed on line or printed by AgraPress.

Georgofili INFO: weekly newsletter on agriculture, the environment and food

Since its beginning, the Georgofili Academy has noted the need to disseminate up-to-date and accurate information on the numerous problems facing the world of agriculture. This need is still evident today, despite a radically different context and the massive technological progress made by the media.

Starting in 2007, the Academy began publishing, three times a year, the periodical *Informazioni dai Georgofili*, or Georgofili News. Since 2010, the publication has become completely digital, allowing up-to-date information to be distributed faster, thus reaching a broader public (www.georgofili.info).

Rivista di storia dell'agricoltura

The Academy has paid particular attention to the history of agriculture. In 1961, the "Rivista di storia dell'agricoltura", or Review of Agricultural History, was conceived and promoted by Ildebrando Imberciadori. Since then, this sector has grown progressively but the Review has maintained its original approach and the characteristic features wanted by Imberciadori. First of all is the fundamental feature of bringing together historians and experts to produce a joint and complementa-

GEORGOFILI INFO

"Georgofili INFO" is a weekly on-line newsletter put out by the Georgofili Academy's press office. It publishes articles on various topical subjects in the fields of agriculture, the environment, and nutrition, and lists the main scheduled events (conferences, study days, exhibitions, etc.).



RIVISTA DI STORIA DELL'AGRICOLTURA SEMESTRALI DELL'ACCADEMTA DEI GEORGOFILI ANNOTHEN 2. DERVERE 2013 Le Lettere

ry work, thus offering a concrete opportunity for cooperation between various branches of learning that too often work separately and independently. Secondly, there is a broad view of the history of agriculture: agrarian history, but also parallel histories such as those of food, landscape, agrarian literature, technologies, etc. All this is encompassed in a wide chronological and geographic span, from pre-history to our times, in Europe and the Mediterra-

nean world. Alongside the scientific contributions are the surveys *Tra memoria e storia*, or From Memory to History, *Discussioni* or Discussions, *Fonti e documenti* or Sources and Documents *Recensioni* or Reviews and *Notizie bibliografiche* or Book News. For timely information on the Review's activities and a continuous updating of its contents, visit the website at www.storiaagricoltura.it.

Other publications

Every year the Academy brings out prestigious publications on various topics, highlighting its documentary and photographic patrimony. They include facsimile reprints and special publications such as the sketchbook of engravings and drawings by the painter Guarnieri.

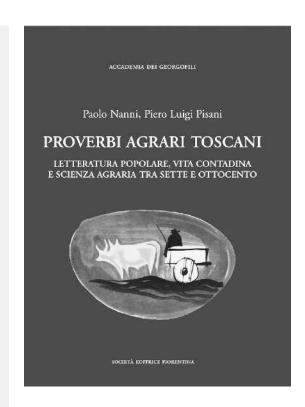
STORIA DELL'AGRICOLTURA ITALIANA

The history of Italian agriculture is a five-volume work carried out by the Georgofili Academy in 2002 on the initiative of the editorial board of the Review of Agricultural History. There was a double purpose. The first was to offer a wide-ranging work from the earliest signs left by human labour and activity in Italy up to the most recent agricultural developments and prospects. The second was to address a broad audience through the words

«QUADERNI DELLA RIVISTA DI STORIA DELL'AGRICOLTURA»

Monographs, meeting proceedings and reprints are published in the "Quaderni" series.

- 1. Il vino nell'economia e nella società italiana medievale e moderna, Atti del convegno (Greve in Chianti, 21-24 maggio 1987), Firenze, 1988.
- 2. Paolo Nanni, Lorenzo agricoltore. Sulla proprietà fondiaria dei Medici nella seconda metà del Quattrocento, Firenze, 1992.
- 3. Ilvo Capecchi, Il Centro Agricolo Sperimentale della Facoltà di Agraria di Firenze. Precedenti storici, attualità e prospettive attraverso l'opera dei suoi protagonisti, Firenze, 1995.
- 4. Ildebrando Imberciadori, *Studi su Amiata e Maremma*, a cura di Zeffiro Ciuffoletti e Paolo Nanni, Firenze, 2002.
- 5. Paolo Nanni, Piero Luigi Pisani, Proverbi agrari toscani. Letteratura popolare, vita contadina e scienza agraria tra Sette e Ottocento, Firenze, 2003.
- 6. Laura Prosperi, *Il miele nell'Occidente me-dievale*, Firenze, 2010.
- 7. Giovanni Cherubini, *Scritti meridionali*, Firenze, 2011.
- 8. Agricoltura e ambiente attraverso l'età romana e l'alto Medioevo, a cura di Paolo Nanni, Firenze, 2012.
- 9. Paolo Nanni, *Uomini nelle campagne. Agri-coltura ed economie rurali in Toscana (secoli XIV-XIX)*, Firenze, 2012.



of experts written in the most understandable way.

The themes of the three central volumes (*L'Età antica*, The Ancient Times; *Il Medioevo e l'Età moderna*, The Middle Ages and The Modern Era; and *L'Età contemporanea*, the Contemporary Era), have a common organization that the President of the editorial board, Giovanni Cherubini, has wanted since the very

RSA ON-LINE

The entire collection of the "Rivista di storia dell'agricoltura" (RSA), from 1961 until today, has been digitized and can be consulted free of charge on the website www.storiaagricoltura.it. It is also possible to do full-text searches as well as by author or subject.



STORIA DELL'AGRICOLTURA ITALIANA











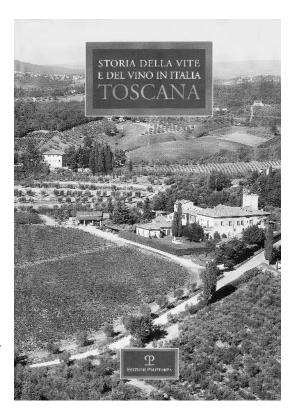
Giovanni Cherubini (President),
Reginaldo Cianferoni,
Zeffiro Ciuffoletti,
Gaetano Forni,
Arnaldo Marcone,
Giuliano Pinto,
Carlo Poni,
Leonardo Rombai,
Franco Scaramuzzi,
Ugo Tucci,
Paolo Nanni (coordinator).

beginning. This organization allows a "vertical" reading, offering the readers a work that, from the distant past to the present day, points out continuities and discontinuities. The specific aspects of each age have been dealt with in the *approfondimenti* or in-depth analyses. The first part of the first volume dedicated to Pre-history and the second part of the third volume dedicated to the Recent Developments and Prospects have a different structure because of their specific themes and the authority required to discuss them: archaeology for the first, science and technology for the second.

STORIA DELLA VITE E DEL VINO IN TOSCANA

- HISTORY OF VINES AND WINES IN TUSCANY In 1996, on the initiative of the Italian Vine and Wine Academy, a collection of volumes dedicated to the Regional History of Vines and Wines in Italy was first published. Thanks to the Edizioni Unione Italiana Vini, the volumes regarding Veneto, Piedmont and Sardinia had already been published. The fourth volume, dedicated to the history of Tuscan wine production, was edited by the Georgofili Academy.

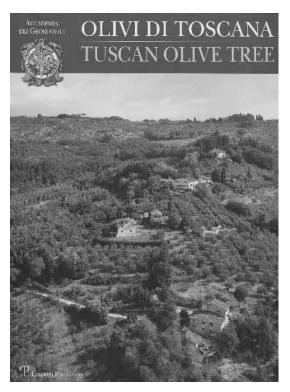
This work is a useful educational tool to promote the specific regional practices that have been developed through the centuries and to understand the extent of the progress made. All this is necessary so that, aware of our achievements and our position at the forefront



of international producers, we can better deal with the major challenges awaiting us.

OLIVI DI TOSCANA - TUSCAN OLIVE TREE

The olive tree is an exemplary plant, both bountiful and long-lived, able to endure hardship and survive by regenerating itself. Two facts are certain: 1) the nutritional and health qualities of olive oil are increasingly better known and appreciated; 2) olive

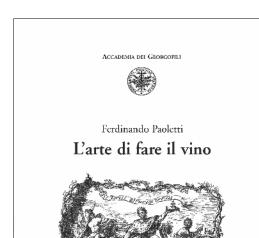


tree cultivation is spreading throughout the world. This leads to thinking that the overall consumption will increase and that, in a more informed and demanding global market, competition will be more difficult. It is therefore only right and fair to responsibly take into consideration how our olive production can remain competitive and at least retain the importance it has acquired thus far. We are therefore all committed to seeking out

any useful innovation to perfect techniques, improve production, and reduce costs. With the passing of time, continuous and evolving progress has been made. We are now trying to further leverage new technologies to tackle also the difficulties of our traditional olive groves where young and old trees are put together or irregularly arranged, with morphologically heterogeneous trees that chaotically mix different cultivars. As long as these olive groves are able to produce a profitable income, we may as well enjoy the beauty they confer on the landscape. But we have to come to terms with a market which tends to favour a good quality/price ratio. With this bilingual edition, in which various experts in history, agriculture, technology and current economic and regulatory scenarios have participated, the Georgofili want to make available to a broader public the knowledge of those products and values that tie the olive tree to Tuscany.

HISTORICAL MONOGRAPHS

Since 1994, the illustrious scholar and emeritus professor at the University of Bologna Enrico Baldini has edited "Saggi gallesiani", the series of essays on Giorgio Gallesio's studies, published by the Georgofili Academy. Besides examining his pomological studies by collecting and organizing the writings and unpublished documentation of Gallesio's research and agrarian travels, the series also includes a number of monographs.



Ristampa anastatica dell'edizione del 1774

Società Editrice Fiorentina

These publications provide useful tools for consultation and research and aim at fostering the genetic resources of our fruit-bearing arboriculture.

FACSIMILE REPRINTS AND PUBLICATIONS

The Academy publishes reprints of memorandums issued during its centuries-long activity, taken from its own periodicals and the Library's collections.

