



GREMPA: A useful initiative for cooperation in almond research

Socias i Company R.

in

Kodad O. (ed.), López-Francos A. (ed.), Rovira M. (ed.), Socias i Company R. (ed.). XVI GREMPA Meeting on Almonds and Pistachios

Zaragoza: CIHEAM

Options Méditerranéennes : Série A. Séminaires Méditerranéens; n. 119

2016

pages 13-22

Article available on line / Article disponible en ligne à l'adresse :

http://om.ciheam.org/article.php?IDPDF=00007250

To cite this article / Pour citer cet article

Socias i Company R. **GREMPA:** A useful initiative for cooperation in almond research. In: Kodad O. (ed.), López-Francos A. (ed.), Rovira M. (ed.), Socias i Company R. (ed.). *XVI GREMPA Meeting on Almonds and Pistachios*. Zaragoza: CIHEAM, 2016. p. 13-22 (Options Méditerranéennes: Série A. Séminaires Méditerranéens; n. 119)



http://www.ciheam.org/ http://om.ciheam.org/



GREMPA: A useful initiative for cooperation in almond research

R. Socias i Company

Unidad de Hortofruticultura, Centro de Investigación y Tecnología Agroalimentaria de Aragón (CITA), Av. Montañana 930, 50059 Zaragoza (Spain)

Abstract. The first GREMPA Colloquium was held at the Mediterranean Agronomic Institute of Zaragoza in February 1974, but was preceded by several initiatives mainly driven by Dr. Jacques Souty, Director of the Station of the Grande Ferrade of INRA in Bordeaux. Many of these previous actions are not well known, but were essential for the launching of such a useful group. In this review I have attempted to follow up these initiatives, as well as the first aims proposed for the success of GREMPA. Many of these objectives have been achieved, but the initial spirit of dialogue and open discussion has changed towards a more formal, congress-style meeting. Additionally, some conflictive moments of the history of GREMPA are recalled and homage is paid to the three great researchers who invested all their energy in this endeavour: A.J. Felipe, C. Grasselly and F. Monastra, whose enthusiasm and spirit we have not managed to maintain.

Keywords. Almond – Research – History – Mediterranean.

GREMPA: une initiative utile pour la coopération dans la recherche de l'amandier

Résumé. Le premier Colloque du GREMPA avait eu lieu à l'Institut Agronomique Méditerranéen de Zaragoza en février 1974, mais il était précédé de plusieurs initiatives impulsées notamment par le Dr Jacques Souty, Directeur de la Station de la Grande Ferrade de l'INRA à Bordeaux. Beaucoup de ces actions antérieures ne sont pas très bien connues, mais elles furent essentielles pour le lancement d'un groupe si utile. Dans cette révision, j'ai voulu suivre ces initiatives, ainsi que les premiers objectifs proposés pour le succès du GREMPA. Une grande partie de ces objectifs ont été accomplis, mais l'esprit initial de dialogue et de discussion ouverte a dérivé vers un type de réunion plus formelle de style congrès. De plus, quelques moments conflictuels de l'histoire du GREMPA sont rappelés, tandis qu'hommage est rendu aux trois grands chercheurs qui ont investi toute leur énergie dans cet effort : A.J. Felipe, C. Grasselly et F. Monastra, dont nous n'avons cependant pas réussi à maintenir l'enthousiasme et l'esprit.

Mots-clés. Amandier – Recherche – Histoire – Méditerranéen.

I - Introduction

Vargas (2014) clearly and concisely described the evolution of almond research in the Mediterranean over the last 40 years, showing how it had been unquestionably effective in the modernisation of almond growing in this region. It began with the creation of GREMPA (Group de Recherches et d'Études Méditerranéen pour l'Amandier) at the Mediterranean Agronomic Institute of Zaragoza (IAMZ) in February 1974, with the purpose of setting up a forum of exchange and discussion for all almond researchers of the Mediterranean region, which is why the GREMPA meetings were referred to at the beginning as Colloquia, rather than Symposia or Congresses. The frequent constructive discussions that arose about the most diverse aspects of almond growing and research probably provided the best basis for modernisation.

The GREMPA kick-off meeting in 1974 was preceded by a series of preliminary steps to found this working group. Unbeknown to many, it was M. Jacques Souty, Chargé de Mission of INRA (France), who performed this task personally. Consequently, my objective has been to look back over the groundwork leading up to the creation of GREMPA, as well the first steps of its fruitful path.

