GOLD NUGGET

The Spice Of Life: The Fundamental Role Of Diversity On The Farm And On The Plate

The world is witnessing major shifts in dietary patterns and - in parallel - the threat to agricultural biodiversity. The implications for human health and the resilience of our food systems are significant. Agricultural landscapes are becoming increasingly simplified as the number of crops and crop varieties grown on farms declines. Responding to a variety of pressures, farmers have replaced many time-tested local varieties with a small number of modern ones - a pattern which holds true for both food crops and animal breeds. Coinciding with the threat to agricultural biodiversity has been a trend towards the homogenisation of diets. Today 30 crops supply 95 per cent of the calories that people obtain from food, and only four crops - maize, rice, wheat and potatoes - supply over 60 per cent. This is noteworthy given that over the millennia, humans have domesticated or collected approximately 7,000 species of plants for food. Such heavy reliance on an unprecedented narrow range of crops, crop varieties and animal breeds brings long-term and increasing risks for agricultural production, for biodiversity, for livelihoods, and for nutrition. It also undermines the ability of agriculture to adapt to climate change.

Why is agricultural biodiversity and dietary diversity important?

What is the relationship between them, the reasons why they are at risk, and what can be done to foster them? We need to reverse these trends, in order to put diversity back in our farming systems and on our plates and to preserve it where it still exists. Biodiversity underpins the earth's life support system. It balances a finely-tuned ecosystem that helps deliver basic human needs, including food. Biodiversity keeps water fresh and air clean; it increases soil fertility and promotes pest control and pollination.

For example, Uganda is in the world's top ten most biodiverse countries. Supporting this ranking is a rich variety of indigenous crops such as millet and sorghum, and indigenous wild fruits, vegetables and medicinal plants. These crops can more easily withstand climate shocks such as drought, and are more nutritious than their modern equivalents. But, increasingly, indigenous foods have been replaced by monocropping of non-indigenous, high-yielding staples such as rice and maize – a trend driven by policies and subsidies promoting agricultural modernisation and commercialisation. A recent study documents the status and importance of indigenous food systems in Uganda, and confirms that a loss of indigenous fruits, vegetables, legumes and grains due to an increase in monocultures has heightened crop vulnerabilities to pests and diseases. A recent example from Uganda and across the horn of Africa is the devastating increase of locust and fall army worm invasions on maize and other staple crops.

How do indigenous foods support biodiversity? Farming of indigenous food crops is more environmentally friendly than methods used in commercial agriculture. Indigenous farming systems require less water and fewer chemical fertilisers and pesticides. These traditional farming methods help keep soil rich with biodiversity while nourishing the food that grows. Although most indigenous foods are grown in rural areas or found in the wild, some farmers are now cultivating indigenous crops in both rural and urban areas of Uganda, and selling them to a small but growing number of people, conscious of the nutritional and environmental benefits.

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