HISTORICAL MONOGRAPHS ON POMOLOGY AND OLIVE TREE VARIETIES

- E. Baldini, A. Tosi, Scienza e arte nella Pomona Italiana di Giorgio Gallesio, 1994
- G. GALLESIO, *I giornali dei viaggi*, a cura di E. Baldini, 1995
- E. Baldini, L'atlante citrografico di Giorgio Gallesio, 1996
- C. Ferraro, Giorgio Gallesio. Vita, opere, scritti e documenti inediti, 1996
- E. BALDINI, S. RAGAZZINI, Le varietà di ulivo dell'agro fiorentino. Manoscritto inedito di Pietro Antonio Micheli, 1998
- G. Gallesio, *Trattato del Lazeròlo*, a cura di E. Baldini, 1998
- E. BALDINI, Le varietà toscane di olivo in tre memorie dei Georgofili del primo Ottocento, 2000 G. GALLESIO. Scritti inediti sulla circolazione del-
- G. GALLESIO, Scritti inediti sulla circolazione della linfa nelle piante, a cura di E. Baldini, 2000
- G. GALLESIO, Dell'influenza dell'innesto. Memoria inedita presentata all'Accademia dei Georgofili nel luglio 1829, a cura di E. Baldini, 2000
- L. VIACAVA, Le Palme negli scritti di Giorgio Gallesio, 2000
- E. Baldini, *Gli inediti trattati del pesco e del ciliegio*, Complementi scientifici della «Pomona Italiana» di Giorgio Gallesio, 2003
- E. Baldini, Il commercio della frutta negli scritti di Giorgio Gallesio, 2003
- L. FANTONI, *Dell'ulivi e dell'olio*, manoscritti inediti ordinati da Enrico Baldini, 2006

The facsimile editions of publications of special historical interest from the Georgofili book collection have also been reproduced.

Catalogues and thematic studies

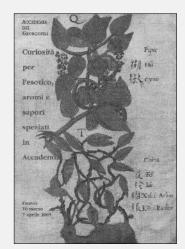
Catalogues and thematic studies are published to record specifically themed exhibitions.

Publications on some of the most important exhibitions of the last few years st

- La seta: itinerario iconografico e documentario
- L'olivo e l'olio negli studi dei Georgofili
- Dagli archivi dei Georgofili.
 Fiumi, inondazioni e "idraulica pratica"
- Delle case de' contadini
- Reciproco insegnamento, il contributo dei Georgofili
- I Georgofili per l'Unità d'Italia (1997)
- Vitivinicoltura tra la fine del Settecento e la crisi fillosserica
- L'Italia: una cultura da vivere. Immagini della scienza e della tecnica agricola
- La donna e il mondo agricolo fra Settecento e Novecento
- I parroci di campagna tra '700 e '800 (dai documenti dei Georgofili)
- In Cucina... ai Georgofili. Alimenti, pietanze e ricette fra '700 e '800
- Il castagno e le sue risorse

- Dei rimedi medicamentosi
- Il selvicoltore del Granduca: Carlo Siemoni (1805-1878)
- La geografia ai Georgofili fra studio della Terra e passione per i viaggi
- Curiosità per l'esotico, aromi e sapori speziati in Accademia
- Dei fiori e dei giardini.
 Immagini, studi e ricerche,
 architettura
- Le macchine che hanno rivoluzionato il lavoro nei campi
- Con la penna e con lo sguardo di Giovanni Targioni Tozzetti
- Il mare negli studi dei Georgofili
- I Georgofili per le Esposizioni nazionali ed internazionali
- I Georgofili per l'Unità d'Italia 1848-1914 (2011)
- La frutta negli studi dei Georgofili

- Cosimo Ridolfi e il perfezionamento dell'arte agraria
- * Edited by Lucia Bigliazzi and Luciana Bigliazzi



Curiosità per l'esotico, aromi e sapori speziati in Accademia, edited by L. Bigliazzi and L. Bigliazzi for the exhibition at the Georgofili Academy (16 March - 7 April 2005)

describing the territory. Agronomists, cartographers, naturalists, and travellers in tuscany from the $18^{\rm th}$ to the $20^{\rm th}$ century

Ever since its foundation, the Georgofili Academy has devoted special attention to describing the territory through writings and cartography. The historical and geographical knowledge of the particular environments and of the different agrarian areas was a fundamen-

tal element in improving agricultural techniques.

Through the display of historical material from the Academy's Archives and from the Istituto Geografico Militare, in collaboration with the Fondazione Osservatorio Ximeniano, this documentary and cartographic

exhibition focused on describing the different perspectives of the territory: studies aimed at reclamation works; descriptions by naturalists, travellers, and geographers; and the evolution of cartographic representation techniques (15 March-19 April, 2013).



Volume edited by Lucia Bigliazzi, Luciana Bigliazzi, Andrea Cantile, and Paolo Nanni, published for the exhibition

Exhibitions

The Georgofili Archives, Library, and Photographic Archives constitute an incomparable patrimony of sources and documents on agrarian history. The value of these collections has allowed numerous exhibitions to be organized on specific themes.

Immediately after the bomb attack in Via dei Georgofili on 27 May 1993, the painter Luciano Guarnieri, working amidst the debris, recorded the images of those terrible moments in forty-six watercolours that the Academy keeps and displays every year in a room dedicated to this event. In addition, the fresco "Salvaging of Cimabue's Cross" by Guarnieri, which he donated to the Georgofili together

with his lithographs carried out to evoke the 1966 flood, has found a new location in the Academy premises. All these latter works have been collected and are now on permanent display in the main entrance hall of the Academy. In the Academy's rooms are paintings by various artists and other works belonging to the Soprintendenza per i Beni artistici e storici (the Fine Arts Department), including *Triumph of Neptune and Amphitrite* and *The Forge of Vulcan* by C. Schut (1597-1655), and *Pelican and other Birds* and *Flowers and Bunches of Grapes* and *Flowers, Game and Rifle* by B. Bimbi (1648-1729).

The Academy also hosts pomological, documentary and solo-artist exhibitions.



Room specially arranged to showcase the watercoloured drawings by Luciano Guarnieri

Awards

Every year at the opening ceremony of the Georgofili Academy, the prizes annually announced by the Academy are awarded. News regarding the competitions is regularly posted on the Georgofili website.

ANTICO FATTORE AWARD

The Antico Fattore Award was established in Florence in the 1930s. It was named after the trattoria restaurant (still found on the corner of Via Lambertesca and Via dei Georgofili), where some of the major exponents of culture (literature, art, science, but especially poetry, painting, and music), from Florence and elsewhere, met on Wednesday evenings.

This award has had various chapters. The first award was given in 1931. Two future Nobel Prize winners were among the early recipients: Eugenio Montale in 1931 and Salvatore Quasimodo in 1932. The activity was resumed after the Second World War with cultural meetings that however slowly faded away without any further prizes being awarded. In 1984, the historical wine producer Ruffino offered to revive this award, transforming it into an international event and creating an analogous prize for winemaking science (the winners have included Indro Montanelli in 1985 and Toni Morrison in 1989, who was later award-

ed the 1993 Nobel Prize). This chapter came to an end in 1998.

On the 250th anniversary of its foundation, the Georgofili Academy revived the Antico Fattore Award. Taking into consideration the strong wine and olive oil traditions that represent a special cultural expression and an identity element of Tuscany and the Mediterranean countries, the award has been alternatingly assigned to works on *wine* and *olives* to promote culture paying special attention to important current socio-economic situations. The prize is given by the Academy Council, which may use a committee of experts.

THE DONATO MATASSINO AWARD

The Donato Matassino Award is conferred to a Ph.D. research thesis in the field of *genetics applied to zootechnics*. It is meant to encourage in young university graduates an enthusiasm for study and scientific research in the field of genetics applied to zootechnics.

Ph.D. graduates who have earned their degree in Italy and whose thesis has been assessed worthy of publication in a prestigious international journal may participate in the competition. The prize money is to be used for a minimum three-month stay at a foreign research institute to further expand one's

knowledge of the thesis topic. The Selection Committee is appointed by the Academy Council.

PROSPERITATI PUBLICAE AUGENDAE EUROPEAN PRIZE

Since 2011, the International Section of the Georgofili Academy has announced the Prosperitati Publicae Augendae European Prize. Candidates from the European Union with a specialized degree from a public or private

university, legally acknowledged by the competent national authorities of the EU member countries, may apply.

The award addresses the following subject areas: economy and agrarian policy, research and innovation in the agricultural and agro-industrial sectors, and the environment and rural areas, food safety and quality of agricultural products. The International Section's Council selects the candidates and appoints the panel of experts that awards the prize.



The fresco "Salvaging of Cimabue's Cross" painted by Luciano Guarnieri in 1976 for the 10th anniversary of the Florence flood has found a new location in the entrance of the Georgofili Academy

RESEARCH AND STUDY TOPICS

o better understand the changes that have taken place after the Georgofili Academy was founded in the mid-18th century, we first of all need a brief introduction that shows the situation at that time.

Nowadays surely the spectre of hunger seems distant but, in that period, there were even in our region recurring famines caused by various natural disasters as well as parasitic infections that destroyed crops and decimated animals. Mobility was limited as the means of transport were tied to horses and the roads were few and rough. Illiteracy dominated and there was no public education. Those who could read and write had to do it by candlelight in the evening. Food production came from an agriculture that had basically been using the same non-scientific techniques for centuries.

It is therefore necessary to know what the situation was like when, spurred by the Enlightenment, the first Georgofili members started their activities more than 250 years ago.

It is best to treat separately the first hundred years of the Academy, which end with Italian Unification, followed by the next hundred years that arrive at the beginning of the European Union, and to finish with the last fifty years of the 20th century, starting from the end of the Second World War. These three periods were chosen not simply for the important historical events that define them (broadly speaking) but because they stand at the centre of three dif-

ferent phases of socio-economic development, today commonly known as revolutions: specifically, the Agricultural, the Industrial, and the Biotechnological Revolutions. Today we talk about a fourth revolution being in progress, under the name of "genomic" or "biomolecular", while a new post-genomic phase seems to have already started, to which we will return when talking about the future.



Peter Leopold, Grand Duke of Tuscany (1747-1792), assigned the Academy the Sala dei Leoni along with other adjoining rooms in the Palazzo Vecchio as its seat.

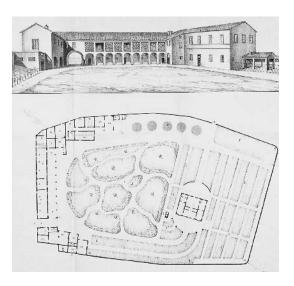
First Century -The Agricultural Revolution

From the Grand Duchy of Tuscany to the Unification of Italy

The vision of the grand dukes who ruled Tuscany at that time had a strong influence for one hundred years. There were no ministries, and the Georgofili Academy was an effective support for resolving various technical, economic, and social problems. Grand Duke Peter Leopold wanted to have the Georgofili Academy nearby, in the Palazzo Vecchio. Ferdinand III was even a member, together with Crown Prince Leopold.

