Regional Network for Date-Palm in the Near East And North Africa

March 2000
Proposal for the Establishment of a

Regional Network for Date-Palm in the Near East And North Africa

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Date Palm Network

I. Background Information

1.1 Date palm, Phoenix dactylifera, is a major agricultural crop in the Near East and African Regions, and its economical role in the countries of these regions is well recognized. The date palm has historically been connected with the sustaining of human life in many of the hot and barren parts of the old world and has become an integral part of the culture and tradition of the people of these regions. The date palm has provided mankind for thousands of years with essential nutrients. Dates are mentioned in the religious books of the Old Testament and the Koran, and are particularly the favorite food for the Moslems all over the world during the holy month of Ramadhan.

1.2 The world date palm cultivation is concentrated mostly in the Near East and Africa, favored by the most suitable dry sub-tropical and high temperature climate prevailing in these regions. While two thirds of the world date production (about 4.6 million tons in 1997) come from Asia and one third from Africa, about 70% of it is concentrated in six countries namely; Iran (918131 tons), Egypt (750000 tons), Iraq (660000 tons), Saudi Arabia (649239 tons), Pakistan (536000 tons) and Algeria (387313 tons), 20% in another six countries, namely; UAE (250000 tons), Libya (130000 tons), Morocco (85000 tons), Oman (135000 tons), Sudan (175000 tons) and Tunisia (95000 tons) and the remaining 10% in 22 others.

1.3 Date palm is a crop capable of establishing a sustainable system in subsistence agricultural areas and thus plays an important social role in reinforcing the subsistence base of a large population group by helping settling in rural areas versus migration to urban centers. Many families depend on the crop for the bulk of their income, since a large number of date palm groves in several countries in these regions belong to small and medium-size holders and provide seasonal employment for many farmers, especially women. It also prevents soil degradation and desertification, thus protecting the environment, currently of great concern to national authorities and international organizations.

1.4 Date fruits are one of the few exotic fruits in the world, and with the small amounts produced compared to the production of other fruits, date fruits should be looked at as a very precious agricultural commodity. It can be consumed fresh or processed into a multitude of different value-added products. The date palm also yields a variety of products used for agricultural production, domestic utensils and small industries. Practically, all parts of the palm have a useful purpose.
Although date palm cultivation in the date growing regions of the world has a long history, yet the efforts expended for the development of this important crop, although significant, yet still insufficient and fall below expectations. In general, the product quality is still low, the field and post-harvest losses are quite high and the date products and byproducts can no doubt be improved and the product mix more diversified. Thus the improvement of the current status of date palm cultivation in the date producing countries of the region and the enhancement of the quality of date products have become a critical need that can’t be overemphasized.

II. FAO & AARINENA Role in Establishing the Date Palm Regional Network

2.1 Technical cooperation networks have become an increasingly important means of action for the FAO & AARINENA and are initiated and supported through the headquarters and Regional Office Regular and Field programs. These networks have become a generic model for the establishment of functional mechanisms for collaboration and enhancement of communication and exchange of experiences among different countries in one region and/or different regions of the world.

2.2 Networks were found to reduce duplicative efforts among national institutions in several countries and may provide a cost-effective instrument for information exchange and institution building (including training). When the resources are limited, networks become a more effective means for the optimal utilization of indigenous expertise and available resources among the countries themselves.

2.3 The NENADATES Date Palm Network (Regional Project for Palm and Date Research Center in the Near East Regional and North Africa, 1978-1988) implemented by the FAO was successful in providing information and development initiatives that strengthened the date industry in these countries. Given the current status of the date agro-industry in the different countries of the region, and in the absence of a coordinating body for the promotion of cooperation among these countries for the optimal utilization of the limited resources available for the development of the date agro-industry, the establishment of a Technical Cooperation Network on Date Palm is a matter of urgency.

2.4 An expert consultation to study the feasibility of establishing a Date Palm Network for technical co-operation on date palm, was held on October, 13-14, 1999 in Tehran, Islamic Republic of Iran, to draft the objectives and guidelines of the network. Scientists from the following countries participated in the meeting: Egypt, Islamic Republic of Iran, Libya, Morocco, Namibia, Tunisia, Oman, Saudi Arabia, Sudan and Pakistan.
2.5 The consultation was hosted by the Islamic Republic of Iran and supported technically and financially by FAO (AGP, RNE) and AARINENA. In the meeting, common problems and interests were defined and a document was prepared summarizing the outcome of the consultation and was presented in the Date Palm International Symposium that was held in Namibia, February 22-25, 2000. The program included a special session to discuss the Network and the establishment of the Date Palm Global Network under the auspices of the FAO.

