CODEX ALIMENTARIUS COMMISSION

Food and Agriculture Organization of the United Nations

World Health Organization

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Agenda Items 3 **CRD22**

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CODEX COMMITTEE ON FRESH FRUITS AND VEGETABLES

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Comments by the International Union of Food Science Technology - IUFoST[1]

The objective of this Conference Room Document (CRD) is to provide comments on behalf of the International Union of Food Science and Technology (IUFoST), an observer organization of the Codex Alimentarius Commission, on agenda **Item 3** of the 23rd Session of the Codex Committee on Fresh Fruits and Vegetables (CCFFV23), which concerns the **Draft Standard for Fresh Dates (at Step 7).**

These comments were prepared by the Group of Experts of the Global Food Regulatory Science Society (GFoRSS), the Disciplinary Group of the International Union of Food Science and Technology (IUFoST) and were endorsed by the Codex Committee of IUFoST.

The International Union of Food Science and Technology (IUFoST) represents the largest gathering of food science and technology scientists from around the world, made of over 300,000 scientists from more than 100 countries.

Introduction and Background

Fresh dates are a globally traded commodity with significant economic, cultural, and nutritional importance, particularly in the Middle East and North Africa (MENA) region, where the majority of production occurs. Given the growing international trade and the need for harmonized quality and safety standards, the establishment of a Codex standard for fresh dates was proposed to facilitate fair trade practices and protect consumer interests.

During CAC45, the proposed standard was adopted at step 5, considering that delegations representing date-producing countries objected to its adoption at step 5/8 as proposed by CCFFV and considered more technical discussions were needed on the proposed minimum value for moisture content of 30%.

The current stage (Step 7) at CCFFV23 presents an opportunity to finalize the standard, ensuring it reflects scientific evidence and trade realities, while maintaining inclusiveness for all fresh date varieties.

IUFoST Observations on the Draft Codex Standard for Fresh Dates

IUFoST would like to thank the Electronic Working Group (EWG), chaired by **India and co-chaired by Saudi Arabia**, for their dedicated efforts in developing the draft standard, and values their continued commitment to facilitating discussions following CAC45's decision to adopt the draft standard at Step 5, allowing for further deliberation on this matter.

In this regard, IUFoST offers the following observations:

[1] This CRD was prepared by the Group of Experts of the Global Food Regulatory Science Society (GFoRSS), the Disciplinary Group of the International Union of Food Science and Technology (IUFoST) and was reviewed and endorsed by the Codex Committee of IUFoST.

- The **moisture content range** proposed in the **Draft Codex Standard for Fresh Dates (30%-85%)** remains a **contentious issue** among Codex members, particularly large producing countries of the Near East region. This range was initially introduced to differentiate **fresh dates from dried dates**; however, concerns were raised by experts and trade stakeholders, particularly in Arab countries. In these regions, various species and varieties of dates are naturally harvested in a soft, semi-dry or dry state (with moisture contents that can be well below 30%) and are commonly marketed and traded as fresh dates, without any artificial processing or treatment.
- **Scientific and statistical analyses** of moisture levels across various **date cultivars** globally show that 85% of the available data supports a moisture range starting at 12%, as indicated in the study conducted by a Working Group of experts struck under the Arab Codex Initiative, whose summary is presented **in Annex I**. This finding is significant as it establishes an evidence-basis documenting the natural variations in moisture content across different date varieties. Additionally, it is important to note that, should the initial proposal be adopted (minimum moisture level set at 30%), this would equate to excluding over 80% of the fresh date varieties produced in the Arab region and commercialized as fresh dates to be called as such, potentially creating trade barriers for producing countries.
- The **Codex standard** should be **inclusive and representative of the diversity of date varieties** and to accurately reflect **production and trade realities,** while avoiding **classification conflicts with the standard on dried dates**, which are already covered under the GENERAL STANDARD FOR DRIED FRUITS CXS 360-2020 / ANNEX B.
- **Moisture content limits should be supported by food data collected on commercially available date varieties rather than arbitrary limits**. Aligning the moisture threshold with scientific evidence would enhance fair trade practices, prevent market distortions, and ensure a globally applicable standard that supports all major date-producing regions.

Proposed Way Forward:

IUFoST supports the proposal put forward by the Chairs of the EWG on fresh dates (documented under CRD03), to remove the minimum requirement for Moisture from the standard on fresh dates and recommends the addition of a clarifying note as proposed below:

Proposed re-drafting of paragraph 3.1.1 on Minimum maturity requirements:

Fresh dates shall [will] have a moisture content, not exceeding 85%, and in accordance with criteria to the variety and stage of harvest/or commercial type and the area in which they are grown ~~Moisture content of fresh dates ranges from 30-85%.~~ As such, moisture levels should not be considered as a determining factor to confer the status of freshness for dates#.