Agriculture absorbed the major part of labour, which is also why it was classified as a primary activity.

It was necessary to produce more food and a number of fundamental improvements in cultivation techniques were introduced, especially with discoveries regarding plant nutrition and soil enrichment with legumes and the advantages of crop rotation to the point of being defined the "Agricultural Revolution". The reclamation of large marshlands was begun, improving the salubriousness of those places and at the same time extending the arable land of the plains. Greater attention was also paid to non-food production, such as the wool, silk, straw, etc. used for manufacturing activities. In 1814, the silk industry in Flor-



The Agricultural Institute of the University of Pisa at which Ridolfi was the first to hold the chair, which was later assigned to Pietro Cuppari (C. Ridolfi, Primo Rendiconto del R. Istituto Agrario annesso all'I. e R. Università di Pisa, "Giornale Agrario Toscano", 1845)

ence employed 3,000 people, equivalent to 3% of the entire population. In 1820, straw manufacture alone employed 60,000 women throughout Tuscany.

Illiteracy had to be eliminated and initiatives such as "mutual teaching" were implemented.

With the Meleto School, Cosimo Ridolfi started an innovative method for technical instruction, which he later developed through higher education in Pisa. And it was precisely in Pisa, in 1839, that the *First Meeting of Italian Scientists* took place, with an important section devoted to agriculture presided over by Ridolfi himself. Markets needed attention and their liberalization had a historical importance, beginning with the wheat trade.

It was necessary to promote and protect savings and, based on the Georgofili's decades-long studies, the first cooperative *Cassa di Risparmio*, or savings bank, was founded in Florence just one year after the one in Paris. The fiscal levy was in need of being put in order so the Lorraines set up the first land

registry office, capitalizing on the Georgofili's

The Georgofili's international importance is documented by its numerous relations with agronomists and by the appointment of foreign correspondent members, who have included three Presidents of the United States of America: Jefferson, Madison and Monroe.

THE LEOPOLDINE REFORMS

rational technical support.

Peter Leopold's reforms at the end of the 18th century opened a new chapter in the economic and agrarian landscape of Tuscany. A considerable improvement in the infrastructure, especially as regarded the road network with the

creation of new roads and the development of the railways, also brought about an improvement in agricultural production and an increase in the value of landed property.

The Academy also greatly contributed to the creation of the detailed Lorraine cadastral survey.

EDUCATION

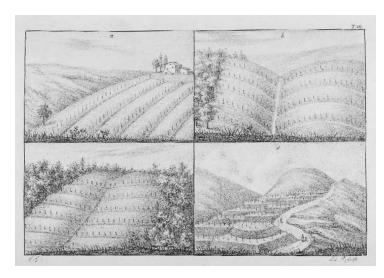
To promote progress, the Georgofili Academy insisted on education. First to be mentioned are all the "Schools of Mutual Teaching", founded in Florence in 1819 to cope with the lack of public schools.

Cosimo Ridolfi created a model-farm in Meleto where he founded the famous Agrarian Institute, also known as the Experimental School of Agriculture which opened in 1834. Young men were prepared there, studying and practicing the new agronomy. However, the idea was not only to train an agronomist, but also an "honest citizen".

The Meleto School officially closed in 1842. The University of Pisa had already established the chair of Agriculture and Pastoralism with Cosimo Ridolfi as its first professor. In 1844, the first Superior Institute of Agrarian Sciences was started, eventually becoming the University's Faculty of Agriculture.

AGRICULTURAL LAND MANAGEMENT

An innovation championed by the Georgo-



The need to drain surface waters to prevent erosion and preserve soil fertility at its best was the inspiring principle behind the field formation and drainage of hilly terrain.

Special attention was devoted to this by Cosimo Ridolfi, along with his bailiff Agostino Testaferrata.

Methods illustrated in the 1828 "Giornale Agrario Toscano": a) vertical ploughing; b) contour ploughing; c) horizontal ploughing; d) terracing or stepping (C. Ridolfi, Delle colmate dimonte)

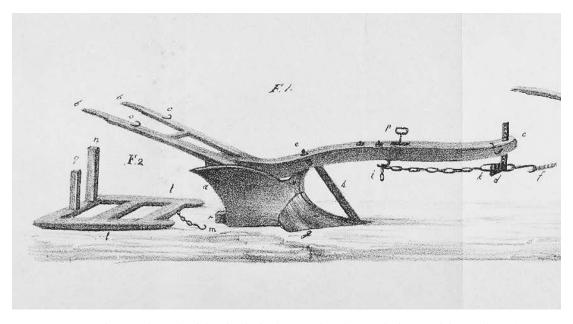
fili regarding the agricultural management of hilly land was the adoption of new field formation techniques. Until the first half of the 18th century, the hilly landscape, especially of the typical hills on medium and large estates, was dominated by vertical ploughing (rittochino), while terracing prevailed on the slopes of the small holdings. The severe famines of 1764 and 1766, the result of devastatingly freak weather, accentuated the problems of slope instability and were the spur that made Giovan Battista Landeschi decide to work crosswise the sandy Pliocene hillsides of his parish lands. Agostino Testaferrata, bailiff for the Ridolfi Marquises at Meleto, tackled the problem of clayey areas and perfected

his system of agrarian surface water control, which was communicated to the Georgofili in 1821.

The main factors in the success that made Tuscany the cradle of the most interesting experiments in slope management were the Academy's enthusiasm and interest, in addition to such especially brilliant and skilled individuals as Landeschi, Ridolfi, and Testaferrata who worked in difficult climatic and soil conditions.

SOIL FERTILITY AND CROP ROTATION

Providing a supply of organic fertilizers was an essential part of eliminating "fruitless fallows". Therefore, the fundamental role



So as to increase productivity they realized that, besides fertilization, the soil required a better and deeper tillage. The Georgofili Academy announced a competition for the invention of a plough "which could replace the spade". Thus, the coulter was created by Cosimo Ridolfi and then improved by Raffaello Lambruschini with the introduction of a helical mouldboard. The Tuscan coulter was also successful at the 1852 Paris Universal Exposition (C. Ridolfi, Di un nuovo coltro da servire a lavorare il suolo invece della vanga, "Continuazione degli Atti dei Georgofili", V, 1827)

of stabled livestock and of the consequent availability of fodder on each farm was understood.

Raffaello Lambruschini and Pietro Cuppari, in particular, stressed the need to increase investments in livestock and farm buildings, introducing a larger proportion of fodder crops into the rotations. This is how the way was led to the principle according to which the increase in cereal production was entrusted to

improving soil fertility, rather than extending areas for this crop.

The first research on soil absorption capacity is owed to a Georgofili member, Giuseppe Gazzeri.

He was a pioneer of studies on this topic, and presented his work *Degli ingrassi e del più razionale impiego di essi in agricoltura* (Manure and Its Rational Use in Agriculture) to the Academy in 1819. The subject was later

picked up by Lambruschini, who studied the *facoltà d'incorpamento*, i.e., the capacity for plant nutrients and soil to combine.

Continuous cropping systems had been tested since 1822 by Georgofili member Simone Mannozzi Torini. Cosimo Ridolfi and Pietro Cuppari were the first Italian scholars to place crop rotation as one of the fundamentals in agronomy courses.

THE PLOUGH

Special attention was paid to ploughs. Memorable innovations were introduced first by Cosimo Ridolfi and later by Raffello Lambruschini that, after various adjustments and modifications over the years, resulted in the plough commonly known as the "Tuscan coulter". In 1824, Ridolfi presented a memorandum entitled *Di un nuovo coltro da ser*vire a lavorare il suolo invece della vanga (On a New Coulter, for Working the Soil Instead Of a Spade). This new tool allowed cutting the soil vertically with the knife-like blade and horizontally with the ploughshare while being pulled. Lambruschini further improved Ridolfi's work by designing a new curve for the coulter's "ear", or mouldboard, that allowed the slice of soil to be turned over.

Other machinery to refine the work (grubbers, harrows, and weeders) were perfected and built under Ridolfi's supervision.

Threshing machines appeared in Tuscany in

the mid-19th century. An English mechanical threshing machine was imported from London by Luigi Frescobaldi, and then acquired by Leopold II. Later donated to the Georgofili Academy, it was given to the Meleto Institute in 1839 and afterwards it was ultimately sent to the Pisan Agrarian Institute.

In 1857, an Academy Committee was present at the test for a new reaping-machine that proved able to reap two-and-a-half hectares in five hours, a result which was considered a record. During those same years, agricultural machines with steam engines also appeared.

GRAPES AND WINE

There were important discussions on viticulture, with new cultivation methods being tried, using different "layouts", changes in farming techniques, and a more careful selection of grapes (for example, the "mixing" of grapes still used today to make Chianti wine, using Sangiovese, Canaiolo, Trebbiano and Malvasia grapes). In the 19th century, some major diseases severely damaged the viticulture. Powdery mildew spread throughout Tuscany in 1851, with the problem then being resolved through the use of sulphuration. Some time later, there was the phylloxera invasion, the only solution to which was to graft European vine species onto American ones. In the 1880s, peronospora, or downy mildew, appeared. After in-depth studies,

copper sulphate-based treatments were found suitable in the fight against it.

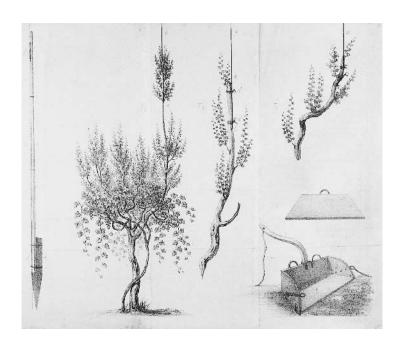
The Georgofili Academy was a point of reference through its establishing of committees and its announcements of competitions for identifying solutions.

OLIVE TREES AND OLIVE OIL

Olive growing became widespread during the 19th century. Tavanti identified and described twenty-one varieties of olive trees, accompanied by watercoloured engravings, in the memorandum he sent to the Academy for a

competition. That memorandum was published in 1819 with the title *Trattato teorico pratico completo sull'olivo* (Complete Theoretical and Practical Treatise on the Olive Tree). The olive trees commonly found on the farms produced an oil that was greatly appreciated even outside Italy.

