E

联合国粮食及农业组织 | Food and Agriculture Organization of the United Nations | Organisation des Nations Unies pour l'alimentation et l'agriculture | Продовольственная и сельскохозяйственная организация Объединенных Наций | Organización de las Naciones Unidas para la Alimentación y la Agricultura | منظمة الأغذية والزراعة للأمم المتحدة

COUNCIL

Hundred and Sixtieth Session

Rome, 3-7 December 2018

Proposal for an International Year of Millets

Executive Summary

Millets are often called "Nutri-Cereals" due to their high nutritional content compared to the more commonly grown cereals; wheat, rice or corn. When millets are included in diets, human and animal health is significantly improved, including that of mothers and their young. Here Millets may encompass a diverse group of cereals that include pearl, proso, foxtail, barnyard, little, kodo, browntop, finger and Guinea millets plus fonio, sorgum (or great millet) and teff. Millets were among the first plants that were domesticated and have served as a traditional staple crop for millions of farmers in Sub-Saharan Africa and Asia. Millets can grow on poor soils with little or no inputs, are resistant or tolerant to many crop diseases and pests and can survive adverse climatic conditions. The genetic diversity of millets offer opportunities for economic development through income generating activities in the food sector or on niche markets for specific professional applications (therapeutics, pharmaceuticals, specialty chemistry).

To respond to the challenges posed today by increasing populations and associated food insecurity and changes in climate, the Government of India is seeking FAO support to the next agenda of the United Nations General Assembly (UNGA), to adopt the proposal for an International Year of Millets (Annex). The Government of India recently increased the Minimum Support Price (MSP) of millets by 50 percent of cost of production to achieve the national commitment of doubling farmers' income by 2022. The Union Government has also declared 2018 as National Year of Millets in the country and millets have featured in recent initiatives such as the Adaptation of African Agriculture (AAA) and programmes such as the Technologies for African Agricultural Transformation (TAAT) funded by the African Development Bank.

While millet cultivation has been historically widespread, there is a current need to promote the nutritional and ecological benefit of millets to consumers, producers and decision makers and to improve food sector linkages to better reward growers. FAO's support to India's proposal will cement trusted partnerships and prioritize policies that advocate for inclusive value chain development for millets.

India has identified three main objectives for the International Year of Millets:

(i) Elevate awareness of the contribution of nutri-cereals (millets) for food security and nutrition.

(ii) Inspire all stakeholders, including national governments to work towards improving production, productivity and quality of millets.

(iii) Draw focus for enhanced investment in R&D and extension services to achieve (i) & (ii) above.

Suggested action by the Council

The Council is invited to:

1) endorse the proposal by the Government of India to establish observance of an **International Year of Millets** in 2023 and provide guidance as deemed appropriate;

2) make a recommendation on the Draft Conference Resolution presented in *Appendix A*, to the 41st Session of the Conference (June 2019).

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

Hans Dreyer
Director
Plant Production and Protection Division
+39 06570 52040

I. Background

1. Millet refers to a collective group of small-seeded annual grasses that are grown as grain crops, in dry areas of temperate, subtropical and tropical regions.

2. According to the International Crop Research Institute for the Semi-Arid Tropics (ICRISAT), more than 90 million people in Africa and Asia depend on millets in their diets, and 500 million people in more than 30 countries depend on sorghums as a staple food. However, in the past 50 years, these grains have largely been abandoned in favour of developing more popular crops like maize, wheat, rice, and soybeans.

3. Millets are grown worldwide, mostly absorbed by the local market while very small quantities are exported, including sorghum (or great millet), pearl millet, finger millet, fonio, common millet, kodo millet, proso millet, foxtail millet, little millet, barnyard millet, teff and other small millets.

4. Global millet production was 32 million tonnes in 2016 and has been declining since the sharp increases seen in the early 2000s. Millet production is shared between Africa and Asia. Africa accounts for more than 55 percent of global production, followed by Asia with 41 percent Europe represents 3 percent of the world market while the Americas accounts for only 1 percent[1].

A. Nutrition

5. Millets are gluten-free, are high in protein and antioxidants, and have a low glycaemic index, which can help preventing or managing diabetes. Pearl millet, in particular, is very high in iron, one of the most common micronutrient deficiencies worldwide and has twice the protein of milk. Finger millet has three times more calcium than milk. Kodo millet includes three times the dietary fiber of wheat and maize, and ten times that of rice. Sorghum, also used as a sweetener syrup, is rich in vitamins, minerals, protein, and fiber, and is also gluten-free. This cereal grain can help reduce the risk of certain cancers, anaemia, B-complex vitamin deficiency, as well as aid in diabetes control and prevention[2].

6. In some countries in Africa or in India, millet production has declined for economic reasons in some cases, but also because dietary habits have changed, as the authorities / food sector have not stimulated an appreciation of the benefit of millets. Consequently, the nutritional content of the food basket is decreasing and the risk of nutrient deficiencies may be severe among children and women.