 # This addition could also be considered in the form of a footnote set at the end of this paragraph, stating:

"Moisture levels should not be considered as a determining factor to confer the status of freshness for dates".

Rationale:

- The proposed approach is consistent with the data collected with support from the community of food science and technology and summarized in the **Annex** appended to this CRD.
- With this proposal, all commercially traded fresh date varieties—whether dry, semi-dry, or soft—would be covered by the standard, preventing market distortions and aligning with global trade practices. Removing the minimum moisture content requirement from the standard appears to be the more scientifically sound approach, consistent with the data collected and presented in the Annex, emphasizing that moisture levels are not a reliable indicator of freshness in dates

Ultimately, this approach would ensure inclusivity across all fresh date varieties and maturity stages, while avoiding overlapping with the existing Standard for dried Dates (CXS 360-2020) developed by the Codex Committee on Processed Fruits and Vegetables (CCPFV).

Annex: Approach Followed by the Working Group Established Under the Framework of the Arab Codex Initiative.

A working group was struck under the Arab Codex Initiative, with a mandate to gather scientific data (scientific articles, doctoral dissertations, scientific documents, etc.) related to the moisture content of fresh dates available in markets of the Middle East and North Africa region. Data was analyzed to support an evidence-based for proposal of moisture levels associated with fresh dates.

A Conference Room Document (CRD) – CRD07, introduced by Morocco, Egypt, Jordan, Algeria, Tunisia, the United Arab Emirates (UAE), Bahrain, Sudan, Iraq, Oman, Palestine, Libya, Yemen and the Arab Industrial Development, Standardization and Mining Organization (AIDSMO) was introduced at CCNE 11 (2023) and summarized the findings of the working group.

1. Distribution of fresh date production

The date palm tree, *Phoenix dactylifera* L., is a tropical and subtropical tree that belongs to the Palm family (Arecaceae). It is among the oldest cultivated plants in human history. It is primarily grown in the hot desert regions of southwestern Asia and North Africa and is traded worldwide as a high-nutrient fruit.

The majority of the world's date production is concentrated in the subtropical climates of North Africa and the Middle East. Global date production has been steadily increasing, reaching over 9 million tons in 2021 (FAO, 2021). According to the collected data, the five leading date producers in the world are Egypt, Saudi Arabia, Iran, Algeria, and Iraq (see Figure 1).