The Georgofili devoted much attention to oil extraction techniques and recommended such rational cultivation techniques as hand-picking directly from the trees and the rationalization of pruning.



Grapevines were also cultivated either with living supports (field maple, elm, ash, poplar, mulberry, olive, and fruit trees) or different types of poles. The illustration is taken from the 1827 "Giornale Agrario Toscano" (L. De' Ricci, Sul rinnovamento delle coltivazioni delle viti palo)

Second Century -The Industrial Revolution

From the Kingdom of Italy to the Republic

With the unification of Italy, to which many eminent Georgofili contributed, the scenario changed. There was a strong growth in manufacturing activities and the period later known as the "industrial revolution" began. The advances in knowledge prepared the conditions for important innovations in the countryside. A growing use of ever more powerful motorized machinery allowed, for example, improving and replacing animal labour, increasingly reducing the legendary "toil" of peasants while, at the same time, increasing productivity.



The festive work of grape harvesting. Antella, Florence (Georgofili Photographic Archives)

The new nation had to create a state apparatus, in other words, a well-constructed bureaucracy destined however to become burdensome. An organization for state education was set up. Research activities were entrusted not just to universities but also to a system of special institutions directly under various ministries. The Ministry of Agriculture created special experimental institutions, but other ministries also established their own research bodies interested in agricultural problems. The National Research Council was set up to deal with the coordination of all scientific activities.

It was soon clear that the large-scale implementation of innovations in agriculture, in other words, new developments, unfortunately required much longer to be put in place in comparison to other productive sectors. It is for this reason that, in 1866, the Comizi Agrari were set up. In charge of the popularizing of techniques, these agrarian associations were mainly financed by the farmers themselves and had public goals and the protection of the sector as their aim. The Comizi Agrari were later replaced by the Cattedre Ambulanti di Agricoltura, institutions for agrarian technical training. In turn, the latter were succeeded by the Ispettorati agrari, agrarian inspectorates organized at the provincial and regional levels as local bodies of the Ministry. Besides the landowners' agricultural activities, there were those of the entrepreneurs,

moved by a new spirit of initiative, as well as the activities of professionals and of agricultural technicians and service suppliers.

Migration began to cause a drop in the number of people employed in this sector. Nonetheless, by the end of the 19th century, the number of people working in the agricultural sector still accounted for about 60% of the working population. Italy gradually became an importer of agricultural commodities because, notwithstanding the overall increase in production, consumption had also grown significantly following an increase in population.

After the 1920s, the political regime centralized the agricultural structure as part of a plan for nationalistic power. Agrarian technology was committed to the so-called "Battle for Grain", a commitment for the nation to achieve self-sufficiency in fundamental foodstuffs, especially cereals, sometimes also at the expense of other crops, such as wine, that had a higher added value. Exceptional results were reached specifically through the favourable interaction of such innovative factors as deeper and better soil tillage, increased fertility through targeted mineral fertilizers, and the availability of new varieties resulting from genetic improvements carried out mainly by Nazareno Strampelli. Naturally, the forced expansion of cultivated areas was also a contributing factor.

THE INTERNAL-COMBUSTION ENGINE

On 4 June 1853, Eugenio Barsanti and Felice Matteucci delivered to the Georgofili Academy a sealed envelope with the report on their studies of the internal-combustion engine. The aforementioned envelope was opened on 20 September 1863. A detailed description of the construction and functioning of this early internal-combustion engine is found in the Academy's Register of Meetings.

The attention of the Georgofili Academy turned to new, emerging problems, among which was that relating to the protection of the inventor's rights, when a law on patents did not yet exist in our country. It was precisely thanks to their initiative that, for example, Barsanti and Matteucci's precedence in inventing the internal-combustion engine was established by the public act of having filed their project in a sealed envelope with our Academy.

THE RISORGIMENTO AND THE UNIFICATION OF ITALY

During the Risorgimento, the Academy played a political role in public debate, especially beginning in 1847-48. The rapid succession of accolades attributed to Riccardo Cobden, Vincenzo Gioberti, and even Cavour, represented a clear economic, historical, and political choice. It did not exclude the federal version of a unitary state, unequivocally recalled by the then Secretary of the Proceedings Raffaele Busacca, who, in those

years, had come from Sicily to Florence. In the Rapporto degli studi accademici (Report of the Academy's Studies), dated January 1864, the secretary Ermolao Rubieri proudly recalled the years, beginning in 1848, when "public consciousness" turned to the Georgofili to draw "hope for future aspirations and conceptions". He described the Georgofili's new role in this new unitary context and in relation to the new parliament: "Academies like ours should almost be preparatory fields in which those principles destined to become laws in parliaments are reduced to axioms. (...) We can even state that the legislature's and the academy's work will truly be valid and convincing only when the Academies begin to be the Parliament's cultivated lands and the Parliaments cease being the Academy's gymnasiums".

DEBATES AND CONFERENCES

In the decades following the unification of Italy, the Academy became a place for debate and discussion, considering ideas and proposals to bring to the government's attention. Discussions and public conferences were organized as an example of an exercise in giving shape to thoughts through a kind of consultation and mediation among various voices, an expression of the economic, political and agricultural worlds.

The chosen topics, also in correspondence



Students (with ties on!) gaining practical experience picking olives in the first half of the 20th century (Georgofili Photographic Archives)

with parliamentary debates, were: *colonat partiaire*; proportional representation; forced circulation of currency; land tax equalization; forest laws; reduction or partial abolition of the grist tax; trade in foodstuffs; the "land question"; subsidies for farm improvements, capital, and labour; and trade agreements.

TECHNICAL AGRONOMIC PROGRESS

Making use of all applicable scientific innovations, the Academy promoted the use of machinery that optimized labour in the fields, and faced the infestations of such new parasites as powdery mildew, phylloxera, and downy mildew. In the first half of the 20th century, and especially between the two great world wars, genetic enhancements joined the improvements in cultivation techniques and permitted Italy to reach self-sufficiency in grain production.

FULL RECLAMATION

The very concept of full reclamation worked out by Serpieri was an important evolution in respect to the more limited hydrological improvements implemented in the previous century. Serpieri distinguished the term "reclamation" from that of "land improvement". He included in the first term non-agricultural projects aimed at a radical transformation of the agrarian arrangement and land system. It consisted of carrying out works for water regime regulation and field drainage systems, road works, buildings, land clearing and tillage, as well as forest plantations and tree crops. With the 1928 and 1929 laws, the authority passed from the Ministry of Public Works to the Ministry of Agriculture, where the post of Special Undersecretary for Full Reclamation was entrusted to Serpieri himself. The implementation policies in the reclamation districts had to be carried out by landowners gathered together into consortiums.

Third Century The Biotech Revolution

From the European Community to the New Millennium

In the last fifty years of the 20th century, there was an exponential growth of new scientific knowledge and we have been affected by the resulting increasingly more rapid and important technological innovations that have determined unpredictable changes in all activities. In this time span, therefore, in the space of just one generation, these changes have influenced our own behaviours and social structures. One can speak of a great "revolution" on an unparalleled scale. The agricultural sector has certainly been among those most affected and has undergone significant changes, greater than all those previously attained throughout its millenary history.

In 1950, the total gross product for agriculture represented about 25% of the national total, and has now dropped to 2-2.5%. The number of workers in agriculture has declined sharply (from nearly 50% to 5-6% of the total population), but the gross productivity of agricultural work has increased at least 10 times overall. In spite of a large reduction in cultivated land, total agrifood production has increased significantly because the average

EU production has at least doubled due to the "green revolution".

From the past need to look for new arable lands, even in marginal areas, we are now able to preserve wilderness areas, and increase wooded lands as well as crops for non-food products.

A very challenging post-war reconstruction was undertaken and the creation of a European economic union imposed a rapid agricultural reconversion, with dramatic agrifood surpluses to the point of having to reduce cultivated areas and finance set-asides.

Territories and landscapes were upset by many simultaneous factors: a variety of legal instruments, such as land reform, spurred the formation of small peasant properties and, in a short time, sharecropping almost disappeared. There were massive flights from the countryside and internal migrations of those people attracted by the industrial development that was concentrated in some areas with the subsequent disproportionate growth of suburbs and mobility.

In the span of a few decades, our traditional and solid "peasant culture", which had



From dawn till dusk... (Georgofili Photographic Archives)



Agrarian Reform: new farmhouse, Scansano Ionico, Matera (Georgofili Photographic Archives)

reached the mid-20th century maintaining the fundamental characteristics of its ancient roots, had practically disappeared. Its remnants and mementoes are today collected and displayed in special museums.

On the other hand, traditional agriculture would no longer have been up to accomplishing its task without the entrepreneurial creativity that is absolutely necessary to take advantage of innovation. Without promptly adapting to change, in fact, in this same period, even the world's great powers, rich in raw materials and advanced technologies, have found in planned agriculture, which is out of reach of private enterprise, a disastrous Achilles' heel that has made them vulnerable.

Besides sole-proprietor farms, there are more and more associations and cooperatives. There has been an effort to support the organization of integrated "production chains", the promotion of quality local production, the protection of a product's origin using certification mechanisms, and organic agriculture. The new term "sustainable" agriculture (the Italian *sostenibile* is a poor translation from English) has also been adopted to indicate a "rational" agriculture respectful of all requirements, not just those linked to production improvements in quantity and quality, but also environmental ones.

Agriculture's "multifunctional" role, always carried out with enormous social advantages,



Field formation and drainage of mountain terrain in Calabria (1955) (Georgofili Photographic Archives)

has been plainly and formally acknowledged. Yet the role played by vegetation, vigorously maintained by agriculture, has not yet been evaluated in real terms as a key factor for the hydrogeological, atmospheric, climatic, etc., balances in protecting the habitat which is linked to our survival. Alongside the farmers are those who support a responsible environmentalism based on ethically acceptable scientific evidence that avoids ideological interference and guarantees effective consistent approaches to tackle the demographic emergency as well as food and environmental safety.

Over this period of time, characterized by radical changes in the world of agriculture, even

the Academy has updated its work methods, stepping up its activities in publishing and organizing study days on a wide range of topics, with a wide assortment of skills and points of view.