7. In arid areas, millets are very often the only crops that can be harvested in the dry season and constitute a crucial nutrient input into the household food basket. It helps to overcome scarcity food in difficult periods, therefore contributing strategically to the food and nutrition security of many countries.

B. The 2030 Agenda and the SDGs

8. Actions must be taken to ensure that millet is a global priority for achieving food and nutrition security, particularly in contributing to Sustainable Development Goals (SDGs) 2, 3, 12 and 13: SDG 2 "*End hunger, achieve food security and improved nutrition and promote sustainable agriculture", SDG 3: "Ensure healthy lives and promote well-being for all at all ages", SDG 12, "Ensuring sustainable consumption and production patterns"* and *SDG 13, "Take urgent action to combat climate change and its impacts".*

[1] FAOSTAT
[2] Madelyn Vital. "Millets and Sorgum: Forgotten foods for future". Foodtank, 2018 [Online]. Https://foodtank.com/news/2018/04/icrisat-millets-sorghum-forgotten-foods-future/ (22/08/2018).

C. Multiple uses and sector developments

9. Millets are important staple crops that enter the diet of millions of people who consume them in the form of porridge (in West Africa), pasta, couscous, donuts and pancakes. The grain of certain millets can be, for example, fermented to produce alcoholic beverages, traditional beer in West Africa or sorghum wine in China.

10. In tropical areas, millets are grown primarily to feed people. In other areas, millet can be used for animal feeding as fodder. One example is Sorghum, which has become the world's fifth cereal crop and has conquered subtropical and temperate regions where it is mainly grown for animal feed. Other types of millet with high starch contents are used for the preparation of glues or adhesives. It can also serve in paper or construction material. Millet stems are also used to make huts or attics. Sugar sorghums are the main component in the biofuel production process.

11. Investment support and stimulation of public and private actors for research and development can help to determine what the health benefits are or how they can best meet the food and nutrition needs of consumers and potentially professional applications in the health sector.

D. Resilience to climate change

12. Millets grow in harsh environment where other crops grow or yield poorly. They can be grown with limited water resources compared to rice, wheat or maize[3]. Some varieties can withstand high humidity levels or can be exposed to high temperatures. Pearl millet can for instance grow up in critical drought conditions, others can be grown on very acidic soil conditions.

13. Millets are adaptable almost everywhere in dry regions on clay soils in wet lowlands or in alluvial lands. Their root systems are powerful, able to descend very quickly to a great depth of soil (sometimes up to 2 meters) to extract water and minerals. This characteristic partly explains their quality of hardiness and drought resistance, as well as their high adaptability and resilience to climate change.

14. It is important to conduct research and development on millets for the identification of adapted cultivars and for the improvement of productive and qualitative material in order to achieve sustainable seed production and best meet the needs expressed by the food sector trends, by consumers, and by farmers.

E. Sustainable production systems

15. Millets can be grown in dry land areas where the soils are not fertile and where external inputs are low or non-existent. As a result, millets have a comparative advantage over others crops in farming systems enabling the cultivation of lands that are not recoverable with other crops.

16. However, efforts must be pursued to improve agronomic practices of farmers, to understand the strategic choice of crop associations and rotations within the productions systems. Pearl millet, is for instance, predominantly associated with peanut or cowpeas in Sahel region. It is therefore essential to ensure efficient use of resources, in a sustainable manner and maximize impact on livelihoods and farmers' incomes.

17. Millets have particularly interesting characteristics for sustainable production systems, such as conservation agriculture and facilitate with this the adoption of climate smart agriculture. Not only do they resist well against drought, they are a good element to diversify crop rotations. With their powerful root systems, they can act as natural soil and subsoil conditioner, which is important in no-tillage systems. The high carbon content of the crop residues and the high amount of those residues makes them particularly important for maintaining and increasing soil carbon levels, maintaining a

[3] Sorghum and millets in human nutrition. Food and Agriculture Organization of the United Nations. 1995-2004. Http://www.fao.org/docrep/t0818e/T0818E00.htm

good soil cover, important for sustainable cropping systems, and, where applicable, to provide at the same time forage for livestock. With this concept in mind, it is important to promote the millets as an element to diversify cropping systems in a wide range of agro ecological zones, while avoiding the promotion of millets in mono-cropping systems.

F. Harvest and Post-harvest operations

18. Attention to harvest with millets starts already before the proper harvest operation with the protection against birds. This problem is one reason for which farmers are opting for other cereals, which are better protected against birds. Addressing this issue with environmentally amicable technologies is one element that could increase the popularity of millets.

19. Postharvest operations, such as threshing, drying, cleaning, packaging, storage, processing and transportation are as significant. This comprises the second half of activities following pre-harvest operations. Therefore, these are crucial processes in the whole food chain for millet production[4].