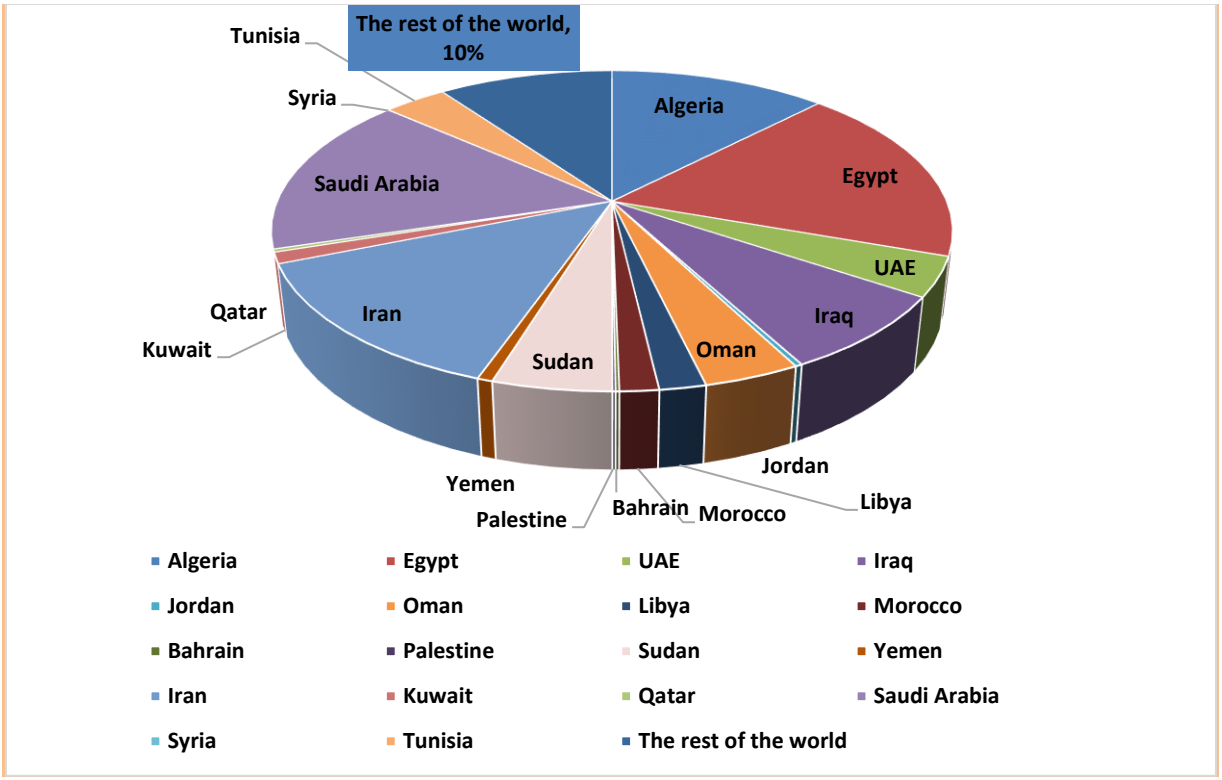

Figure 1: Distribution of fresh date production by country.

This short summary includes details on the **working group members, data collection and analysis methodology, followed to support proposals for a range of moisture content** associated with fresh dates. **Thirteen (**13) **Arab countries**, were represented in the data collection process, drawn

from studies describing a range of regional production and trade practices of commodities identified as fresh dates.

2. Data Collection Process

- Data submission followed a **two-phase process**:
  - **Phase 1 (June 8–27, 2023):** Collection of production, export, and import data**.**
  - **Phase 2 (June 30–July 24, 2023):** Collection of scientific research on moisture content in fresh dates.

3. Data Analysis on Moisture Content in Fresh Dates Across Countries

As illustrated in **Figures 2 and 3**, the **descriptive analysis** presents the **distribution of moisture content** in various date cultivars across different regions. The graph visualizes the **minimum, average, and maximum moisture content levels**, along with the **proposed lower moisture threshold** for classification as fresh dates.

The data analysis highlights the following key points:

- Setting 30% as the minimum moisture content would exclude many widely traded date varieties (more than 80%), particularly dry and semi-dry varieties that are classified and marketed as fresh dates.
- A 12%-85% moisture range ensures fair classification, accommodating diverse date cultivars while aligning with global trade practices and preventing market distortions.

Descriptive statistics_Egypt

	N	Minimum	Maximum	Moyenne	Ecart type
Min Moisture Content %	19	11,00	25,00	18,4474	4,11263
Max Moisture Content %	19	15,00	28,00	21,5263	4,16825

Descriptive statistics_Morocco

	N	Minimum	Maximum	Moyenne	Ecart type
Min Moisture Content %	13	7,00	28,40	17,8838	7,41943
Max Moisture Content %	7	18,30	34,00	27,4714	5,88974

Descriptive statistics_Algeria

	N	Minimum	Maximum	Moyenne	Ecart type
Min Moisture Content %	64	9,00	44,00	26,6253	7,72491
Max Moisture Content %	6	16	39	29,79	7,884

Descriptive statistics_UAE

	N	Minimum	Maximum	Moyenne	Ecart type
Min Moisture Content %	14	7,20	32,10	20,1786	8,47005
Max Moisture Content %	1	21,30	21,30	21,3000	.

Descriptive statistics_Tunisia

	N	Minimum	Maximum	Moyenne	Ecart type
Min Moisture Content %	5	11,00	12,00	11,2000	,44721
Max Moisture Content %	5	24,00	32,00	29,2000	3,34664

Descriptive statistics_Libya

	N	Minimum	Maximum	Moyenne	Ecart type
Average Moisture Content %	6	10,00	27,00	16,5000	6,28490

Descriptive statistics_All Countries

	N	Minimum	Maximum	Moyenne	Ecart type
Min Moisture Content %	121	7,00	44,00	22,5166	8,39819
Max Moisture Content %	38	15,00	38,75	24,9305	6,12486

Descriptive Graphic of Minimum Moisture Content in Date Cultivars

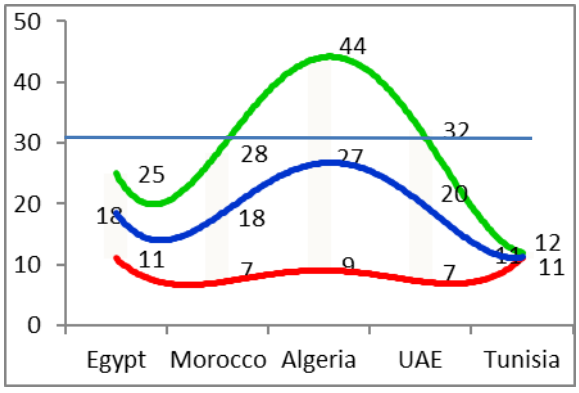

Figure 2: Descriptive analysis of minimum and maximum moisture content in date cultivars across producing countries.