A more highly specialized expertise has substituted the eclectic scholar of the past. The increasingly extreme multidisciplinary nature of scientific research, as well as of professional activities that tend to bolster individual specializations, has made wider collaborations indispensable.

Using a currently fashionable term, the Georgofili Academy has been playing the role of innovation "incubator", useful in identifying and analyzing the primary sector's vast prob-

SOCIETÀ ORTICOLA ITALIANA (SOI), THE ITALIAN HORTICULTURAL SOCIETY

In 1953, the Academy sponsored the establishment of the Società Orticola Italiana, which still today fosters the activities for the development of Italian horticulture, floriculture, and fruit farming, also in conjunction with the International Society for Horticultural Science.

lems, also in their totality, to continuously search out the necessary overview and draw attention to the possible combined effects of various new situations.

Despite organizational and methodological adjustments, the Academy's role has remained firm, especially as a hub for comparing ideas.

THE RECONSTRUCTION AND REORGANIZATION OF AGRICULTURE

At the end of the Second World War, the Georgofili immediately organized the famous Italian-American Agrarian Congress. Given the number and importance of the topics discussed, the Proceedings were defined as the *Magna Charta* for the reconstruction and rebirth of Italian agriculture.

AGRARIAN REFORM

In September 1948, the Georgofili organized, together with other Italian agrarian academies, a historic convention to discuss the agrarian re-

THE 1966 FLORENCE FLOOD

The Georgofili Academy was so severely hit by the flood of 4 November 1966 that nearly all the volumes in the library were immersed in water and mud. The number of damaged works amounted to 35,000, and the entire collection of books needed prompt action to prevent the humidity that permeated the rooms from damaging them all.

The rescue operation lasted 22 days altogether. The timely labour and cooperation of numerous students allowed almost all the books to be saved. Only those severely damaged by the violent waters could not be saved.

The rooms were completely renovated and the library resumed its regular function as early as January 1968.

form project presented by the Minister of Agriculture to Parliament. The convention's proceedings were immediately distributed among the members of Government and Parliament so that the forthcoming reform, at such a particular moment for the country, could be well-informed and documented.

EUROPEAN UNIFICATION AND INTERNATIONAL RELATIONS

For its bicentenary (1954), the Georgofili Academy had already organized a Conference on Agrarian Education in Europe, with delegates from the main agrarian study centres of almost all the participating European coun-



Proceedings of the conference on mechanization of hill agriculture (1959)

tries. The Georgofili Academy has contributed to the discussion of these topics following the complex evolution of European unification starting in the post-war period, and more recently considering the new prospects for a Europe enlarged to include Eastern European countries.



Ploughing with a Fiat DT all-purpose tractor (Georgofili Photographic Archives)

HILLY AGRICULTURE AND MARGINAL AREAS

In 1960, with the large flight from the countryside and especially the abandonment of many holdings in the high hills and in the mountains, the Academy promoted studies on fodder-livestock exploitation of areas unsuitable for intensive agriculture in central Italy. Some studies were conducted on livestock

guidelines to exploit marginal areas.

Another problem dealt with was the one of drainage, both for slopes and plains. The field water control studies continued with the implementation of new designs more suitable to the mechanization also used in the clay hills of the Meleto estate.

More recently, in 1980, a survey on the growing imbalance between the income and expenses of small, medium and large farms in hilly areas was carried out to examine the reasons for the serious crisis which troubled most of them. In 1984, the Academy proposed to the Regione Toscana a law regarding the hilly areas. The results of research carried out by the Georgofili in 1992 allowed drawing attention to the possibility of promoting the hills of Tuscany.

SCIENTIFIC AND TECHNOLOGICAL PROGRESS

The new knowledge that has greatly contributed to agriculture's rapid development is based predominantly on biology, chemistry, and physics that in turn have availed themselves of other sciences, even totally new ones, beginning with computer science.

As a result of the greater power provided by machinery, there have been impressive drainage and reclamation works, as well as a larger use of irrigation water. Today there is a movement towards what is known as precision agriculture. Using machinery guided and controlled by satellite systems and sensors as well as by electronic devices, the purpose is to optimize selective and targeted cultivation methods for all major operations, with greater efficiency and reduced consumption.

In the chemistry sector, research has permitted significant improvements in fertilization and defences against parasites and pests, as well as in the use of plant growth regulators and production. Large-scale genetic research has seen further developments in investigations at the bio-molecular level. Genomic science has opened broad new horizons and transgenosis itself has offered a tremendous range of applications.

The innovations awaiting us in the near future go beyond our imagination. This is a certainty that should make us think, because research and the advancement of knowledge cannot be stopped. Only their use shall remain entrusted to human discretion, our independent creativity and initiative and our ability to distinguish the essential moral and ethical values, with full respect for each one's rights and duties. Our conscience and civil responsibility alone will enable the best and most principled use of each potential advance we may achieve.

Above all, as a valuable link between science and society, our Academy has contributed to understanding how easy it is to believe the mistake that "progress" and "development" are the same thing or, in any case, synonyms of "quality of life", and that they grow together with an ethical conscience.

SAFEGUARDING OF GREEN AREAS FOR ENVIRONMENTAL PROTECTION

In the early 1990s, the Academy organized a series of six study days on the general theme of global change and of green areas for the safeguarding and restoration of the environment. The themes discussed were the role of vegetation; vegetation in an urban and territorial dimension; compatibility of agroforestry activities in protected areas; plants; water regime regulation and hydrogeological instability; the procurement of perennial plants; and the role of forestry in safeguarding and restoring the environment.

AGRICULTURE AND THE LANDSCAPE

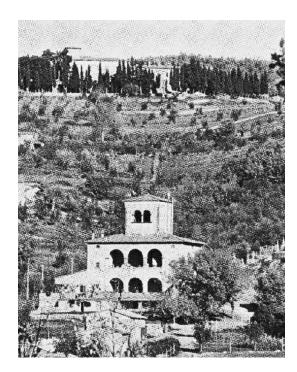
To discuss the relationship between agriculture and the landscape, the Georgofili Academy has carried out, over the years, discussion-excursions in various regions, drawing attention to the unrestrained role of agricultural activities in local land-use planning, and the creation of new landscapes. Places and characteristic crops have been visited in the Chianti, Apulia, Sicily, Tuscia, Calabria, Veneto, and Friuli Venezia Giulia. The Georgofili Academy's participation in the CNR project for the safeguarding of rural buildings has offered the opportunity to emphasize their

BOMB ATTACK

In May 1993, the Georgofili Academy was the target of a barbaric and vile bomb attack. A car bomb was set off in Via dei Georgofili, near the back entrance, thus causing the collapse of a portion of the medieval tower where the Academy was housed. There were five dead (including the entire family of the Academy's porter) and numerous casualties as well as considerable damage also to a vast area of the city (including the Uffizi Gallery and Palazzo Vecchio). The Georgofili never suspended their activities but rather drove the reconstruction of their own headquarters, to which they would return almost three years later. Radical repairs were therefore carried out and the structure was reorganized. The utmost was also done to improve the functionality of the main facilities: the document archives, the library, and photographic archives. Furthermore a spacious branch in Piazza Alberighi was set up to store a part of the ever-increasing number of books, and a general computerization of all the activities also began.

importance. The Academy has also organized a study day on this theme, during which the analysis was extended to the acknowledged opportunity of redeveloping rural buildings within their landscape context.

The unmistakable features of the distinct rural Tuscan landscapes have been the result of the work of man and his interaction with the natural environment. The variety of crops and their





1974-2007 Le Marangole farm, Radda in Chianti. From traditional agriculture (inherited from the mezzadria or sharecropping period) which was characterized by extensive terracing and mixed cultivation of grapevines, olive trees, etc. (1974), to an extensive monoculture of specialized vineyards (2007)

distribution, the farming systems, cattle-breeding, trends in demographic pressure and population systems and the distribution of landed property are elements that have brought about local transformations and have affected the character of the landscape, leaving traces still visible today. A new, more widespread interest in landscape is now growing, due also to the fact that its aesthetic value can have a tangible

economic one since, when it is acknowledged, it attracts tourism and results in "residential desirability". We have begun talking about "landscape heritage" precisely in an economic sense and a new "economics of the landscape" is being developed.

GLOBALIZATION

The Georgofili have studied the various prob-



Wood-chipping machine (R. Cavalli, 2007)

lems that have arisen, such as those relating to the Common Agricultural Policy (CAP), World Trade Organization (WTO) agreements, and the enlargement of the European Union (EU). They have especially focused their attention on how they are connected to the process of globalization, whose developments have been projected into a future yet to be built. It is not about whether we do or do not want a globalized world, because the latter is already here in our daily life. People and goods move from one hemisphere to the other, from one continent to another with unprecedented ease. Audio and video information can be broadcast everywhere and permits speaking in real time.

This is reflected in each aspect of life, making necessary a timely adjustment of the very way ideas are formulated and acted upon. We can discuss the positive and negative aspects and try to govern its course better, but globalization is a developing entity that cannot be stopped. The increasing supremacy of economics and technology on policies and states, which create and manage the law, finds the legislators and the rigid legal systems still tied to a local point of view, and therefore unable to satisfy the needs of globally expanding economic activities. Thus arise great risks of exploitation and abuse, with inevitable conflicts between the political power of states and the world-

wide economic power. The latter needs rules in the relationships among supranational players and towards the states.

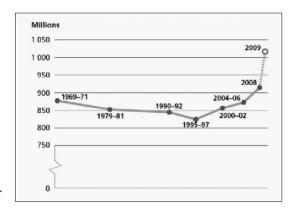
PLANT-BASED BIOMASS FOR ENERGY PRODUCTION

The need to meet the new and pressing requirements for environmental protection and the search for alternative sources of energy has found in the agricultural sector an interesting prospect with the energy use of agroforestry biomass. The studies in this sector have been particularly significant with the aim of optimizing the use of woody biomass from agricultural and forest crops in addition to the by-products of woodworking and of materials used in the transport of agricultural and industrial products.