II - Background

A meeting of experts on cooperation in agricultural teaching and technical research took place in Zaragoza in May 1971 under the aegis of the OECD and the organisation of CIHEAM. The launching of a working group on almond breeding, both on cultivars and rootstocks, was considered most interesting (Souty, 1973). The main reason for launching this proposal was the low productivity of the Mediterranean almond orchards, most of them on non-irrigated and poor soils, unlike the irrigated and fertile Californian orchards. The increase of almond consumption all over the world at that time, a trend which continues today, was an incentive to seek greater productivity for the Mediterranean orchards, considering innovations such as the release of new, productive and high-quality cultivars from the French breeding programme and the introduction of new growing techniques, such as mechanical harvesting. Some of these ideas had already been discussed in February 1970 in Athens during a meeting on horticultural production and marketing in the Mediterranean Basin (Crossa-Raynaud, 1975).

Therefore, further coordination was needed to offer growers the newly selected plant material to ensure them a higher quality and more profitable production to satisfy market requirements. Unsurprisingly, this initiative followed the releases of the first cultivars, mainly 'Ferragnès' and 'Ferraduel', from the French breeding programme, led by the INRA researcher Charles Grasselly (Grasselly and Crossa-Raynaud, 1980). Despite several research studies conducted on almonds in the different Mediterranean countries, these activities were often carried out in isolation, with limited knowledge of the plant material involved and with a restricted diffusion of results. These activities were not very efficient and furthermore there were no reference cultivars for the different growing regions. The insistence of Jacques Souty on this project was highly significant, taking into account that from his position as Director of the Station of the Grande Ferrade in Bordeaux in the 1950s he became the promoter of the first studies on the almond (Hugard, 1974), which lead to the successful releases of Charles Grasselly's programme.

The objectives suggested for the working group were:

- To facilitate cooperative research work to solve complex problems, difficult for a single country to tackle.
- To harmonise research projects through knowledge of the work carried out in other centres, to standardise working techniques and to adopt common reference controls, etc.
- To propose a distribution of tasks according to objectives, available resources in each centre, environmental conditions, etc.
- 4. To exploit the results of each group to benefit participants as a whole.

The preliminary activities to form this group started immediately and a provisional secretariat was set up in July 1971 at the Station de Recherches d'Arboriculture Fruitière de la Grande Ferrade, which sent a survey to the centres possibly interested in this initiative, including stations in Spain, France, Italy, Greece, Portugal, Romania, Tunisia, Turkey and even Iran. The results of the survey were published in January 1972 (Anonymous, 1972) in a document that included all the centres involved in almond research work:

- Research on plant material, such as collections of local and foreign cultivars, breeding by crosses, etc.
- 2. Works on rootstock selection.
- 3. Physiological studies related with breeding.

Considering that some centres, possibly interested in taking part in the working group did not answer the survey, this document included centres of seven countries with their research lines, as well as the list of cultivars present in their collections. These centres were:

Spain:

- INIA CRIDA 03 (Estación Experimental de Aula Dei, Zaragoza), with A.J. Felipe, J. Herrero and M.C. Tabuenca.
- INIA CRIDA 04 (Estación de Viticultura, Enología y Fruticultura of Reus), with R. Vidal-Barrraquer.
- · INIA CRIDA 08 (Extremadura), with B. Ramos.

France:

 INRA (Station de Recherches d'Arboriculture Fruitière de La Grande Ferrade, Bordeaux, with the joined farm of Manduel, Nîmes), with R. Bernhard, C. Grasselly and H. Gall.

Greece:

· Institute of Pomology, Naoussa, with D. Stylianides.

Italy:

- Instituto Sperimentale per la Frutticoltura (Roma), with F. Monastra.
- · Instituto Sperimentale Agronomico (Bari), with F. Lanza.
- Instituto di Coltivazione Arboree (Università de Bari), with G. Donno.
- Instituto di Coltivazione Arboree (Università de Sassari), with A. Milella.

Romania:

• Institutul de Cercetari, Pitești, with V. Cociu.

Tunisia:

NRAT – Laboratoire d'Arboriculture Fruitière (Ariana), with A. Jaouani and P. Crossa-Raynaud.

Yugoslavia:

· Institut zu Jadranske Culture (Split), with A. Vlasić.