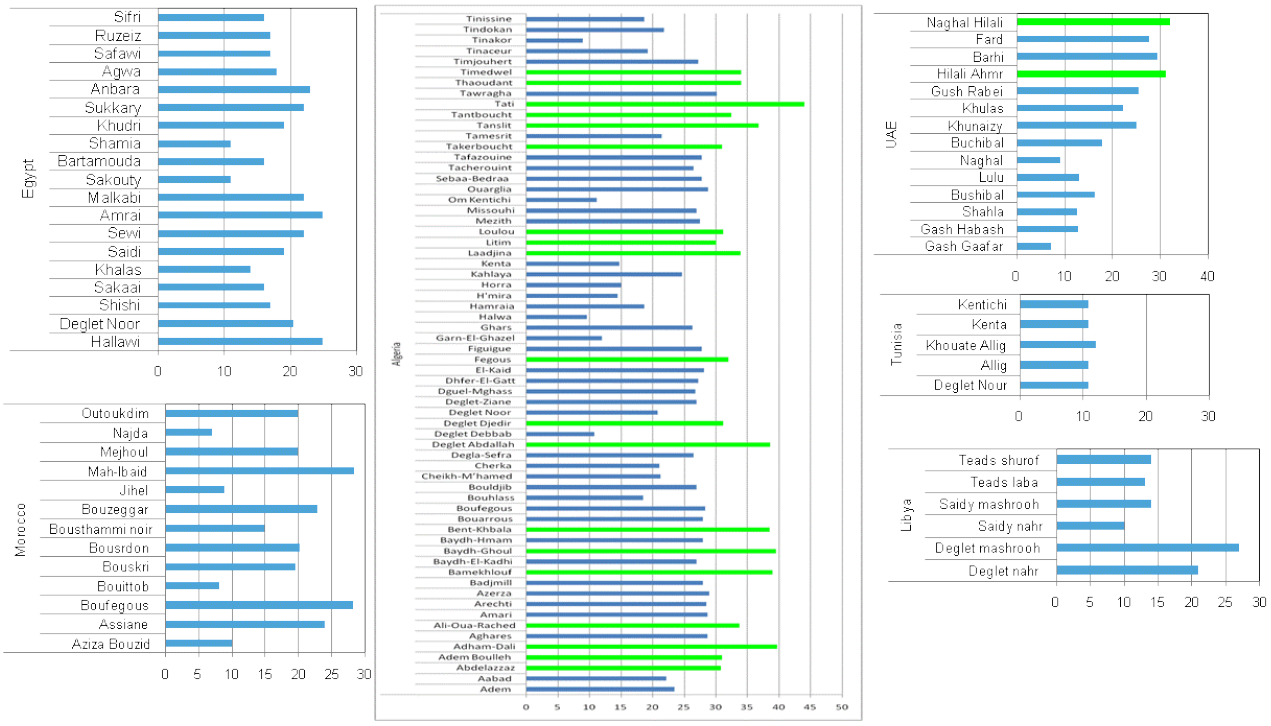

Figure 3: Moisture Content Distribution Across Date Cultivars.

The descriptive analysis strongly supports the **revision of the Draft Codex Standard for Fresh Dates** to either remove the minimum moisture content from the text of the standard or adopt a **minimum moisture content of 12%** instead of **30%**, ensuring an **inclusive, science-based, and trade-aligned approach**.

4. Summary of Data Analysis of the Range of Moisture Content

- Statistical analysis of moisture content across diverse date cultivars demonstrates that 85% of the data supports a moisture content range starting at **12%**, which is well below 30%.
- Should a minimum threshold be needed, it is suggested to use the 85th percentile of the data collected to ensure inclusion of a wide variety of dates without relying on arbitrary thresholds; aligning with evidence-based Codex principles (Codex aims to create standards that are scientifically valid, inclusive, and practical for global trade).
- The 12% minimum, derived from statistical distribution and the 85th percentile, could therefore be considered as a minimum threshold (if one is needed) and would ensure inclusivity and fairness across diverse regions and cultivars.
- Dates with moisture levels between 12%-85% include a wide range of cultivars, from dry, semi-dry to soft varieties, which are all traded as fresh dates.
- Dry and semi-dry dates are widely consumed and traded due to their longer shelf life, reduced spoilage risk, and suitability for transport.
- Eliminating the lower threshold of moisture content provides flexibility to accommodate natural variability in moisture levels due to environmental, varietal, or harvesting factors. This avoids penalizing producers of dry and semi-dry varieties, ensuring sustainability and equity in trade.

- It is also important to note that the moisture content is not considered a parameter to determine “freshness” of dates.