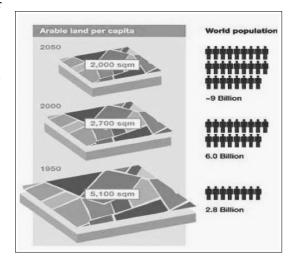
The Georgofili have been particularly involved in energy forestry, in which specifically selected plants are grown to provide biomass for power generation

FOOD SECURITY AND SAFETY

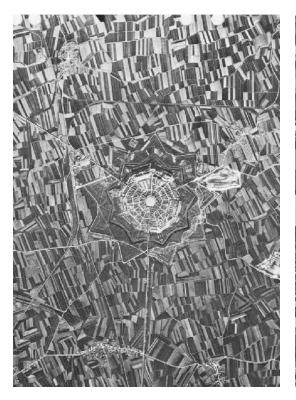
As is still the case in much of the planet, the Georgofili Academy has since its very foundation talked about food security as the assurance of food in sufficient quantities to meet the nutritional demands of the world, saving it from hunger. Even here the main problem was quantitative, with food scarcity being frequent, especially because of various kinds of



Undernourished people in the world (from 1969 to 2009). Source: FAO



Decrease in available per capita arable land. Source: FAO





1954-2000 Palmanova, Udine. From traditional agriculture (1954) to the extension of single cultivated lots (2000) and simultaneous urbanization of the countryside (S. Arca, 2007)

shortages. The western world has subsequently managed to produce food that is even in excess to its needs, but has had to face new and dramatic problems of food quality. Food safety has taken on a different meaning that regards the wholesome characteristics of food (in other words, healthy and nutritional).

The direct line of the traditional relationship between the farmers who produce food and the consumers has almost disappeared. Instead, "chains" have developed and stepped in. Various players are interested in the many aspects of handling the product (selection, packing, preservation, transport, etc.). This new

situation has created the need to safeguard the single components of the chain, but especially the two extremes: on one side, protecting the producers from unfair competition, and on the other side, the consumers from fraud, sanitary deficiencies and so on. At the same time, a conscious appreciation of the quality of products has increased, setting a fundamentally different trend in market requirements.

All possible ways have been tried to offer goods with a "guarantee" of quality, creating confusion regarding the word's true meaning that can be used to indicate very different things (place of origin; cultivation techniques used; intrinsic nutritional, healthful product characteristics, etc.). Many forms of "guarantees" have spread (e.g., registered trademarks, protected designations of origin, etc.). "Certification" forms (of origin, process, or product) have also been developed.

AGRICULTURAL AREA "CONSUMPTION"

Statistics from the final decades of the 20th century have already shown a growing and worrying tendency in a drastic reduction of the UAA (utilized agricultural area). The main reasons have been the flight from those areas that are more difficult to farm and the progressive urbanization of farmlands. The move towards the countryside has taken place especially along the main routes of communication, often on valley floors right where the best farmland is

found. A part of agriculture has disappeared in this way, radically changing the landscape, as documented by the telling comparison of satellite images. These changes have affected a large part of the agricultural areas, especially in the north-central regions.

As farmland is a limited resource, this "consumption" has caused critical and irreversible damage. For all practical purposes, at this rate, our cultivated farmland could disappear in a few decades, also because the rate seems destined to become ever more rapid. It is therefore urgent and imperative to undertake a rational safeguarding of agricultural areas. According to the Georgofili, rather than thinking about a utopian plan for the agricultural landscape, through the imposition of restrictions aimed at maintaining the existing crops, we should first of all secure the preservation of farmland: i.e., of those areas where it can survive, able to make innovations to remain competitive, and continue to offer its living landscapes, ever changing in space and time.

With the assistance of expert agronomists, the public administrations in charge should carefully plan protective actions to ensure the availability of sufficient farmland for future generations. In many countries, actions regarding prime agricultural land, whose importance has been recognized, have already been carried out.



Gabbiano Castle. September 2007 photographic campaign on the main agricultural areas carried out by the Georgofili Academy thanks to the technical support offered by the Regione Toscana (Georgofili Photographic Archives). Note the specialized vineyards and the size of the plots, almost a monoculture of vineyards and woods (at farm, agricultural, and territorial levels), which has brought about a rapid and radical change in the Tuscan landscape

LOOKING TOWARDS THE FUTURE



Emblem made for the 250th anniversary of the Georgofili Academy

Dawn of the Third Millennium

Unfortunately, the twentieth century can be considered to have closed for the Georgofili Academy on 27 May 1993, with the explosion of a car bomb at the foot of the academy's ancient tower headquarters (see p. 21). It was almost three years before the Academy returned to its rebuilt and restored premises (11 March 1996). Its activities were never suspended, instead its immediate reaction to this outrageous experience was to increase its efforts with growing intensity, demonstrating the absolute ineffectiveness of this contemptible act of barbarism on the Academy's spirit.

As a matter of fact, starting in the 2000s, a series of innovative initiatives can be observed, including changes to the charter and the creation of the new category of associate academy members, the division of the Academy into regional sections (see p. 15), the formation of advisory committees (see p. 16), and the setting-up of the Association of the Friends of the Georgofili. At the Georgofili's initiative, academies and similar institutions dedicated to agricultural sciences in Italy and Europe have agreed to establish closer relations among themselves, also because of the prospects opened up by European unification, setting up a permanent

cooperation (though respecting individual autonomies) to encourage and support the development of joint programs (UNASA and UEAA, see pp. 80-81).

Considering the lack of awareness of agriculture's real problems, the Georgofili has paid particular attention to communication given the essential need to make their work known through the media. Indeed, an academy such as ours can also be a useful source of up-todate and accurate news for those bodies involved in public information. For this reason, in addition to the traditional publication of its "Proceedings" and "Supplements", addendums, monographs, and catalogues, the Georgofili Academy has started to issue its own monthly newsletter "Informazioni dai Georgofili" (Information from the Georgofili), distributed by AgraPress, and more recently, its own weekly online magazine "Georgofili INFO" (see p. 37).

With these innovations to its methods, tools, and organizational structure, the Academy now finds itself at the beginning of a new millennium, facing a relentless and profoundly new world, in a confused political-economic framework at a European and an international level. Estimates must therefore be projected as far forward as possible and our work adapt-

UNASA

National Union of the Academies for Science Applied to the Development of Agriculture, Food Safety and Environmental Protection

On the initiative of the Georgofili Academy, other academies and similar national educational institutions committed to the sciences for the development of agriculture, food safety and environmental protection, gathered in Florence on 26 October 1999, 18 May, and 19 October 2000. After underlining the strategic value of education and scientific research for technical, economic and social development, it was pointed out that such educational institutions as the academies offer a contribution towards the creation and dissemination of innovation and sustainable development.

Considering the importance of applied sciences to multifunctional agricultural activities, including all the aspects related to food safety and environmental protection, the advisability was expressed of establishing closer working relationships among themselves, also considering the prospects offered by the European unification process.

List of the academies that signed the UNASA charter (19 October, 2000):

Bologna: Accademia Nazionale di Agricoltura Firenze: Accademia dei Georgofili Firenze: Accademia Italiana di Scienze Forestali Firenze: Accademia Nazionale Italiana di Entomologia

Firenze: Associazione Italiana delle Società Scientifiche Agrarie (AISSA)

Milano: Società Agraria di Lombardia

Pesaro: Accademia Agraria

Roma: Accademia Nazionale delle Scienze detta dei XI.

Siena: Accademia dei Fisiocritici

Siena: Accademia Italiana della Vite e del Vino Spoleto: Accademia Nazionale dell'Olivo e dell'Olio

Torino: Accademia di Agricoltura di Torino

Treia: Accademia Georgica

Verona: Accademia di Agricoltura, Scienze e Lettere di Verona

ed in a timely manner, without lapsing into apathetic expectation.

For some time, a pernicious sense has been spreading of an ineluctable and ominous future for our agriculture, which has ended up fuelling passive and demoralizing attitudes. Often, new roles for the primary sector, "capable of representing the needs of culture,

nature, environment, landscape, etc.", have been introduced. Many wonder if the farmer of the future will still have a productive role or be merely an employee paid by the community to keep alive the last remaining areas still being cultivated. We cannot help being concerned about the growing hunger that humanity continues to experience and the in-

UEAA

European Union of the Academies for Science Applied to the Development of Agriculture, Food Safety and Environmental Protection

On the initiative of the Georgofili Academy, the Academies and other similar European Institutions committed to the sciences for the development of agriculture, food safety and environmental protection, gathered in Bologna on 13-14 November 1999 and in Florence on 20 October 2000. After underlining the strategic value of scientific research for technical, economic and social development, it was pointed out that such institutions as the academies offer a contribution to the creation and dissemination of knowledge, innovation and sustainable development.

Considering the importance of science applied to multifunctional agricultural activities, including all aspects related to food production and safety, and natural resource protection as well as the necessity of strengthening international cooperation, they expressed the intention of establishing closer working relationships in the spirit of European unity and of setting up a structure aimed at providing this permanent interconnection which, while respecting their individual autonomies, may foster and support the fulfillment of common programs of activity.

List of the academies that signed the UNASA charter (19 October 2000):

Croatia: Croatian Academy of Sciences and Arts Estonia: Estonian Academy of Sciences France: Académie d'Agriculture de France Germany: Dachverband Agrarforschung e V. Greece: Greek Agricultural Academy Italy: Unione Nazionale delle Accademie per le scienze applicate allo sviluppo dell'agricoltura, alla sicurezza alimentare ed alla tutela ambientale (UNASA)

Latvia: Latvian Academy of Agricultural and Forestry Sciences

Holland: Royal Society for Agriculture Science Polony: Polish Academy of Sciences Polony: Polish Academy of Arts and Sciences United Kingdom: Royal Agricultural Society of England

Romania: Gheorghe Ionescu Sisesti Romanian Academy for Agricultural and Forestry Sciences Russia: Russian Academy of Agricultural Sciences Slovenia: Slovenian Academy of Sciences and Arts

creasing population growth worldwide in the near future. Indeed, no nation or continent can remain indifferent and consider itself removed from the possibility of insufficient global agriculture. It is a theme that will be debated at the upcoming EXPO Milan 2015 entitled *Feeding the Planet*.

The Georgofili plan to work towards tackling the causes of such insensibility and indifference to the agricultural crisis, by resolutely appealing to sensible people of good will or common sense. In truth, tomorrow's world depends on what we sow and build today.

