



Recovery of agrobiodiversity and traditional cuisine

Recuperación de la agrobiodiversidad y la cocina tradicional



J Selva Andina Biosph. 2024;12(1):1-3.

The issue of food security is currently a matter of significant concern at the national and supranational levels, and is one of the most important development goals set out in the 2030 Agenda. This objective has been proposed as a response to food shortages and rising food prices, a situation caused by market speculation, but also by the effects of the variability of the fundamental climatic elements for agriculture, such as rainfall and temperature. These have led to crop failures in crops that are essential for the world food supply, such as rice and maize¹.

Among the most important ideas are good agricultural practices, but also the analysis of cropping patterns, the way in which these were modified by industrial agriculture, which, although it produced more food under certain particular conditions, also reduced the number of species cultivated in productive areas in local contexts (chancras, parcelas, farms, etc.). Some of these species are endemic and linked to ancestral culinary traditions, which are now only grown and eaten by the oldest members of the family.

In light of this, it is important that decision-makers take into account the importance of this local agrobiodiversity, which is adapted to specific conditions and considered valuable in these years of recurrent drought because of its ability to withstand extreme conditions. These species will move from being crisis foods to the basis of the food of the future, a process that has already begun, with tree legume seeds appearing on local markets in the face of lost maize harvests. These species are adapted to acidic and poor soils, have a root system that allows them to absorb moisture and nutrients from deeper soil profiles, and are atmospheric nitrogen-fixing species.

In light of this, it is important for decision-makers to consider the importance of this local agrobiodiversity, adapted to specific conditions and considered valuable in these years of recurrent drought because of its ability to withstand extreme conditions. These species will move from being crisis foods to the basis of the food of the future, a process that has already begun with the appearance of tree legume seeds on local markets in the face

of maize crop losses. These species are adapted to acidic and poor soils, have a root system that allows them to absorb moisture and nutrients from deeper soil profiles, and are atmospheric nitrogen-fixing species.

The aforementioned species represent a food resource that will enable us to address the consequences of climate change. In the case of Mexico, the most severe drought in the last 70 years is expected in 2024. This recurring phenomenon renders the most vulnerable farmers, who are often the poorest, even more susceptible to its effects².

It is important to note that the mere rescue of this genetic material and the traditional knowledge that underlies it is insufficient. It is essential that these formerly cultivated species, including those collected, be incorporated into culinary practices and that the younger generations begin to consume them. This is because it is well known that ‘what is not consumed, is not preserved’. This represents a significant challenge, as this population group is accustomed to consuming processed foods that have contributed to both malnutrition and undernutrition, resulting in an epidemiological transition characterised by the emergence of chronic degenerative diseases in sectors of the population that were previously uncommon³.

Consequently, it is not sufficient to merely rethink the strengthening of crop patterns that respond to food sufficiency or the conservation of agrobiodiversity in germplasm banks. Rather, food education is essential, in conjunction with a series of strategies that allow the adoption of new food and nutrition practices, which in turn improve the health and well-being of those involved⁴. In order to achieve this goal, it will be necessary to engage the expertise of professionals with a background in food processes in order to innovate traditional culinary processes. Additionally, those with a background in health and chemistry will be required to evaluate the nutritional characteristics of the food in question, with a particular focus on the micronutrients that are essential for healthcare. Finally, agricultural specialists, such as agro-ecologists and agronomists, will be needed to generate knowledge about the propagation of the food in question.

Conflicts of interest


This publication has no conflict of interest with any public or private entity.

Ethical considerations

We have avoided naming any institutions or individuals involved in any way in the presentation of this document.

Literature cited

1. La ONU pide mayor acción contra la pérdida y el desperdicio de alimentos para enfrentar la triple crisis planetaria [Internet]. ONU Programa para el Medio Ambiente. 2021 [citado 5 de marzo de 2024]. Recuperado a partir de: <https://www.unep.org/es/noticias-y-reportajes/comunicado-de-prensa/la-onu-pide-mayor-accion-contra-la-perdida-y-el>
2. Monitor de sequía en México [Internet]. Gobierno de México. 2024 [citado 5 de marzo de 2016]. Recuperado a partir de: <https://smn.conagua.gob.mx/es/climatologia/monitor-de-sequia/monitor-de-sequia-en-mexico>
3. Secretaría de Salud. Panorama epidemiológico de las enfermedades no transmisibles en México, cierre 2021 [Internet]. México: Secretaría de Salud; 2021 [citado 2 de abril de 2024]. 89 p. Recuperado a partir de: https://www.gob.mx/cms/uploads/attachment/file/745354/PanoEpi_ENT_Cierre2021.pdf
4. Espejo JP, Tumani MF, Aguirre C, Sánchez J, Parada A. Educación alimentaria nutricional: Estrategias para mejorar la adherencia al plan dieto terapéutico. Rev Chil Nutr 2022; 49(3): 391-398. DOI:<http://dx.doi.org/10.4067/s0717-75182022000300391>

Lorena Casanova Pérez PhD 
Agrobiotechnology Educational Program
Technological University of Huasteca Hidalguense
Huejutla-Chalahuiyapa Highway SN, Huejutla, Hidalgo
Mexico, CP 43000
Member of the National System of Researchers Level 1
National Council of Humanities, Science and Technology
E-mail. lorena.casanova@uthh.edu.mx