This document not only established the lines of research of each centre, often with the names of cultivars and rootstocks under study, but also the other points of interest, such as breeding perspectives, by crosses and irradiation, studies on frost and disease resistance, such as *Monilia* in humid environments, and selection of local populations.

All this information facilitated the proposal of a working programme (Souty, 1973).

III - Initial working programme

In order for the programme to be efficient, the consensuated coordination of all participants was necessary, therefore an initial informative meeting was imperative to provide better information on all the work performed and create an atmosphere of trust among the members.

This first meeting could have been held either in Spain or France, but the Manduel farm was the first to be suggested. This farm, near Nîmes (France), belonged to the Grande Ferrade. It had a Mediterranean climate, important trial plots, cultivar collections, parental genotypes, different progeny from breeding crosses and rootstock trials. Therefore, it was considered an ideal place for participants to gather information and discuss various activities to be undertaken and facilitate understanding of the problems and adoption of a joint programme of concerted activities. From the outset this programme contemplated important issues such as:

- 1. Standardisation of the methods for establishing and evaluating the cultivar collections.
- 2. Prospecting among local populations of interesting genotypes for their specific traits (late bloom, kernel quality, resistance to *Monilia*, leaf-hole, frost...).
- 3. Establishment of botanical collections of wild species of the subgenus *Amygdalus* in a small number of locations, but available to all participants.
- 4. Exchange of parental genotypes.
- 5. Study of the possibilities of obtaining F₁ cultivars vigorous enough to establish seedling orchards without grafting, mainly for arid regions.
- The complex problem of drought resistance, both in the rootstocks (wild species, forms to be prospected in arid regions) and in the cultivars (because of their anatomical and physiological traits), seeking practical selection methods for adaptation to drought.
- The search for genotypes with progeny showing better resistance to nematodes or to saline conditions.

The first meeting was to focus on establishing personal relationships and drawing up a programme, whereas subsequent meetings would be held every 2-3 years in the different participant countries, keeping in mind the funding resources required to implement this programme.

IV - GREMPA kick-off meeting

This meeting took place on 19-20 February 1974 at the IAM of Zaragoza. Only four countries were present, since for visa or agenda problems several potential participants could not attend and sent their apologies: S. Serafimov (Bulgaria), I. Saraiva (Portugal), V. Cociu (Romania) and A. Vlasic (Yugoslavia). Despite not being able to attend, other researchers, namely D. Stylianides (Greece), V. Grigorian (Iran) and P. Spiegel-Roy (Israel) sent their reports which were included in the final report of the meeting.

The participants from Spain were: M. Vidal-Hospital (Director of IAMZ), E. Prieto (representing INIA) and the researchers A.J. Felipe (INIA-CRIDA 03), R. Vidal-Barraquer (INIA-CRIDA 04) and F.J. Vargas (Tarragona Provincial Council); from France: J. Souty, R. Bernhard, C. Grasselly, M. Lansac and H. Gall, all from INRA-La Grande Ferrade; from Italy: F. Monastra (ISF of Rome) and Dionigi (IA of Bari); from Tunisia: P. Crossa-Raynaud and A. Jouani from INRAT-Ariana.

J. Souty, promoter of GREMPA, chaired the meeting. Unfortunately, he died several months later, on 13 October 1974, without being able to see the progress and success of GREMPA. During the opening session he recalled the fundamental objectives of the working group: to facilitate cooperative research work to solve complex problems difficult for a single country to undertake; to harmonise the research projects in the Mediterranean Basin by sharing information between the groups, standardising working techniques, adopting common controls, sharing responsibilities in relation to the objectives, available means and environment...; to make use of the synergies created between the participants.

The documents already prepared by the participants as well as those sent to the meeting were commented on and eight activities were chosen in order to reach the objectives set:

- 1. Bibliographical documentation, commissioned to G. Donno.
- 2. A list of reference cultivars to serve as controls in the different national collections. C. Grasselly and P. Crossa-Raynaud were commissioned to draw up this list, which would then be discussed and approved by all participants. Thus, the observation methods and recording data would be standardised by a working group formed by A.J. Felipe, C. Grasselly, A. Jouani, F. Monastra and D. Stylianides. If necessary, INRA-France would provide the buds for grafting the reference cultivars to complete the national collections. The definition of the blooming stages was one of the first accomplishments of this line of work (Felipe, 1977).
- A list of suitable parents for their exceptional traits was drawn up by A.J. Felipe. It was already mentioned that the self-compatible cultivars would be included in this list, probably because of the recent studies already under way on almond self-compatibility (Grasselly and Olivier, 1976; Socias i Company, 1974).
- 4. Mutual information on the crosses made by the different breeding programmes, drawing up a list by the INRA-Bordeaux to be distributed and completed by all participants.
- Collection and maintenance of a botanical collection of the subgenus Amygdalus including
 the species considered relevant by a group formed by A.J. Felipe, C. Grasselly and V. Grigorian, suggesting that the collection could be established in Spain.
- 6. Studying the possibilities of almond growing without grafting directly from seed, by P. Crossa-Raynaud and R. Bernhard, although this possibility could involve some risks.
- 7. Cooperation in rootstock study and selection, considering the different possibilities of using seedling almonds (INRAT-Ariana of Tunisia or INIA-Badajoz of Span), almond x peach and peach x plum hybrids (INRA-Bordeaux, France), several plum types (INIA-Zaragoza of Spain). The utilisation of peach as a rootstock for almond was not considered interesting.
- 8. Establishing a common reservoir of almond cultivars, suggesting the station of Bari.

At the same time it was intended to widen contacts with other researchers possibly interested in this almond network, and the names of L. Egea and E. García (CEBAS of Murcia), H. Andreu (INIA-Murcia) and B. Ramos (INIA-Badajoz) from Spain; Damigella (Univ. Catania), Amedda (Consorzio Provinciale di Frutticoltura di Cagliari) and Refatti (Fitopatologia Vegetale di Catania) from Italy; V. Vassilev (Station of Plovdiv) from Bulgaria; M. Dokuzoguz (Univ. Izmir) from Turkey; H. Al-Rais (Ministry of Agriculture) from Syria were put forward, as well as a representative from the Ministry of Agriculture of Cyprus.

Following discussion, the date of the following meeting was set for September 1975 in Montpellier, France. This was rather short term but would ensure a larger presence of participants. Finally the discussion focused on a very dissimilar trait between the Californian and the Mediterranean cultivars such as shell hardness, and a field visit to the trials under way in Zaragoza by A.J. Felipe.

V - First activities and II Colloquium

Several activities were undertaken in order to prepare the II Colloquium, establishing continuous contact between INIA-Zaragoza and INRA-Bordeaux, with activities such as the visit of A.J. Felipe to Bordeaux in December 1974. Another activity was the prospecting mission in June 1975 to Afghanistan by C. Grasselly and A.J. Felipe to oversee the wild species related to almond. Thus, a botanical collection was set up in Zaragoza (Felipe, 1984) and furthermore, with the support of

INIA and CIHEAM it was decided that the almond collection of Zaragoza would be considered as the reference collection for GREMPA.

The II Colloquium took place in Montpellier-Nîmes, France, on 8-11 September 1975, with the presence of a high number of researchers of the different Mediterranean countries: Algeria (2), Bulgaria (1), France (5), Iran (1), Italy (2), Romania (1), Spain (7), Tunisia (1), Turkey (3) and Yugoslavia (1). Researchers from Israel, Greece and the Soviet Union excused their absence, as did some researchers whose countries were already represented at the Colloquium. For the first time there was a researcher from beyond the Mediterranean Basin, Dr. Kester, from the University of California, who was in Europe on sabbatical leave.

After this Colloquium a publication was prepared with the different communications discussed during the meeting, mainly the reports on the work carried out in the different centres. Consequently, this publication has an introduction (Crossa-Raynaud, 1975) summarising the discussions on the broad working lines established at the beginning of GREMPA activities, maintaining the basic aim of these colloquia, i.e. to be the appropriate forum for exchanging ideas.

Some of the main points to be mentioned are the establishment of a list of 14 reference cultivars by C. Grasselly and P. Crossa-Raynaud, selected because of certain relevant traits, such as blooming time, ripening time, resistances, etc... The way of recording blooming time was also discussed as well as how to distinguish shell hardness. The general awareness regarding cultivar characterisation and avoiding confusions between research centres led to the creation of almond descriptors after the IV Colloquium in Izmir (Gülcan, 1981), published by the IBPGR (now Bioversity International). These descriptors were later revised in order to improve the definition of some traits (Gülcan, 1985).

In addition a list of appropriate parents for crosses in the breeding programmes was drawn up, mainly based on a very interesting trait, including the self-compatibility of 'Tuono', 'Genco' and 'Mazzetto' (not yet identified as 'Tuono'). The exchange of information on the crosses performed in the different centres was also decided. The expedition of C. Grasselly and A.J. Felipe to Afghanistan in the previous June was also commented on, as well as the studies on rootstocks and the other aspects included in the initial objectives of GREMPA.

