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COMMITTEE ON AGRICULTURE

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Proposal for an International Year of Date Palm

Executive Summary

The date palm (*Phoenix dactylifera* L.) is one of the oldest fruit crops cultivated in the Middle East, North Africa (MENA) and nowadays in many parts of arid and semi-arid regions of the world. The date palm is also one of the most important income-generating crops, providing a major source of export earnings and livelihoods for millions of rural smallholders. Furthermore, it provides food and nutrition security for millions of users especially as part of school feeding for children and recently as a snack even in some developed countries. Traditional production and distribution systems dominate value chains for dates, and while very good examples exist of companies and countries that are modernizing sustainable systems and expanding exports, there is still scope for significant advances. Through the economic activities generated, the date production and trade can make a positive contribution to the achievements of a number of Sustainable Development Goals (SDGs). However, constraints to production, improved genetic resources, pests and disease, post-harvest handling and processing, marketing and trade, limit the competitiveness of the date palm sector in local, regional and international markets. Population, gender and consumption dynamics exert external forces on the date palm production and value chain. In this regard, the national governments, regional institutions and the private sector have key roles to play in further development of the sector.

To respond to the challenges posed today by increasing populations and associated food insecurity and changes in climate, the Kingdom of Saudi Arabia initiated the organization of the side event on “Promoting dates as extraordinary fruits for economic, environmental and social development” during the last FAO Conference on 27 June 2019 in Rome, Italy. The event increased awareness and promotion of partnership opportunities among the date producing and importing countries. Particularly, the nutritive value and bioactive properties and other commercial uses of dates and palm tree products. Like many dried fruits, dates provide significant energy, being 50 percent to 65 percent sugar (fructose and glucose) by dry weight and are a rich source of fibre. They contain relatively low protein (2 percent fat (<2 percent) and sodium, and low to moderate concentrations of potassium, calcium, chlorine, magnesium, phosphorous. Interestingly, their low sodium: potassium ratio makes them potentially suitable for people with hypertension. Dates are a good source of vitamins including B1 (thiamine), B2 (riboflavin), and B7 (niacin). They have also been reported to contain a range of antioxidant compounds such as phenolic acids, carotenoids, and polyphenols.

Suggested actions by the Committee

The Committee is invited to:

- Review the proposal by the Kingdom of Saudi Arabia to establish observance of the International Year of Date Palm in 2027 and provide guidance as deemed appropriate.

- Review and amend, as needed the Draft Conference Resolution presented in Appendix A, and submit it for the consideration of the 165th Session of the Council for adoption by the 42nd Session of the Conference.

Queries on the substantive content of the document may be addressed to:

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I. Background

A. Origin and Global Distribution of Date Palms

1. The date palm (*Phoenix dactylifera* L.) is one of the oldest fruit crops cultivated in the Middle East and North Africa (MENA). The fruits of date palm and by-products have contributed to the food security and livelihoods of population in the region for over 5 000 years. The crop has been linked to ancient civilizations, including Sumerians, Akadians and Babylonians, and is mentioned in Islamic, Jewish and Christian holy texts. The sign for the word “year” in Egyptian hieroglyphics is figurative of a date palm branch. Traditionally in the MENA region, the date palm is considered as a proof of family wealth, just as camels and other assets and it has an unrivalled cultural importance in arid regions.
2. Due to the long history of cultivation and exchange of germplasm between date cultivating regions, it is difficult to identify the exact center of origin of the date palm, although evidence suggests it originated in a segment of the Fertile Crescent (current Iraq). Spanish missionaries in the 18th and early 19th century facilitated dissemination of the date palm and it is currently cultivated in many regions and countries around the globe, including the Canary islands, Pakistan, India, Mexico, Morocco, Peru, the USA (California), United Arab Emirates, Albania, Turkey, Tunisia, China, Benin, Cameroon, Eswatini (Swaziland), Kenya, Namibia, Niger and Nigeria. The lead date producing and exporting countries include Egypt, Kingdom of Saudi Arabia and Iran.
3. Date consumption in the whole of the Islamic world peaks in the Holy month of Ramadan since Muslims all over the world break their fast with dates. In this month 250 000 metric tons (MT) are consumed in KSA, equivalent to one quarter of its annual production of about one million MT of dates. Another peak of consumption is during the annual Pilgrimage Holy Days observed by millions of Muslims from all over the world. Considering its high energy content, KSA also donates large amounts of dates to hunger-stricken countries through the World Food Program of the United Nations.
4. Globally date palm production covers an area of 1 092 104 hectares with a total production of 8 526 218 MT. Its cultivation expands to Asia (648 372 ha), Africa (435 763 ha), Europe (947 ha) and the Americas (7 022 ha). The lead date producing regions are Asia and Africa accounting for respectively, 55.8 percent and 43.4 percent of the total world harvest. The share of the Americas and Europe in date production was 46 493 and 15 061 MT, respectively. The share of Gulf Cooperation Council (GCC) countries in world date production was 21.04 percent with the following contribution of the member countries to this share: Saudi Arabia, 9.24 percent, Bahrain, 0.13 percent, United Arab Emirates, 5.82 percent, Oman, 4.42 percent, Qatar, 0.36 percent and Kuwait, 1.07 percent (FAOSTAT, 2018).
5. Date palms can reach a height of 15-25 m. Their trunk is made of strong cellulose fibers. Currently, more than 5 000 date palm varieties exist globally. Many fresh date palm fruits are available throughout 8 months of the year. Due to their high sugar content, packed dry dates can be stored without any preserving agents for months.
6. The date palm is tolerant to drought, salty and alkaline soils. Therefore, the crop can contribute to the sustainable development of agriculture systems allowing efficient utilization of natural resources for the improvement of nutrition and socio-economic status of farmers and rural populations in drylands. However, date palms remain underutilized and demands immense global recognition.
7. Date palms have a wide genetic diversity of genotypes with several known commercial varieties. Currently, 595 accessions of date palm are conserved in genebanks located in Afghanistan, Cuba, Spain, UK, India, Jordan, Libya, Pakistan, Sudan, Trinidad and Tobago, Tunisia, USA and South Africa. In addition, there are 1,104 accessions of date palm relatives (belonging to the same genus) conserved in the genebanks and available for breeding purposes (WIEWS, FAO database).
8. Date palm trees are traditionally propagated from either seeds or suckers (basal stem offshoots produced in the early years of the life of the palm). However, FAO has championed tissue culture systems for in vitro supply of high quality seedlings that vastly improve yields. The climatic

requirements for date palm cultivation are hot and arid conditions and therefore access to water / irrigation is essential. Male and female flowers are borne on separate plants so when cultivated the female flowers are artificially pollinated. Palm trees begin to provide fruit after four to five years and can live as long as 150 years, but fruit production declines with increasing age and under commercial cultivation trees are replaced much earlier. The shape, size, colour, quality, and consistency of date flesh varies according to the variety cultivated and the growing conditions, but potentially more than 1 000 dates can appear on a single bunch, weighing up to 8 kg.

B. Multiple Benefits of Dates

9. Date palm is a multipurpose tree that provides fruit, fibre, sheltering material and fuel. Dates are used since generations because of their economic benefits. Each part of the tree has the potential to offer economic returns for empowering of poor rural people and give a boost to their incomes. Its trunk furnishes timber; leaves provide roofing materials; leaf midribs supply material for crates and furniture; the leaflets are manufacture into baskets; the leaf bases are used for fuel; the fruit stalks provide rope and fuel; the fibers are processed into cordage and packing material; and the seeds can be ground and used as stock feed. Syrup, alcohol, vinegar can be processed from the fruits. The sap is also used as a beverage, either fresh or fermented, but, because the method of extraction seriously harms the tree, only those that produce little fruit are used for sap. When palm trees are felled, the tender terminal bud can be eaten as a salad. Dates conserve rather easily, to the benefit of small farmers' ability to gain maximum returns from their crops.