III. Overview: Date Palm Production in the Region/Current Status, Constraints & Strengths

3.1 Date Cultivars

There are more than 400 date varieties that are known, but many of them have low yields and poor fruit quality. The number of date varieties that have reasonable yields are probably less than fifty, out of which 25-50% are of commercial value.

The quantities of the low quality date varieties in some of the date producing countries are significant and the substantial numbers of the unproductive male palm dates can’t be neglected. In addition to that the unpollinated date palms are found in all varieties of date palm with different percentages, probably due to the inefficient traditional system of pollination. As a result, a good percentage of the dates produced are of low quality and thus economic return.

Meanwhile, a substantial amount of the dates produced are of the soft varieties and are prone to spoilage quicker than the semi-dry and dry varieties. They can be consumed fresh in the Khalal and Rutab stages and command high prices if they are well preserved. Such requires special handling conditions (refrigeration / freezing, or heat treatment for ripening and drying) for increasing its shelf-life. The absence of the proper conditions increase the date fruit losses due to spoilage and decrease its value if they are not well processed.

The efforts of some of the countries in tackling these problems, i.e. the introduction of mechanical pollination, the development of processing techniques for the preservation of the soft date varieties (microwave heating and drying as well as refrigeration and freezing) and the utilization of the unpollinated dates (pickling and ripening) are all well recognized and important steps in the right direction. However, more efforts are still needed in this respect, and the gradual replacement of the low quality varieties with more productive and demanded varieties like what is being currently done in few, but not most of the countries in the region, is essential.
3.2 **Horticultural Practices**

Horticultural practices have direct effect on the yield and fruit quality. In many of the date producing countries in the region, several problems exist that affect adversely, both the yield and quality of the fruit produced. These include among others the following: narrow spacing among trees in the old plantations, thus making it difficult for the introduction of mechanization, inefficient hand pollination, leaving many of the date palm trees unpollinated; minimal fertilization and minimal irrigation if any, where water is available, that result in lower yield and fruit quality and little attention given to fruit thinning and pruning. The serious efforts that are being expended in few countries for the protection of fruits on the bunch during the rainy season are encouraging and very much needed.

As for the harvesting of the fruits, it is still mostly being done manually. This increases the cost and incurs a lot of losses during harvesting. The efforts to introduce mechanization on a small scale by some countries for the harvesting of the fruits as well as for other purposes such as pruning and thinning is a good start that needs to be encouraged.

In addition to that, the efforts that are being spent for the establishment of an integrated effective pest control system for the protection of the date fruits from infestation on the tree and during transportation and storage, should be intensified, since the losses due to insect and pest infestation are still substantial, and in certain instances can cause the wipe out of the whole crop if not checked in due time.

3.3. **Post-Harvest Technologies**

Post-Harvest technologies, including all handling and storage operations that take place in the field and afterwards in processing plants, can and should be all substantially improved for the enhancement of the value of the date fruits and its products. In most of the date producing countries, many of the date palm plantations are small to medium size and farmers don’t have the appropriate knowledge and means for the proper handling, storage and transportation of the date fruits after harvesting, nor they can afford the cost of the proper equipment for the processing or preservation of the fruits on site. As a result, post-harvest losses may increase and the fruit quality may adversely be affected. The pioneering role of few of the countries in introducing the small-size private date-packing facilities and providing extension services and training of the farmers along with credit facilities, is a good model for other countries to follow.
As for date processing, the quantities that are processed in date plants into different products, e.g. packed dates as well as date byproducts, represent only a small percent of the total dates produced in these countries and most of these plants are underutilized and run far below their production capacities. There is also a need for the development of new innovative products that cater for the dynamic market needs and demands, both on the retail and industrial scale levels.

Moreover, there are no well defined organized systems in existence yet through which the farmers can sell their produce and/or deliver to processing plants that can serve the interests of both, the farmers and the date industry. The establishment of a well-planned cooperative system to facilitate the farmer’s work and enhance his/her productivity needs to be given serious consideration.

In addition to that, the search for the most appropriate technique for the disinfestations of date fruit that can replace methyl bromide and is economically feasible needs to be seriously addressed.

It should also be stressed here, that inspite of the efforts that are being exerted by some of the countries in the region for the better utilization of date palm residues and the increase of its economic return, there has not been yet any systematic approach for the optimal utilization of these residues, both on the rural and industrial levels, something which can’t be neglected and should be given its due consideration.

### 3.4. Marketing

Marketing has been the weakest link in the date agro-industry chain, because it has been given only very little attention. On the national level, only little has been done to address the consumer demand, (e.g. market and consumer research) including individuals, gender, ages, families, etc, and to develop the right product mix. Also little has been done to address the industrial user needs; launching of campaigns to win over the young generation, sale support and merchandizing through the media; promotion of date consumption by the exploitation of the health attribute and heritage factors; development of brands and attainment of brand loyalty and others.