VI - III Colloquium onwards

The III Colloquium took place in Bari (Italy) on 3-7 October, 1977. The number of participants and contributions had increased significantly. This Colloquium has been defined by Vargas (2014) as that of almond self-compatibility since during this Colloquium there were two very significant contributions: that of the wide presence of this trait in the almond population of the Puglia (Godini, 1977) and its transmission through the crosses of the breeding programme of Zaragoza (Socias i Company and Felipe, 1977). This Colloquium may be considered as the consolidation of GREMPA, as seen by the success of the three following Colloquia: those of Izmir (Turkey) in 1980, Sfax (Tunisia) in 1982 and Thessaloniki (Greece) in 1985.

In my opinion, the success achieved by GREMPA in the 1980s contributed to its development since this free association of researchers interested in the almond attracted the interest of other organisms whose interest lay not only in collaboration in the Mediterranean region but also in the exchange of almond-related ideas and materials.

The VII Colloquium in Tarragona and Reus (17-19 June, 1987) was preceded by some tension and also introduced two significant changes. The first was scientific, due to the introduction of another species, the pistachio, to the discussion of the GREMPA colloquia. Consequently, although maintaining the same acronym, pistachio was included in the name of Group de Recherches et d'Études Méditerranéen pour le Pistachier e l'Amandier The second change was the assumption of the

GREMPA activity by the Agrimed Research Programme of the Commission of the European Community, present at this colloquium by G. Rossetto.

The tensions had risen because in the past P. Crossa-Raynaud had unilaterally adopted the position of GREMPA coordinator, an act of selfishness only accepted by the GREMPA members to avoid further tension. In face of his coming retirement, P. Crossa-Raynaud in another act of selfishness unilaterally appointed a new GREMPA coordinator, a nomination that no members had accepted and which ended in an evening of heated discussion in the hall of the Tarragona hotel where the participants were staying. This tension came close to spoiling the friendly atmosphere among the GREMPA members, jeopardising the previous good relationship based on mutual confidence.

The introduction of pistachio into the GREMPA activities was justified by the frequent presence of the two species in the same research centres, often under the responsibility of the same researchers, since both species grew under Mediterranean climates and in the same or very close regions. This incorporation could also have been influenced by the second change, namely when Agrimed took over GREMPA. Undeniably this change gave rise to additional tensions during the Colloquium and interrupted another line of action in the basic activities of GREMPA: the publication of the Colloquium proceedings by IAMZ. From a personal point of view, I remember that I questioned this change, considering that the publication by IAMZ was a long-standing tradition. M. Rosetto answered me that "Les traditions sont pour être interrompues".

The efforts to maintain the initial spirit of GREMPA led to a specific meeting on almond rootstocks (Felipe and Socias i Company, 1989) the following year at IAMZ (29-30 November, 1988) with the aim of restoring the original interest in almond rootstocks in the first colloquia, far overtaken by the interest in cultivars due to the great progress achieved in cultivar breeding and in the knowledge on self-compatibility.

The VIII Colloquium (Nîmes, France, 26-27 June 1990) was organised by C. Grasselly, also marking his departure as he was close to retirement. His fruitful activity, however, continued to be highly appreciated by the GREMPA members and he was still present in other meetings, even once he had retired. This Colloquium was also witness to another tension between some members as just before this colloquium the kick-off meeting of the FAO Network on Nuts in the Mediterranean region had already been held. This meeting had taken place in Yalova (Turkey) on June 19-22, unaware to most of the GREMPA members, whereas some had assigned themselves a prominent position in the network. This one-sided behaviour, similar to P. Crossa-Raynaud's in the past, aroused the suspicion of the other GREMPA members.

Following this Colloquium, all the subsequent meetings were arranged by the FAO Network, originally motivated by similar objectives to GREMPA, but widening its interest to all nuts, including the pinion pine. Its functioning, however, did not follow the established rules (Anonymous, 1996), mainly when appointing those responsible for the different working groups, since they were designated without previous consensus, including the network coordinator, equally designated without consensus for a period of four years, but extended indefinitely without discussion.