10. Encouraging processing dates into a variety of products can generate new demand and new market opportunities for producers and actors along the chain. Fresh and dried fruits are eaten as a key component in traditional diets, as snacks and are processed into confectionary products. Fresh and dried fruits are eaten as a key component in traditional diets, as snacks and are processed into confectionary products. From the human nutrition point of view, dates as raisins and figs are a rich source of carbohydrates. Dates provide a wide range of essential nutrients, and are a very good source of dietary potassium. The sugar content of ripe dates is about 80 percent; the remainder consists of protein, fiber, and trace elements including boron, cobalt, copper, flourine, magnesium, manganese, selenium and zinc. Compared to similar types of fruit, such as figs and dried plums, dates have the highest content of antioxidant. The glycemic index of dates varies from 30.5 to 49.7 which make them attractive for slowing the rise in blood glucose and insulin levels.

C. Challenges and opportunities for sustainable date production

11. There are some challenges related to the sustainable production of dates, including pest and disease control and access to high quality planting materials from trusted sources (offshoots and *in vitro* propagated plants). For example, the red palm weevil (*Rynchophorus ferrugineus*) is a highly invasive and destructive enemy of date palms. This pest was introduced to the Near East in the 1980s through the importation of ornamental palms and subsequently spread to parts of Africa, the Caucasus, the Mediterranean and the Balkans. There are other non-arthropod pests (i.e. other than insects or mites) potentially damaging date palms, including vertebrates (birds, rodents, bats) or invertebrates (snails and nematodes). Vertebrate pests can cause substantial damage to date fruits in the field and during storage. Rats for instance can cause up to 30 percent damage to the fruits (during storage and on the trees). Rats can also damage the roots of the trees, tender shoots and inflorescences. Frugivorous bats can also seriously damage date fruits. Many species of nematodes are usually found in the rhizosphere of date palm inflicting serious damage to the root system. Snails are potential pests of young date palm offshoots under conditions of high humidity.

12. Nevertheless, opportunities exist for the expansion of date palm cultivation areas, as well as undertake efforts to improve germplasm, develop income-generating activities, promote sustainable mechanization, etc. The crop can be an important source of income, particularly for youth and women involved in the agribusiness system existing within an oasis that includes by-products of date palm. Moreover, as indicated above, date palms are highly tolerant to dry and hot climatic conditions that could also be induced and/or exacerbated by climate change in drylands. Cultivation of date palm through the application of sustainable crop, soil and water management techniques could thus support the development of resilient farming systems that are adapted to climate change.

13. Traditionally, dates are harvested manually, from high rising date palms trees. The development of short rising tree types, more suitable for row plantations, would be an advantage when considering mechanization and the use of state of the art production techniques. For example, drip irrigation, use of sprayers with long lances for the control of pests and diseases. Other operations where innovations in mechanization could be beneficial include de-thorning of the leave bases, thinning, pruning and post-harvest handling, including pneumatically driven scissors for fruit harvesting and areal buckets to allow farm workers to more easily harvest dates from high trees. Innovative mechanization could possibly play a role in specific processing plants that convert dates into cakes. However, as is the case with other value chains involving mechanization, only if market opportunities are identified will it be feasible to invest in specific equipment and machinery. Development and fine-tuning equipment and machinery needs to be underpinned by market research and marketing campaigns.

14. Dates processing, except for drying, is markedly low despite the potential that exists for numerous value-added date products and there is untapped opportunity in marketing their nutritional and health value. Secondly, there is need to improve post-harvest handling, marketing and competitiveness of the date value chain. While production is of critical importance, the date palm value chain is comprised of several post-production components, which will require upgrading for the whole value chain to develop and function efficiently. The key components needing improvement are genetic material, post-harvest handling and processing, date quality, trade and marketing policy and infrastructure, as well as date consumption by emphasizing its nutritional value.