On the international level, some reasonable amounts are presently being exported, mainly as packed dates from the Deglet Noor variety with smaller quantities from other different date varieties and date products, yet these constitute only a small fraction of the total amounts produced. Major among the constraints for export, are the uncompliance of many of the packed date fruits and date products with the standards and specifications of the importing countries, e.g. EEC, USA, others where these can command high prices. But also because, little, if any, has been done by most of these countries to explore the potentials of different world markets and assess the consumer’s demand and industry’s needs.
3.5. **Research & Development**

Major efforts have been exerted on R&D for the development of date products and by-products, both in universities and research institutions and the industry. The Regional Project for Palm & Date Research Center in the Near East and North Africa (1978-1988) implemented by the FAO, may be considered as a good model that has helped during that period in the development and strengthening of the date industry in these countries through product development and technical information support. However, many of the newly developed date products that were reported in the literature since then have not yet seen the light. The reason for this could be partly due to the missing link between the R&D centers and the industry, and partly due to the techno-economic unfeasibility and/or product quality and unsuitability for the intended market.

As for the support of scientific research and R&D, it has always been and is still insufficient. Most of the funding has come in the past from governments with almost none from the industry. Research institutions exist in many countries in the region, but most are fragmented and lack adequate financial support and technical facilities and also lack coordination of policy and programs among themselves and other related departments. Serious efforts should be expended on the strengthening of these institutions and a plausible mechanism, based on the situation of each country, needs to be established to bridge the existing gap between these institutions and the private industry. (Appendix I, lists the names of the research centers/institutions in some of the date producing countries).

IV. **Proposed Regional Date Palm Technical Cooperation Network**

4.1 **Description**

The regional network will be comprised initially of eleven countries, including: Islamic Republic of Iran, Egypt, Saudi Arabia, United Arab Emirates, Libya, Pakistan, Oman, Tunisia, Morocco, Sudan and Namibia, but other countries may join upon request at a later stage. The International and Regional organizations which have interest in date palm as well as donor countries and the private sector, including all stakeholders in the date palm chain from cultivation to processing and marketing, may also join the network as members without voting rights.
The network will be established as a partnership among all the different bodies and stakeholders in each of the participating member countries that are involved in any manner throughout the overall date palm chain, starting from cultivation and production to processing, marketing, and research and funding support and include: NGOs, Private Sector, Research Institutions (Both Governmental and Non-Governmental) and universities as well as other national and international supporting organizations. The roles of the FAO and AARINENA are to initiate action and provide support to programs but not for institutional core support. Initially, three networks will be established with others to be added in the future as deemed necessary and according to the availability of financial resources.

### 4.2 Objectives

The long term objectives of the network are to mobilize the collective efforts of the date producing countries in the region towards achieving self-sufficiency in food, enhancement of the quality of life of their people, conservation of the eco-system and natural resources and development of the date palm agro-industry through the following:

i) create awareness at various policy making and technical levels within member countries on the importance of the development of the date palm through an integrated approach, i.e. production, post-harvest technologies, processing and marketing.

ii) promote cooperation in the collection, conservation, propagation, evaluation and utilization of date palm germplasm.

iii) facilitate exchange of information through the development of an information program for the collection and dissemination of information on date palm, e.g. cultivation and horticultural practices, production, post-harvest and processing technologies, marketing and trade, environmental protection and natural resources development and socio-economic impacts.

iv) allow joint programs to be developed for the exchange of experiences and expertise and organization of training courses, workshops and conferences for the effective use and sharing of transferable technical information and skills.

v) collate and/or develop common technical standards and specifications, methodologies and approaches for laboratory procedures as part of an overall quality control system for the marketing of date fruits and date products, in local and international markets.
vi) enhance cooperation for the analysis and solution of common problems through joint research/development projects.

vii) contribute to the formulation of national networks in each country to increase collaboration among national institutions, non-governmental organizations, private sector and universities.

viii) Undertake promotional activities to promote the nutritional, social and ecological benefits of date palm.

4.3 Composition

The network will consist of the following bodies (see Chart):
Co-ordinating Board:

Made up of members from each of the participating countries that may represent institutions identified as the focal points or sub-networks. Board representatives may be selected from the NGOs, Private Sector, Research Institutions (Governmental and non-governmental) and universities. The chairmanship will rotate every year among member nations, by election during the previous year. The Co-ordinating Board will meet every year and will be hosted by the institution which the chairman represents.