The IX Colloquium was atypical, since the two species were separated once again contrary to previous decisions and the colloquium was held exclusively on pistachios (Bronte, Sicily, 20-22 May 2003), whereas the meeting on almond had been held just before and had become the I International Congress on Almond of the ISHS (Agrigento, Sicily, 16-19 May 1993), confirming once again that the success of GREMPA had attracted the attention of different institutes and international bodies which, to a certain extent, intended to take advantage of GREMPA's success to their own benefit forgetting the real GREMPA role. This step by the ISHS was conclusive, since the original idea of a colloquium aiming at discussions and collaboration, of maximum scientific rigour, became a congress of formal communications and less discussion.

The original idea of GREMPA was in some way recovered at the X Colloquium (Meknès, Morocco, 14-17 October 1996). In addition to the sessions devoted to the presentation of research results, there were other discussion sessions. One of them was specially important, devoted to the revision of the almond descriptors, mainly related to the advances in delaying blooming time. As a result of these advances, the scale established by Gülcan (1981) was no longer operative, since a score of 9 was attributed to 'Tardy Nonpareil', and at this time there were selections already blooming much later than this cultivar and which could not be adequately rated. Despite the contact with Bioversity International it has been impossible to publish a revision of the almond descriptors including the changes discussed in this Colloquium.

The X Colloquim also marked the occasion of another discussion on the dependence of the GREMPA activity on the FAO-CIHEAM network on nuts, following the tensions of previous colloquia because of the involvement of different organisms in GREMPA activity. I keep a card where R. Viti asked me a question after my communication on the genetics of late blooming in almond, where I took notes from the discussion of the independence of GREMPA. I. Batlle said that without the support of the FAO-CIHEAM network, GREMPA would disappear in three years; similarly F. Vargas said that CIHEAM would not support any GREMPA activity outside the network. Furthermore, E. Germain forecasted that GREMPA would disappear as such if it was a part of the FAO network, as did F. Monastra, who always showed a keen interest in maintaining the originality of GREMPA.

The IX Colloquium was held in Sanliurfa (Turkey), on 1-4 September 1999, after the II International Congress in Davis in 1997, a Congress where almond and pistachio were united once again. In this Colloquium the Mediterranean aspect of GREMPA was weakened in favour of an international scope as a consequence of the new functioning system, a trend which has been maintained in the following meetings, becoming an international meeting rather than a colloquium. This aspect was completely clear in the XII Colloquium, which was also the III International Congress of Almond and Pistachio (Zaragoza, 20-24 May 2001), as well as in the following GREMPA Colloquia, held independently of the ISHS: the XIII in Mirandela, Portugal (1-5 June 2004) and the XIV in Athens, Greece (30 March-4 April 2008). Subsequently there have not been any more GREMPA Colloquia, with the exception of the GREMPA session during the V International Congress on Almond and Pistachio (Murcia, Spain, 27-31 May 2013).

VII - Publications

The papers on the constitutive Colloquium of GREMPA were put together in a typeset document of limited circulation. For the II Colloquium the document was bound previously in order to facilitate its consultation, as for the III Colloquium, although the volume was significantly larger. The Italian conveners also published a book with the Italian translation of the communications as well as the transcription of the discussions following each presentation.

IAMZ undertook the publication of the three subsequent colloquia (IV-VI) as single volumes of the "Série Études" of "Options Méditerranéennes". The two following proceedings were published by the Agrimed Research Programme of the European Communities. The dual meeting of almond and pistachio in 1993 led to an independent pistachio GREMPA publication and resulted in a volume of Acta Horticulturae for the ISHS Congress on Almond. Consequently, all the following ISHS Congresses had their own volume of Acta Horticulturae, whereas the proceedings of the GREMPA colloquia X, XI and XIV were published by IAMZ-CIHEAM in the series of "Cahiers Options Méditerrenéennes". The latest colloquium published so far (XIV) is that of Athens with the format change in the "Options Méditerranéennes. Series A: Mediterranean Seminars".

VIII - Conclusions

From the outset, GREMPA activity has received the support of CIHEAM through IAMZ, a fact to be recognised and acknowledged. Only with the formation of the FAO network has this support been partially discontinued.

At the beginning, the GREMPA meetings provided a forum for the exchange of opinions, a true colloquium, not a congress at which to present research results. As a consequence, a real exchange of ideas was possible, in a relaxed atmosphere without rivalry or suspicion, genuine meetings of friends. Furthermore, the true satisfaction lay in the discussion of work results between friends, and supposed no further interest, such as the publication in a journal of high impact index.