II. Objectives of the International Year of Millets

20. Millets are currently underutilized and their production is declining in many countries. Yet these crops have considerable assets to address food and nutrition security issues, particularly in regions highly threatened by climate change. In pursuit of the targets set under Sustainable Development Goal (SDG) 2 set in the 2030 Agenda for Sustainable Development, India seeks to capture attention on millet and wishes to proclaim an International Year of Millets (Annex). India is convinced that the boost of millets' production will go with raising consumer awareness on the nutritional and health benefits of this cereal and by supporting smallholder production systems, particularly in the selection of appropriate cultivars. Efforts should also focus on advocating for national public programs on millets, and generating opportunities to farmers in better connection with value chains and markets, and supporting investment policies for research and development. India proposes that the International Year of Millets would provide the unique opportunity to increase global production, efficient processing and consumption, better utilization of crop rotations, address trade challenges, and encourage better connectivity throughout food systems to promote millets as a key component of the food basket and to ensure sustainable food and nutritional security through climate resilient agriculture. The Government of India requests the Committee on Agriculture to endorse the proposal (*Appendix A*).

[4] Silas T.A.R. Kajuna. "MILLET: Post-harvest operations", 2001. Okone University of Agriculture. Edited by AGSI/FAO. Http://www.fao.org/fileadmin/user_upload/inpho/docs/Post_Harvest_Compendium_-_MILLET.pdf

Appendix A

Draft FAO Conference Resolution

International Year of Millets

Considering the urgent need to raise awareness of the climate resilient and nutritional benefits of millets and to advocate for healthy diets through the increased sustainable production and consumption of millets;

Recalling the UN General Assembly resolution proclaiming the United Nations Decade of Action on Nutrition 2016-2025, and the need to implement sustainable food systems that promote healthy diets, which include a variety of foods;

Recalling recommendation 10 of the Second International Conference on Nutrition, ICN-2 that establishes, inter alia, the promotion of crop diversification to diversify diets;

Recognizing the important contribution of millets to the cultivation of nutritious foods in climate adverse environments;

Noting the importance of sustainable farming and production practices to the livelihoods of millions of rural farm families and small family farmers around the world;

Cognizant of the historical contribution of millets, to food security, nutrition, livelihoods and incomes of family farmers;

Concerned over the current need to invigorate market recognition of the benefits of millets and to promote efficient value chains;

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

Recognizing the need to empower women through education, to assure the quality of family diets;

Recognizing that the observance of an International Year of Millets by the international community would contribute significantly to raising awareness of the nutritional and health benefits of millet consumption and their suitability for cultivation under adverse and changing 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 2023 as the International Year of Millets.

Annex

D.O. No. 1721 /AM

राधा मोहन सिंह
RADHA MOHAN SINGH

सत्यमेव जयते

कृषि एवं किसान कल्याण मंत्री
भारत सरकार
MINISTER OF AGRICULTURE
& FARMERS WELFARE
GOVERNMENT OF INDIA

F.No.11-11/2017-TC
14th August, 2018

Dear Mr. Jose Graziano da Silva,

As you will be aware millets were a staple diet for the communities in Africa and Asia, but have lately been losing prominence from their plate. Hence the demand has declined and so also the area under cultivation across the globe. Along with the high nutrients and usefulness in various lifestyle diseases including obesity, diabetes, etc, millets have an important role in enhancing resilience and risk management in the face of climate change, especially for small farmers and family farmers. Hence it is highly desirable that global efforts are stepped up to bring these nutri-cereals back to the food baskets of a wide range of consumers, rural and urban as well as rich and poor, for boosting their production as well.

In this context, you would be pleased to know that India is celebrating 2018 as the National Year of Millets and is promoting cultivation by amending cropping patterns of areas which are especially susceptible to climate change. It is an important component of our efforts to achieve the national commitment of doubling farmers income by 2022

To garner wider global attention and action, India has mooted a proposal to FAO for declaration of an upcoming year as 'International Year of Millets', a copy of which is enclosed for your ready reference. The matter has received support of the member countries when placed in the Bureau meeting of the Committee on Agriculture held on 5th July 2018. A short presentation on the multi dimensional benefits of millets is also enclosed for your perusal

May I request you to kindly consider inclusion of this proposal into the agenda of the forthcoming 26th Session of the Committee on Agriculture (**COAG**) meeting, scheduled to be held during 1-5 October 2018 in Rome. Adoption of this proposal by FAO with the support of its Member Nations will enable it to be moved to the UNGA for declaration of upcoming year as **International Year of Millets.**

Encl: A/a.

Yours sincerely,

Radhe Mohan Singh
(RADHA MOHAN SINGH)

Mr. Jose Graziano da Silva,
Director-General,
United Nations Food & Agriculture Organization,
viale delle Terme di caracalla, 00153,
Rome, Italy.

Office : Room No. 120, Krishi Bhawan, New Delhi-110 001 Tel.: 23383370, 23782691 Fax : 23384129