The Co-ordinating Board may form Technical Advisory Committees and ad-hoc committees to study and follow up on certain technical matters and specific tasks, or attend to some specific issues. The Co-ordinating Board may also establish a think tank of date palm expertise from different technical backgrounds that can provide consultancy services to the different date producing countries as per their needs and requirements and/or due to urgent circumstances.

The Secretariat:

Forms the Headquarter of the Network and will be located in one of the institutions in one of the participating countries.

The secretariat consists of a full time Secretary assisted by sufficient staff appointed by him, upon the approval of the Co-ordinating Board, to carry out the function of the Network. The host country will provide physical facilities at the focal institution for the secretariat, but the operational costs, including the staff salaries and other running expenses should be shared among participating countries and accounted for in the annual budget of the Network.

The FAO Regional Office for the Near East would provide assistance to the Secretariat. The Co-ordinating Board shall appoint the Secretary who will be nominated by a selection committee from within the Board.

Focal Points:

Institutions, identified as focal points in member countries, may be either universities, research institutions or other competent, well established and renowned institutions depending on the set up and organizational structure in each of the countries in the region, will be the linkage among other institutions, NGOs, private industry and all stakeholders throughout the date palm agro-industry chain in the country as well as the
Regional Network., and shall include representatives from the NGOs, Private Sector, Research Institutions (Governmental and/or Non-Governmental) and universities.

**Regional Sub-Networks:**

Priority areas on a regional basis, where cooperation among participating countries is needed for the development of these areas, have been identified by the participant countries in the expert consultation meeting for the establishment of a Global Date Palm Network that was held in the Islamic Republic of Iran, October 13 and 14, 1999. These include the following:

i) Production and protection,
ii) Post-harvest and processing technologies
iii) Socio-economic and commercialization

Each sub-network will consist of one of the competent institutions in each of the member countries which are most capable of contributing to the development of one of the specific areas identified above.

The headquarters of each sub-network should be at one of the selected national institutions which have competence in the respective area. These institutions will formulate, in co-ordination with the Network, the technical working groups in the priority areas mentioned above and co-ordinate their activities. Participation in the working groups is open to all interested scientists, organizations and associations as well as researchers from the private sector.

The host institution would provide local facilities and expenses, but funds for regional programs and research activities, training and collection and dissemination of information would be sought from national and/or multilateral sources. Cost sharing among participating countries should be encouraged on TCDC basis. FAO will continue to provide technical assistance in the activities of the sub-network.

**V. Technical Working Groups:**

For the optimal utilization of the limited resources available, Working Groups in the three sub-networks should prioritize, streamline and focus on the problems in each of the areas identified as priority areas. They should also seek to tie the existing activities of country members of the network rather than starting completely new programs, unless on a temporary basis, to address a specific research problem, using external funding.
It is important to have precise and realistic work plans which assign responsibilities to members and to the secretariat for each aspect of an activity. Some of the specific tasks that may have to be addressed by the working groups in each of these areas are summarized below. These should be looked at as only guidelines that have to be prioritized and may later be modified and updated as deemed necessary. They include the following:

5.1 Date Palm Production and Protection group

The Date Palm Production and protection Group needs to focus on the conservation and propagation of date palm germplasm and on the development of the different agricultural practices commonly used in different countries under different environmental conditions for the increase of production and improvement of the quality of fruits.

The group can also cooperate with the post –harvest and processing technologies group on the introduction of mechanization , at both the cultivation and post-harvest levels, through the development of the appropriate equipment and machinery that are compatible with the nature of the land and the local constraints.

The group also needs to work on the development of integrated date palm pest programs, with particular emphasis on the Bayoud disease and the red weavil, among others.

i. Promote the establishment of tissue culture units in different countries, prepare a manual on the propagation of date palm by tissue culture and develop/transfer the technology for the molecular identification of date palm varieties(DNA fingerprinting).

ii. Agricultural practices, including, pollination, flowering, budding, fruit set, pruning, thinning and bunch covering as well as nutrient and water requirements and intercropping.

iii. Harvesting, fruit quality and protection from damage including the development of appropriate machinery as per the local needs and environmental requirements.

iv. Exchange of technical data and experiences on current pests and diseases that limit the yield and quality of the fruits and development of an integrated pest management system model for the most important date palm diseases.

v. Functional system for the control/quarantine of the import and movement of plant material trans borders.
vi. Establishment of a specialized date palm pest disease manual and a central regional disease diagnostic unit.

5.2 Post-Harvest and Processing Technologies Group

The Post-Harvest and processing Technologies group has to focus on the development of the overall post-harvest technology processes, including the preservation of the quality of the fruits and the improvement of the processing techniques for the production of premier products, both for export and local consumption.