As regards the work carried out in recent

DEFINITION OF AGRICULTURE

Because of present and future possible misinterpretations and confusion, the Georgofili feel the necessity of making the sector's vital issues and overall great potentials appreciated, so as to identify the true common priority problems to be faced urgently and also to more clearly stress that all farmers need to promote their production, showing sensible respect for the environment and quality of life.

It is for this reason that the Academy has updated the very definition of agriculture: rational management and protection of the biosphere's renewable productive resources.

years, being issues with which we are still deeply involved, we will cite only the most important, with the intent of making the reader aware of them. Sometimes, opinions and positions are also expressed that do not represent the writer's personal thoughts, but they report what has emerged in the course of public meetings. As has always been the case—and it is right that it continues to be so—the Georgofili's opinions are the result of open discussions of all the "diverse ideas" that can lead to various guidelines, yet which are equally useful to responsibly evaluating possible alternative solutions.

THE CONCEPT OF AGRICULTURE

First and foremost, a slow yet progressive metamorphosis is taking place in the concept of agriculture, which today is subjected to requirements that tend to emphasize the unquestionable values of the environment, nature, and landscape. Some mistakenly believe that agriculture serves only to sustain wildlife and to provide a diversion for citizens and tourists in search of something that recalls a bygone natural world, without considering how humankind's very existence is inextricably linked to agricultural production. These are the changes that have been emerging through deceptive regulations, e.g., those that provide financial support for environmental protection rather than for agricultural production, or the *planned preservation of agrarian landscapes*, entrusted to "plans" prepared by local municipalities.

There are also forces that tend to distinguish various types of agriculture, often putting one against the other in a jumbled mix (intensive agriculture, natural farming, niche agriculture, sustainable agriculture, organic farming, multifunctional farming, multisectoral agriculture, etc.), or which tend to consider separately the individual sectors (forestry, animal husbandry, cereal growing, viticulture, etc.),

as well as the categories of workers and their representative associations. The importance of each of the three classic fundamental factors of *land*, *labour*, and *capital* is also changing with the development of increasingly sophisticated technological means and the delocalization of productive activities. There seems to be the baseless idea that globalization may lead to a worldwide market with an inexhaustible availability of agricultural commodities, whose volatile prices are often lower than our production costs, and which our agribusinesses import, undermining our country's agriculture.

On the other hand, the strategic importance of agriculture has again resurfaced at the various world summits that address the most pressing global issues, such as environmental protection, energy resources, and food security. A new green economy is increasingly being discussed, with a promising vision of the contribution that agriculture could offer. However, the now fashionable word "green" is also used to charm the collective imagination. It is misleading to contrast "economic competitiveness" and "environmental sustainability" since agriculture has always protected the environment, not only by managing renewable productive resources, but also through the multiple activities carried out in land management and tillage, water regulation, erosion prevention and hydro-geological instability. The current frequency of natural disasters shows the very real effects of abandoning agricultural activities and of the steady overbuilding of rural areas.

CONSERVING THE AGRICULTURAL LANDSCAPE

Our Constitution expresses a commitment to protecting the landscape, yet the meaning of this word was given by our laws that, expressly and wisely, continued to always exclude protection restrictions on agricultural landscapes. Nevertheless, with the new millennium, some legislative measures have imposed strict conservation and planning rules on all existing landscapes, no longer excluding agricultural ones. A special "Code" was introduced in 2001 that, in this regard, raised serious concerns and doubts on the technical feasibility of such generalized measures, the sustainability of the associated costs, and the expected damage that such planning (left to various interpretations) would have on farms, forcing them to a paralysis precisely at a highly critical time for them.

The Georgofili Academy has issued stark reminders regarding the problems that have arisen. In various forums, it has been mentioned that the "green" of plants certainly has an aesthetic value (both ornamental and landscape). However, it is above all the central means by which nature ensures the sur-



Montalcino: H-shaped grapeharvesting machines at work (Georgofili Photographic Archives)

vival of plant and animal life, underpinning all food production while simultaneously being an equally key means for controlling the atmospheric equilibrium. It is the plants themselves that allow us to eat and breathe in an environment that must be protected, to which the aesthetic value of the landscape can then be added. Nonetheless, this order of priorities cannot be ignored, much less reversed. However, it does seem unfair to oblige farmers to cultivate their land in accordance with binding planning regulations, independent of production profitability, and without even the expectation of any possibility of eventual compensation for damages.

In light of our legal system and that of the European Community, it is clear to the Geor-

gofili that the relationship between agricultural development and the preservation of its current landscape appears at odds. Preserving agriculture means preserving the land's intended use, and not its appearance or tillage techniques. The denial of free entrepreneurial choices in primary production activities can call into question the constitutionality of these actions.

AGRICULTURAL PRODUCTION

Agriculture has long been undervalued. Nevertheless, our food agro-industry cannot ignore the possible loss of one of its original success factors based on the use of highly regarded, quality agricultural products linked to their areas of origin. Not giving reasonable



Super-intensive olive grove one year after being planted (Georgofili Photographic Archives)



Entirely mechanical picking in a superintensive olive grove in its third year (Georgofili Photographic Archives)

value to the prestige of these ties will eventually lead the current commodity-exporting countries to also develop equally competitive processed food products for export, perhaps labelled with our historical brands, acquired and used by multinational or delocalized companies.

The organizational structure of the food chain must be assessed with utmost attention. Farmers, manufacturers, distributors, and consumers are all interested in promoting the quality of our products, specifically in leveraging the clearly indicated point of origin of the raw materials used, and ensuring as much as possible an identifiable supply chain, also with regard to the true meaning of the "Made in Italy" brand.

The rules to be adopted make a shared strategic vision between the different components of the supply chain essential, in addition to considering how to strike a balance between the incomes of those who work there, the end is to achieve a higher overall added value and a more equitable distribution of profits. There have been clear signs of the severity of this problem in relation to agricultural workers' wages being too low, much lower than those of other business sectors (even within a single chain in the same municipality), which are causing a continued abandonment of agriculture, even without flights and migrations. No country can heedlessly allow their primary

agricultural production to continue to gradually decrease and decline.

FARMS

Currently, there is confusion regarding the exact number of "agricultural workers" in our country. It is necessary to understand if this category also includes those who work around farms, but in different ways that do not involve working in the fields. Similarly, the strong continuing increase in land fragmentation, (i.e., the successive, repeated divisions of a family's agricultural land), requires establishing whether those extremely small land parcels are to be considered farms. Now widespread throughout the countryside, their owners work at other businesses in various sectors. Consequently, the family's total income has no relationship to the small plot of land, as it is cultivated only in their free time and only provides products for the family's own consumption. It is important to define the parameters that distinguish "real" farms and "real" agriculture, i.e., those that produce what is needed and with a competitive cost/ quality ratio, obviously paying the related taxes, starting with VAT.

Above all, the modern farmer needs two elements to successfully undertake and manage this business: an up-to-date knowledge of the market and the necessary expertise to produce what the marketplace considers appropriate in

addition to the needed financial capital to carry out projects (land use, work tools, etc.). Thus a new creative entrepreneurial capitalism is created, based on knowledge, i.e., on an operational intellectual capital, backed by financial capital, making it necessary to develop new working relationships both locally and internationally.

SCIENTIFIC RESEARCH, BUSINESS, AND FINANCE

Today our country appears impoverished and disoriented. It recognizes the need for reforms, but has difficulties implementing them collectively. Nonetheless, the current crisis should be an incentive to promptly renew existing obsolete structures, starting with those in scientific research. In this area, we also have to make up for past structural delays. Therefore, a strong policy of review as well as organizational renewal and optimisation would be more appropriate than ever, even promoting an exchange of researchers and the rational management of resources that, regrettably, are currently broken up among too many different departments and agencies. The importance of greater integration between science, business and finance to back up continuous innovation—essential for the development and competitiveness of production—should also be mentioned. The policy supporting enterprises should adopt funding as incentives rather than as subsidies,

to be managed with forward-looking criteria that favour the initiatives of those capable of pursuing them.

GENETICALLY MODIFIED ORGANISMS

The Georgofili Academy has always been interested in genetic research, which has seen bio-molecular important developments in recent years. The science of genomics has opened up broad, new horizons and transgenosis has already proposed a huge range of applications. Unfortunately, developments in our country have been hampered in various ways, pleading those precautionary reasons that are certainly necessary in the face of any application of new scientific knowledge. Yet "precaution" cannot be a "principle" to be invoked and applied only in some cases and not in others, since it represents a general rule of ethical conduct.

However, it is important to remember the serious obscurantism regarding GMOs that has been imposed on all Italian scientific research through the prohibition of continuing laboratory activities and the destruction of important existing experimental fields. Moreover, the precautionary reasons put forward so far are as yet non-existent. In the meanwhile, the universal quest to produce new GMOs of great interest and usefulness to humanity continues. Although recently mitigated by the EU, the current vetoes

are destined to cause only damaging delays. The topic has been widely debated in the Academy, stressing that all parts of the living world (animals, plants, insects, bacteria, viruses, etc.) are in continuous evolution and that scientific research also has the task of identifying and employing natural mechanisms so as to be ready to take action, where necessary.

Today, genetically-modified crops have already spread to many millions of hectares in several countries around the world, with a gradual annual increase. New second- and third-generation genetically-modified products, offering highly useful qualitative traits, especially for human health, have also spread. Initially in the hands of a few multinationals, the creation of new GMOs has now also been implemented in many countries that are not particularly advanced. The conviction has emerged at the Georgofili Academy that the current preconceived and generic ostracism to all GMOs cannot continue. With the current control mechanisms, genetic engineering can achieve tremendous developments.

POLICY GUIDELINES

The changes made in 2001 to Title V of the Constitution ignored making mention of agriculture among the subjects considered. The complex agricultural, forestry, and pastoral activity, as agriculture has always been

considered, has been divided and split among various authorities, reflecting the concept which lies behind the repeated attempts to completely suppress the Ministry of Agriculture. This plan has always been strongly and openly opposed with well-founded explanations by the Georgofili, that still draw attention to the need that all powers relating to the primary sector be assigned to a single institutional level able to address the entire issue with clear and rational criteria.

The central government has gradually abandoned many of its prerogatives, passing them to international bodies, on the one hand, and to regional and local authorities, on the other. Agriculture thus finds itself being governed simultaneously by local, regional, national, and European bodies, in addition to having to meet rather major obligations assumed by being part of such international organizations as the World Trade Organization.