II. Objectives of the International Year of Date Palm

15. Dates can contribute to global food and nutrition security, the sector has proven socio-economic importance and through the valorization of dates and by-products, and date palm can contribute to poverty eradication and the accomplishment of Sustainable Development Goals. Encouraged by these arguments, the Kingdom of Saudi Arabia initiated the organization of the side event on “Promoting dates as extraordinary fruits for economic, environmental and social development” during the last FAO Conference on 27 June 2019 in Rome, Italy. The aim of the event was to respond to the challenges posed today by increasing populations, including food insecurity and changes in climate.

The main objectives of the IYDP are:

- (i) Raising awareness on the contribution of dates for food security and nutrition under changing climates and in view of achieving the global goal of forging a world free from hunger and poverty.
- (ii) Encouraging stakeholders, including the national governments, to join efforts towards the establishment of an enabling environment for improving production, productivity and quality of dates, including local value chain development.
- (iii) Support the development of a global framework to conserve the date palms diversity and mobilizing global efforts through cooperation, collaboration, facilitation, and partnership for sustainable intensification of date production and consumption.
- (iv) Drawing attention to the need for enhanced investment in research for development and capacity development to promote sustainable and resilient date production systems through the application of innovative approaches and digital technologies.
- (v) Raising awareness to create policies for the improvement of marketing of dates nationally, regionally and globally.

16. In this framework, the IYDP will support the promotion of sustainable soil, crop and water management techniques, sustainable management of transboundary pests and diseases, sustainable conservation and utilization of genetic resources and biodiversity. Moreover, the IYDP will facilitate the development of policies and strategies for the establishment of enabling environment for date production, marketing and equipment innovations to strengthen date value chains. The activities under the IYDP will include improving access to critical market information, such as input and output prices as well as developing capacities for the implementation of food safety measures at all stages of the

food chain. There will be more opportunities for developing a global inventory of germplasm collection, characterization and evaluation of palm date genetic resources in ex situ collections. Special attention will be paid to research and development on rapid propagation of superior varieties of date palms and mechanisms to facilitate access and benefiting sharing.

17. The IYDP will also focus on issues related to nutritive value, bioactive properties and extra-nutritional health-promoting compounds of dates to improve the quality of life. It will recognize the contribution of desert nomads to preserve ancient biodiversity since generations. The IYDP will tap into the economic potential of dates for rural development and highlights the importance of dates in global food and nutrition security and poverty eradication.

18. The main indicators of expected outputs of the IYDP are increases in cropping area and sustainable production, rural development, contributions to food and nutrition security and eradication of hunger and poverty.

19. The key stakeholders and strategic partners of the national Governments for celebrating the IYDP will be International Organizations, industry, producers and their associations, research institutions, academia, small-scale farmers and family farms.

Appendix A

Resolution .../2021 International Year of Date Palm

THE CONFERENCE,

Considering the urgent need to raise awareness of the economic benefits of sustainably produced dates;

Recognizing the important contribution of dates to the adaptation to climate change;

Noting the importance of sustainable farming and production practices to the livelihoods of millions of rural farm families and small holder farmers in the Middle East and North Africa (MENA) and other regions of the world;

Cognizant of the historical contribution of dates, to food security, nutrition, livelihoods and incomes of small holder farmers;

Concerned over the current need to invigorate market recognition of the benefits of dates and to promote efficient value chains embracing innovative mechanization, digitalization and post-harvest services;

Recognizing the vast genetic diversity of dates and their adaptive capacities to a range of production environments and marketing demands;

Recognizing that date palms as an important source of income and the need to empower youth and women through education, to assure the quality of family diets and to develop agribusiness system that includes the crop byproducts;

Recognizing that the observance of an International Year of Date Palm by the international community would contribute significantly to raising awareness of the suitability for sustainable cultivation of date palm under adverse climatic conditions, while directing policy attention to improving value chain efficiencies.

Stressing that costs for implementation of the Year and the FAO involvement will be covered by extra-budgetary resources to be identified;

Requests the Director-General to transmit this Resolution to the Secretary General of the United Nations with a view to having the General Assembly of the United Nations consider at its next session, declaring 2027 as the International Year of Date Palm.

(Adopted on June 2021)