This group can also cooperate with the Date Palm Cultivation and Production group for the development of the appropriate equipment and machinery that are required for the introduction of mechanization. At the first stage, simple machinery can be developed with the more sophisticated ones to be developed at later stages.

i) Alternative fumigation agent/technique to replace methyl bromide for the disinfestations of date fruits and techniques for the prevention of its post-harvest decay.

ii) Mechanization of the date fruit ripening and development of date production machinery and processes

iii) Encouragement of the establishment of complementary industries, e.g. storage, transportation, packaging, etc.

iv) Development of Quality control and safety procedures, for the handling of date fruits and products throughout the overall chain, from the field to the consumer.

5.3 Socio-economic and Commercialization Group

The role of the socio-economic and commercialization group is to promote the economic welfare of the date palm farmers, particularly women, and promote date fruit and date product consumption and sales locally, as well as their exports world-wide. The private industry should play a major role in directing the efforts for the improvement of the date crop and economic return. Such is important because it will be in harmony with the market demand.
i. Formulization of farmer co-operatives, stakeholder associations all through the date palm network, and establishment of linkages among them and other governmental and non-governmental organizations and private industry.

ii. Establishment of efficient extension and training programs, particularly for women, at all levels throughout the overall date palm chain.

iii. Establishment of a system for the collection and dissemination of information, international trade and economic forecasting; also for conducting marketing surveys to assess market needs and consumer attitudes and future trends.

iv. Promotional campaigns through different means, (media, internet, web page, schools, commercial centers, etc), both locally and abroad, and exploring new markets through exhibiting in international food exhibitions, technical and commercial conferences and other feasible means.

v. Adoption and/or development of standards and specifications for date products that are compatible with that of the WTO and other international organizations and economic blocs.

VI. **Criteria for the location of the secretariat**

The following criteria are suggested for the selection of a national institution which would host the Secretariat of the Regional Network.

i) The location of the institution should be centralized in the Region as much as possible to ensure easy communication, transportation and contact.

ii) The host country should be accessible to all other member countries through the granting of visas and internal travel.

iii) The institution should have adequate physical facilities and technical competence.

iv) The host country should be able to provide the required facilities.

6.1 **Functions**
**The Co-ordinating Board** will have the following functions:

i) Planning, coordination and follow-up of research, training and other work programs.

ii) Review and approval of the annual budget as well as the work programs of the sub-networks.

iii) Fund raising from private donors, funding agencies and international organizations for the strengthening of the network activities.

iv) Facilitation of communication among the different focal points and working groups and the Regional Date Network.

v) Cooperation and coordination of activities with other national, regional and international organizations involved in date palm agro-industrial development.

vi) Decision on policy matters including introduction of new member countries and establishment of new sub-networks or changes in the existing ones.

vii) Promotion of technology to the users in member countries.

**Secretariat**

The Secretary, will be responsible to the chairman of the Co-ordinating Board of the Network on the following functions:

i) Establishment of a Network web page along with a comprehensive date palm data base (all aspects relevant to date palm agro-industry) and an overall marketing and promotional web program (in cooperation with the sub-networks).

ii) Publication of a regular newsletter for enhancement of dissemination of information and preparation of a biannual report highlighting the different activities and achievements of the different groups.

iii) Collection, compilation and dissemination of all documents, reference material and correspondence as well as technical information (in cooperation with the sub-networks).
iv) Preparation and follow-up of work programs (research, training, workshops, conferences, etc) and budgets approved by the Co-ordinating Board.

v) Administrative responsibilities of the Network, including the preparation of the annual budget in co-ordination with the sub-networks in the different countries.

vi) Preparation of an evaluation criteria for the assessment of the performance and efficiency of the network. Evaluation will be performed by an outside team of experts. The FAO will facilitate the work of the team.

The Focal Point National Institutions will have the following functions:

i) Establishment of communication channels among all national organizations, research institutions, private & non-governmental organizations, universities as well as other stakeholders through out the date palm agro-industry chain, and facilitation the exchange of information, concerns and aspirations of all groups.

ii) Collection and dissemination of information at the national as well as regional level through the Network’s Secretariat.

iii) Coordination of programs with other national institutions in the country as well as other non-governmental organizations, private industry, universities and all other stakeholders in the date palm agro-industry chain on research, training (particularly women), extension and marketing requirements.

iv) Linkage with the Network on all activities (sub-regional and regional research projects, training courses, workshops, conference etc…)

v) Advise government agencies on matters related to policy, programs and coordinated activities for the development of date palm agro-industry.

Sub-Network

Each sub-network will have the following functions:
i) Collection and dissemination of information through the Network Secretariat. This information will be in the form of literature information, research and development results, patents consultancy services, institutional news, technologies, annual reports, etc...

ii) Planning and implementation upon the approval of the Network’s Co-ordinating Board, training programs including seminars and workshops.

iii) Planning and coordination of research and development programs in cooperation with other member institutions.

iv) Provision of technical assistance to various national institutions. Consultants from institutions in the Region would be used on TCDC basis and from outside the Region whenever competence is not available within the Region.