However, problems of individualism appeared right from the beginning, worsened by the appropriation of GREMPA by other institutions. Probably the success of the first GREMPA colloquia and the spirit of collaboration provoked these successive appropriations, first by the Agrimed programme of the CE, later by FAO, and finally by ISHS in the Agrigento meeting and the problems related to this internationalisation and loss of the Mediterranean background. GREMPA was born with the idea of defending the Mediterranean production of almond against the production of California, that was increasing at that time and is predominant today, also exacerbated by the increasing production of Australia.

Homage

The author would like to pay tribute to the driving force of GREMPA, J. Souty, as well as to the three great researchers who invested all their energy in this endeavour: A.J. Felipe, C. Grasselly and F. Monastra, whose enthusiasm and spirit we have not managed to maintain.

Special thanks are due to the IAMZ and its librarians for the search of the old documents cited in this review.

Finally I would like to recall three symbols of GREMPA, highly appreciated by all and rose by Charles Graseelly: the green flag, embroidered by Mrs. Monique Grasselly and later by my wife, flown for the last time in Athens in 2008; the anthem, pointing to the importance of almond self-compatibility, sang for the last time in Zaragoza in 2003; and the investiture of the GREMPA knights, done also for the last time in Zaragoza in 2003.

References

Anonymous, 1972. Groupe d'Étude Méditerranéen pour l'Amandier (GREMPA). Internal note. CIHEAM, IAMZ.
Anonymous, 1996. Rules for the operation of the FAO/CIHEAM Cooperative Research Network (Inter-regional) on Nuts. Internal document signed by the Regional Representative of FAO in Europe (J. Pérez de la Vega on March 25, 1996), the General Secretary of CIHEAM (M. Lasram on April 2, 1996), and the Regional Representative of FAO in the Middle East (A.Y. Bukhari on March 5, 1996).

Crossa-Raynaud P., 1975. Rapport de synthèse. Il Coll. GREMPA, Montpellier-Nîmes, 8-11 Septembre 1975, 7 p.
 Felipe A.J., 1977. Almendro. Estados fenológicos. In: *Información Técnica Económica Agraria*, 27, p. 8-9.
 Felipe A., 1984. État de l'arboretum des espèces sauvages à Saragosse. In: *Options Méditerranéennes CHI-HEAM/IAMZ* 84/II, p. 203-204.

Felipe A.J. and Socias i Company R. (eds.), 1989. Séminaire du GREMPA sur les porte-greffe de l'amandier. In: *Options Méditerranéennes*, Série A, Séminaires Méditerranéens 5, 75 p.

Godini A., 1977. Contributo alla conoscenza delle cultivar di mandorlo (*P. amygdalus* Batsch) della Puglia: 2) Un quadriennio di ricerche sull'autocompatibilità. III Coll. GREMPA, Bari, 3-7 octubre, p. 150-159.

Graselly C. and Crossa-Raynaud P., 1980. L'amandier. G.P. Maisonneuve et Larose, Paris, XII + 446 p.
Grasselly C. and Olivier G., 1976. Mise en evidence de quelques types autocompatibles parmi les cultivars d'amandier (*P. amygdalus* Batsch) de la population des Pouilles. In: *Annales de l'Amélioration des Plantes*, 26, p. 71-75.

Gülcan R., 1981. Almond descriptors. IBPGR, Roma, Italia, v + 21 p.

- Gülcan R., 1985. Almond descriptors (revised). IBPGR, Roma, Italia, 30 p.
- Hugard J., 1974. Monsieur Jacques Souty n'est plus. In: La Pomologie Française, 16, p. 171-172.
- Socias i Company R., 1974. Effect of temperature and genotype on pollen tube growth of some self-compatible almond selections derived from peach (Prunus persica L.) x almond (P. amygdalus Batsch) hybridization. MSc Thesis, Univ. California, Davis, vii + 69 p.
- Socias i Company R. and Felipe A.J., 1977. Heritability of self-compatibility in almond. III Coll. GREMPA, Bari, 3-7 octubre, p. 181-183.
- Souty J., 1973. Note relative au Groupe d'Étude Méditerranéen pour l'Amandier. Internal note. CIHEAM, IAMZ. Vargas F.J., 2014. Influence of research on modernization of almond and pistachio culture in the Mediterranean area during the last forty years and some challenges for the future. In: *Acta Horticulturae*, 1028, p. 19-26.