European agricultural policy guidelines have attempted to reconcile different, often divergent or antithetical needs. Sometimes they have even tried to work with the same methods and measures, which are not always useful to the various types of agriculture. Confusion has arisen in interpreting a number of different concepts of development distinguished by, among other things, two mere synonyms: "rural" and "agricultural".

INTERNATIONAL CONTEXT

As was the case in the past, though with altogether new problems, issues related to agriculture cannot be addressed without considering the more general worldwide picture. The history of Europe is based on a peculiar form of unity in diversity. Today this trait is even more necessary in the awareness that the value of each cultural identity is fundamental to the establishment of an appropriate course of joint initiatives that pursues common solutions to the global problems looming over our future. Through its efforts, the Georgofili Academy has not stopped drawing the attention of those today at the forefront of European policy to the responsibilities that they would assume in the face of history if they did not prove to be worthy of their predecessors in the difficult task of uniting the continent that has already paid for the disasters of devastating fratricidal wars.

In a constructive spirit, the Academy has highlighted the need to reconsider some of CAP's basic choices because, drawing useful information from the experiences to date, it may be possible to achieve the expected and necessary unitary policy even in other sectors of the European Union, avoiding the copying of overly bureaucratic models.

The need is also being demonstrated for new formal combinations between businesses in geographically distant areas that are however bound together by common interests and connected by modern communication and integrated operational networks. The forms are different from the traditional ones that answer to a single nation-state in addition to being unlike the current multinational corporations.

Globally, many countries are pursuing changing political guidelines tied to their own interests yet sharing the necessity for global agreements that allow everyone to have clear rules. This is demonstrated by the frequency with which countless world summits at various levels are held, one after the other, to solve difficult and moreover strongly intertwined supranational problems. However, the most difficult objective will certainly be that of establishing an authoritative global governance capable of making and enforcing the rules.

THE GEORGOFILI ACADEMY, A SOCIAL ASSET

The words that dominate the Georgofili Academy's coat-of-arms, *prosperitati publicae augendae*, (enhance the commonwealth's prosperity) are not merely a reminder of the past, they also highlight the need to continue to think about the vast, new horizons open to a future unconstrained by preconceived dogmatic doctrines and ideologies. The Academy has not declined its commitment to adapt to the times, aware of the role of individual academy members and of the potential opportunities to work together,

GEORGOFILI MEMORANDUM

For some years now, a growing malaise has been emerging in the world of agriculture and thus the European Commission decided to carry out a methodical CAP Health Check. Praising this initiative, in 2008, the Georgofili Academy decided to offer a contribution to the constructive phase of verifying the main ideas and policies currently being pursued. A memorandum was then drawn up with a list of some overriding problems, which, through the Georgofili's activities, were

identified as items to be discussed. The purpose of this list, consisting of seven points which in turn contain various exemplifying items, was to open exhaustive discussions.

All the problems pointed out in the memorandum have remained priority and unresolved matters. The Georgofili are still waiting for some sort of reaction or at least an acknowledgement of the necessity to discuss them.

PRIORITY PROBLEMS:

- 1) Give the sector more political weight by:
- a) grouping administrative competencies into a smaller number of parties;
- b) overcoming shortsighted divisions among the farmers' representative organizations and cutting down on the excessive number of interlocutors around the tables of technical-political discussion;
- c) improving communication to the public to disseminate knowledge of the sector's real problems and thus create greater awareness and sensibility towards the needs of agriculture.
- 2) Increase awareness of the essential and irreplaceable functions of agriculture by:
- a) drawing attention to the priority strategic importance of food production;
- b) highlighting the value of agro-environmental multifunctionality of agriculture (not to be confused with the multisectoriality of farms);
- c) reassessing the opportunities and contributions that can be offered by agriculture in the development of a modern tertiary industry and of tourism in particular; d) considering urgently and with the utmost attention problems related to water supply an element essential to all living organisms and therefore a priority for

agriculture.

- 3) Resolve inconsistencies and disagreements between the different decision-making levels by:
- a) re-assessing the importance of the State and the role of national Government;
- b) attributing the appropriate meaning and value to EU directives and the difficult task of allowing for the different regional situations, without compromising the community nature of CAP;
- c) clarifying the aims and limits of regional autonomies and competencies.
- 4) Analyze and oppose the causes of agriculture's structural regression by:
- a) drawing attention to the progressive and irreversible reduction of UAA;
- b) opposing the excessive subdivision of arable land by also establishing minimum size and efficiency limits that justify access to financial support for farm innovation and competitiveness;
- c) favouring the management grouping to form suitably sized farms that can take advantage of planned development;
- d) trying to promote equalization of per capita in-

comes of those working in the agricultural sector with the incomes from other work sectors in the same municipal areas.

- 5) Update facilities and services by:
- a) stimulating quality protection and promotion in a competitive organization of markets;
- b) promoting and consolidating the aggregation of product offers, beginning with primary commodities;
- c) organizing systems for the collection and timely distribution of economic and global market information
- useful tools to orient famers as well as the purchasers of their products;
- d) making access to credit easier;
- e) reducing the number of regulatory rules and streamlining bureaucratic procedures;
- f) reducing the incidence of current contributory taxation:
- g) making the presence of agronomists mandatory in Commissions dealing with interventions in the agricultural sector at every degree and level;

- 6) Promote innovation by:
- a) boosting both public and private scientific research and supporting the consequent technological development;
- b) disseminating knowledge through education and training, at all levels, with continuous professional refresher courses in the various sectors of activity;
- c) fostering autonomous entrepreneurial initiatives within a framework of responsible guidelines and financial support, not to be used as indirect planning tools;
- 7) Simplify agricultural laws and make them homogeneous by:
- a) clarifying terminologies and concepts related to current regulations;
- b) cutting down on the excessive number of overlapping rules;
- c) re-examining the changes made to Title V of the Constitution in the light of the experiences gained in this regard;
- d) producing the eagerly-awaited single consolidated act.

each with their own specific areas of expertise. This *social asset*, combined with the cultural and human capital, is the Georgofili's living heritage. It indicates a functional structure of people bound together in order to increase the ability to interact in society, with a view to creating ever more effective ways to communicate, in-

form, and draw the attention of public opinion to issues that are important to us in the face of new challenges. We are quite pleased to compare ideas with people having an open mind and we are capable of changing our mind on individual issues when someone with the appropriate arguments can convince us.

L'Accademia dei Georgofili all'avvio del terzo millennio



a cura di Maurizio Naldini

P EDIZIONI POLISTAMPA Edited by Maurizio Naldini, the volume, L'Accademia dei Georgofili all'avvio del terzo Millennio (The Georgofili Academy at the Dawn of the Third Millennium) was published in December 2011. The introduction to the history of the Academy's activities is followed by the Relazioni del Presidente, President's reports, by Franco Scaramuzzi from 2003 (the year of the 250th anniversary of the Academy) to 2011. It also contains the Prolusioni, inaugural lectures, from 2001 to 2011 given at the opening ceremonies.

In this volume, the Georgofili have brought together observations and discussions on the major problems in the world of agriculture at the dawn of the third millennium.

The Georgofili's Future Role and Objectives

What role can the Georgofili Academy play in the society of tomorrow?

Our work methods and tools have changed over time, yet the Academy's role has remained unchanged. The Georgofili collect new scientific knowledge and new ideas, to study and discuss them also publicly. Well-informed summaries drawn from these activities are disseminated; they are brought to the attention of those whose task it is to use them for economic and social policies, according to responsible political choices. These goals have always been expressed in our historical logo: *Prosperitati publicae augendae*.

Why speak of hope?

We face a future full of unknowns and additional changes. The Academy does not have scientific research laboratories. The universities and many institutions that perform these activities tend to study specific scientific areas and individual researchers are increasingly specialized. Today we're lacking the figure of the mature, all-round scientist who, with his extensive knowledge, is capable of coordinating all these areas by personally addressing the various problems.

Is this what makes your work essential?

Without a doubt, widespread scientific cooperation across disciplines is essential. Otherwise, the individual researcher ends up losing sight of the big picture in which the results of his work are placed and often the range of its possible applications as well. The Academy's role in this area is increasingly important.

Have you ever thought of changing the Academy's name?

The name "Georgofili" was the one given to the Academy upon its establishment. It is not easy to pronounce, especially for some foreigners. However, it has been preserved through the centuries because its broad meaning reflects the Academy's horizons, conferring on it a clear distinction. Any attempt to change the original name would only lead to reductive and nonetheless banal changes.

With the disappearance of the peasant's figure, how is the farmer's figure evolving?

The number is growing of part-time farmers whose income comes also or prevalently from non-agricultural activities. The figure is increasingly emerging of a farmer no longer

^{*} From an interview with President Franco Scaramuzzi by Maurizio Naldini in 2011

tied to landed property. The number is growing of farmers who delocalize their businesses, transferring them to wherever they can find the most favourable local conditions (such as the environment, infrastructure, services, and the attention and efficiency of public administrations). An increase is being seen in the number of farmers who only require up-to-date knowledge of the market, expertise, and financial capital.

Does science have the right to absolute freedom of action?

Humankind's progress is the result of intelligence and any new knowledge can lead to changes in ways of thinking and acting that go beyond prior beliefs, even if they formerly were certainties. The perspectives of science and human thought are always open, so they must also be completely free from any kind of restraint. Curiosity is the mainspring that drives and pushes the researcher in a constant race towards the truth, following the most diverse paths.

What limits may scientific research encounter? We are becoming aware of the limitations that affect the availability of the entire planet's resources. It is essential to use intelligence

to combine goals and to act globally, through shared programs that leverage new knowledge without placing any limits on general scientific research. It is the entire planet that must assume the responsibility to provide for its future.

What is the next goal to be achieved?

I should speak of goals in the plural because we have multiple ones in mind. To reply in the singular and thus remain with a single overview, I will say that international cooperation appears to be a goal of indispensable priority. Even the Georgofili Academy must look to the future with an increasingly broader horizon, while making use at all levels of the most qualified partnerships, wherever they operate.

Your work has received gratifying praise, what recognition is awaiting you?

The work I have carried out has primarily satisfied my personal interests and enriched my mind. It is I who must express gratitude to all those who have contributed, for better or for worse, to making me do what I have done and to making me what Providence has allowed me to be.

Accademia dei Georgofili

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