This would require keeping an updated record of national institutions, expertise and technologies available in the region on date palm agro-industry.

VII. Financial Requirements

7.1 The long-term objective of the network is to gradually become self-supporting and assume more of its own expenses. However, at the initial stages, external inputs and technical backstopping are essential. Contributions by various governments and FAO’s input will be determined by the co-ordinating Board in consultation with FAO.

7.2 Other potential sources for covering up of some of the expenses include the following:

i. Consultation fees when services of the expertise of the think tank are utilized by any of the countries. A certain percent (about 25-35%) of the consultancy cost is retained by the network as an overhead, like it is being currently done in many universities and research institutions (consultation fees can be secured from international organizations and donors).

ii. Overhead cost for coordinating regional projects that are funded e.g. research, training, extension, conferences, etc. (about 10% of the total)

iii. Charges (reasonable and affordable) for providing information to prospective users, including the private sector.

iv. Revenues from sale of developed promotional material, posters, standards, publications, etc..
v. Revenues from advertisement on the web site of the date palm network by the private sector and other concerned groups.

7.3 Donations and funds from national, regional and international organizations as well as the private sector. (A list of potential funding agencies is attached, Appendix II).

7.4 Contributions from the private sector, including date palm growers, wholesalers, processing plants, auxiliary industries supporting the date palm agro-industry, others. The contribution of the network to the private sector would be in kind, providing services, technical support, consultation, others.
APPENDIX I

DATE PALM RESEARCH INSTITUTIONS

1 - Production & Date Palm Propagation (Tissue Culture):

**Iraq**

Palms and Date Department, Agricultural Research Commission, Ministry of Agriculture.
Baghdad University: College of Agriculture, Horticulture Department, Horticulture & forestry & Plant Protection Department.
Basra University: College of Agriculture: Horticulture and Date Palm Department, & Plant Protection Department.
Agriculture Research Commission, Nuclear Research Center.

**Qatar**

Ministry of Municipal Affairs & Agriculture
Tissue Culture Laboratory
P.O. Box 1967 Doha – Qatar Tel, 00974 - 834117 Fax, 00974 - 834148
Attn: Dr. Hamad Saad Al Saad, Director.

**Iran**

Agriculture Biotechnology Research Institute of Iran:
P.O. Box 4119, Mardabad Rd.
Karaj 31585
Tel: +98-0261-229484
Fax: +98-0261-233749
E-mail: HYPERLINK "mailto:ghareyazie@yahoo" ghareyazie@yahoo .com

Date Palm & Tropical Fruit research Institute of Iran (DPTFRI)
Ahwaz Agricultural research, Education & extension Organization,
Tel, 0098 – 612242 - 3 410 or 3420
Attn: Mr. Aziz Torahi, Director.

The Institute is presently conducting research in production, post harvest technology, economical and marketing in various Sub Stations, Ahwaz, Boushehr, Jirof, Bam, Kerman, jahrom, Minab, Hagiabad and Sara van (Balochestan).
Saudi Arabia

Governmental Institutions:
Date Palm Research Center
King Faisal University
Attn: Dr. Abdullah Al Ghamdi - Horticulturist

Ministry of Agriculture & Water
The National Center for Agricultural research & Water,
Molecular Biology and Tissue culture Laboratory
Attn: Mr. Abdullah Ali Al Baiz

Saudi Arabia/Private Sector

Saudi American Plant Development (SAPAD)
Dammam 81441 P.O. Box 1800
Tel, 03 8223850 / 8223858 Fax: 8221472
Attn: Abdul Jabbar Bomara, Director.

Tissue Culture Laboratory
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Morocco

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2. Post – Harvest Technology:

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United Arab Emirates

Agriculture Research & Development Section
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Tel/ 009714 228161 Or 224136 Fax: 009714 232781

Sudan

Food Research Center
Shambat
P.O. Box 213 Khartoum North

Egypt

Food Technology Research Institute
Agriculture Research Center
Ministry Of Agriculture
Giza - Cairo
Attn: Dr. Abdel Mohsin M. Nezam El-din

Iraq

Al-Rabee Research Center, Research and Development Commission, Ministry of Industry and Minerals.
Regional Network for Date-Palm in the Near East and North Africa

Food Industrial Department, General Directorate of Industrial Development, Ministry of Industry & Minerals.
Baghdad University: College of Agriculture, Food Science and Technology Department.
Basra University: College of Agriculture, Food Science & Nutrition Department.

3.- Socio – Economic & Marketing:

**Saudi Arabia**

Saudi Consulting House
General Administration Of Industrial Engineering
P.O. Box 1267 Riyadh 11431
Attn. Dr. Hussein El-Manawaty Tel/ 01 4484533 Fax/ 01 441234

Saudi Industrial Development Funds {SIDF}
P.O. Box 4143 Riyadh 11149
Tel/ 01 4774002 Fax/ 01 4790165

Council Of Saudi Chambers of Commerce & Industry
Saudi Export Development Center
Attn: Mr. Fahd Mohammed Al-Salmi
Asst. Secretary General
Tel: (01) 405 3200
Fax: (01) 406 5196 / 402 4747

King Abdul Aziz City for Science & Technology, KAAC Information Development
P.O. Box 6055
Riyadh 11442
Tel/ 01 6367320 Fax. 01 4883990

**Iran**

Agricultural Research, Education and Extension Organization
P.O. Box 19835-111
Tabnak Ave., Evin-Tehran
Tel: +98-021-2402987
Fax: +98-021-2400568/2400083

**Iraq**

Agricultural Economics Section, Planning Commission, Ministries Council.
Regional Network for Date-Palm in the Near East and North Africa

General Commission for Organizing Agricultural Investments, Ministry of Agriculture.
Ministry of Trade, Exports and Exhibition Commission.
Baghdad University: College of Economics & Agricultural Economic Department (College of Agriculture).

4. Germplasm Conservation:

Saudi Arabia

King Saud University
College Of Agriculture
Botany Department
Dr. Faisal Abdullah Al-Saud - Riyadh

King Faisal University
Date Palm Research Center - Al hasa
Attn: Dr. Abdul Latif Al-Khatib, Director
Tel/ 03 5805858 Fax/ 03 5805857

Iran

Germplasm Conservation Institute
P.O. Box 4119, Mardabad Rd.
Karaj 31585, I Tel: +98-021-3130737/+98-0261-224851
Fax: +98-0261-229405, E-mail: seed.plant @@ abdnet.com
Agriculture Biotechnology Research Institute of Iran:
P.O. Box 4119, Mardabad Rd.
Karaj 31585
Tel: +98-0261-229484
Fax: +98-0261-233749
E-mail: HYPERLINK "mailto:ghareyazie@yahoo" ghareyazie@yahoo .com

Oman

Sultan Qaboos University
Ministry of Agriculture & Fisheries
Directorate General Of Agriculture
Department Of Date Palm research
Date Palm Horticulture section
Tunisia

Laboratoire de Genetique et biologie Moleculaire
Faculté des Science de Tunis. Campus Universitaire, 2092 El Manar,
Tunis, Tunisie

INRAT Centre de Recherches Phoenicicoles,
2260 Degache, Tozeur.
Attn: Ould Mohammed Salem Ali
Researchers in Tunis are working on research projects aiming to evaluate and conserve genetic
resources in date palm using Iso Zymes markers and RAPDS technology
Fax: +98-2242/3410, Tel: +98-061-82242/3420061 -2242/341

Iraq

Genetic Engineering and Tissue Culture Research Center, Saddam University.
National Herbarium and Botanical Garden, Ministry of Agriculture.
College of Science: Baghdad and Basra Universities.
APPENDIX II

POTENTIAL FUNDING AGENCIES

LIST OF UN AGENCIES/ORGANIZATIONS

WFP

World Food Programme
Via Cesare Giulio Viola 68/70
Parco de Medici
00148 Rome
Tel. 00 39 06 6513-1
Fax 066590632, 066590637

UNEP

Mr. Fouad Kanbour
Senior Environmental Affairs Officer &
Officer-in-Charge of UNEP/ROWA
United Nations Environment Programme
Regional Office for West Asia (ROWA)
P.O. Box 10880
Tel: 278072
Tlx: 7457 UNEP BN
Fax: (0973) 276075 Manama, Bahrain

WTO

World Trade Organization
Centre William Rappard
154, rue de Lausanne
CH – 1211 Geneva 21 Switzerland
Tel. 0041 – 227395111
Fax. 0041-22-7314206
E-mail: WEBMASTER@WTO.ORG

IAEA

International Atomic Energy Agency
Vienna International Center
P.O. Box 100 1400 Vienna – Austria
Tel. 00431-2600
Fax 00431-26007
E-mail: OFFICAL.MAIL@IAEA.ORG
Regional Network for Date-Palm in the Near East and North Africa

IFAD
International Fund for Agricultural Development
Via del Serafico 107
00142 Rome, Italy
Tel.: 54591
Fax: 5043463 - 5042513
E-mail: IFAD@ifad.org

International Bank for Reconstruction and Development
1818 H st. N.W.
Washington, DC 20433 USA
Tel. 001 – 202 – 4771234
Fax 001-202-4778164

ARAB & Others ORGANIZATIONS
PRIVATE
AFESD
Mr. Abdellatif Al Hamad
Director-General, Chairman of Board of Directors
Arab Fund for Economic and Social Development (AFESD)
P.O. Box 21923
13080 AL SAFA
Kuwait
Tel: 4844500
Tlx: 22153
Fax: 4815750/60/70

ACSAD
Dr. Hassan Seoud
Director-General
Arab Center for the Studies of Arid Zones and Dryland (ACSAD)
P.O. Box 2440
Damascus
Syrian Arab Republic
Tel: 5323089- 5323039
Tlx: 412697 ACSAD SY
Fax: 3523063

AOAD
Dr. Yehia Bakour
Director-General
Arab Organization for Agricultural Development (AOAD)  Tel. direct: (249-11) 471374
7 Al Amarat Street
Khartoum, Sudan
Tel: (249-11) 472176 - 472183
P.O. Box 474
Tlx: 22554 AOAD SD
Fax: (249-11) 471402, 471050
Email: HYPERLINK "mailto:aoad@sudanet.net" aoad@sudanet.net
AAI

Mr. Maamoun Ibrahim Hassan
Director General Arab Authority for Investment (AAI)
Arab Organizations Building Tel: 4844500
Airport Road Tlx: 22562/46312
Kuwait Fax: 4815742, 4815741

BADEA

BADEA (Arab Bank for the Economic Development of Africa)
Mr. Ahmad Al Harthy Al-Wardi
Director General
Banque Arabe pour le Development Economique en Afrique (BADEA)
Al-Sayed Abdel Rahman Al Mahdi Street Tel: 73709, 73646, 70498
P.O. Box 2640 Tlx: 23098/ 22739/ 22248 BADEA
Khartoum, Sudan Fax: 73600, 24911, 70600

AMF

Dr. Gasem Al Manai
Director-General
Arab Monetory Fund (AMF)
P.O. Box 2818 Tel: 215000
Abou Dhabi Tlx: 22989 AMF EM
United Arab Emirates Fax: 726000

AAEA

Dr. Mahmoud Barakat Fouad Barakat
Director General
Arab Atomic Energy Agency (AAEA)
4 Nahg Moawia Ben Aby Sofian Tel: 709464, 709483
P.O. Box 402 Tlx: 14896
1004 Tunis, Tunisia Fax: 711330
Regional Network for Date-Palm in the Near East and North Africa

OAPEC

Mr. Abdel Aziz Al Abdallah Al Turki
Director-General
Organization of Arab Petroleum Exporting Countries (OAPEC)
Arab Organizations Building
Airport Road
P.O. Box 20501
Al Safat 13066
Kuwait

AAAID

Mr. Yousif Abdellatif Al Serkal
Director General
Arab Authority for Agricultural Investment and Development (AAAID)
Barkia Estathmarat
P.O. Box 2102
Khartoum, Sudan

ICARDA

Mr. Adel El Beltagy
Director-General
International Centre for Agricultural Research in the Dry Area (ICARDA)
P.O. Box 5466
Aleppo
Syrian Arab Republic

Islamic Development Bank

Mr. Ahmad Mohamed Ali
President
Islamic Development Bank
P.O. Box 5925
Jeddah 21432
Kingdom of Saudi Arabia
CARDNE

Dr. Nabil Al Arkawy
Acting Director
The Regional Center on Agrarian Reform
And Rural Development for the Near East (CARDNE)
P.O. Box 851840, Amman, 11185
Hashemite Kingdom of Jordan
Tel.& fax (9626)-5924348

GCC

Mr. Gameel El Hugailan
Secretary General
Gulf Cooperation Council
P.O. Box 7153 Tel: 4827777
Riyadh 11462 Fax: 4829089
Kingdom of Saudi Arabia Tlx: 405050 GULF SJ

OIC

Dr. Azzeddine Laraki
Secretary-General
Organization of Islamic Conference
Jeddah Fax: (00966-2) 6873568
Kingdom of Saudi Arabia Tel: (00966-2) 6800800

ISESCO

Islamic Educational, Scientific and Cultural Organization (ISESCO)
Mr. Abdel Aziz Bin Othman Al-Touwegri
Director-General
Islamic Educational, Scientific and Cultural Organization
Hay Misk Al-Lail, A venue Attine,
Hay Ryad, Rabat – Maroc

IDRC

International Development Research Center
P.O. Box 8500 Ottawa ON K1G 3 H9 - Canada
Tel. 1-613-236 6163
Fax 1-613-236 7230