



Food and Agriculture
Organization of the
United Nations



Grandma and the Bees: My connections to Agroecosystems

by Preeti S. Virkar, India

FEB
2023

of **Stories
Change**

*Connecting traditional knowledge and
innovations for fair and sustainable
food systems*

United Nations
Decade of
**FAMILY
FARMING**
2019-2028





Grandma and the Bees: My connections to Agroecosystems by
Preeti S. Virkar, India

Writers

Alethea Kordor Lyngdoh, Bhargavi Nagendra, Brighton Govha, Diana Mapulanga, Edwin Abwino, Georgina Catacora-Vargas, Joseph Karangathi Njoroge, Kushal Poudel, Laura Tabet, Magdalene Amujal and Gillian Avako of Kulika, Nichola Hungerford, Preeti S. Virkar, Doon Valley, Rafal Serafin, Sarah Appiah, Shalini Pathi, Smita Magar, Sostain Moyo.

Technical Coordination

Nathalie Santini

Family Farming Knowledge Platform
Family Farming Engagement, Parliamentary
Networks and ComDev Initiatives Unit
Partnerships and UN Collaboration Division
Food and Agriculture Organization of the United Nations

Zdravka Dimitrova

Agroecology Knowledge Hub
Scaling up Agroecology Initiative
Ecosystem approach to crop production intensification
Plant Production and Protection Division
Food and Agriculture Organization of the United Nations

Editorial team

Doug Reeler & Cristina Temmink
Barefoot Guide Connection

Layout and graphic design

Ricardo Rivera, Jorge Leiva & Érika Ortega Sanoja

Prosperous and Inclusive Rural Societies Regional Initiative,
FAO Regional Office for Latin America and the Caribbean

- [Family Farming Knowledge Platform](#)
- [Agroecology Knowledge Hub](#)
- [Family Farming & Agroecology Community of Practice](#)
- [Family Farming & Agroecology Community of Practice for the Africa Region](#)
- [Family Farming & Agroecology Community of Practice for the Latin America and The Caribbean Region](#)



©FAO

Stories of change: *Connecting traditional knowledge and innovations for fair and sustainable food systems*

In December 2017, the [United Nations General Assembly proclaimed the United Nations Decade of Family Farming \(UNDAF, 2019-2028\)](#) thus constituting a framework that recognizes the importance of family farmers, which includes peasants, indigenous people, traditional communities, pastoralists, fisherfolks, upland farmers, and many other groups of food producers that possess a unique potential to promote transformative changes in the way food is grown, produced, processed and distributed.

All over the world, there are thousands of stories of distinctive work carried out anonymously by family farmers, including women and youth, on successful transitions to more inclusive, sustainable and fair food systems. Those stories are based on co-creation and sharing of traditional knowledge and innovations that are helping to make food systems sustainable, leaving no one behind.

In this context, the [Family Farming Knowledge Platform](#) in collaboration with the [Barefoot Guide Connection](#) organized a series of “writeshops”, writing classes to support practitioners to write their own experience, generating knowledge which highlight the practices, changes, innovations and impacts of what they do in support of family farming.

These writeshops represented an opportunity to share the creative process through which identify, recognize, write and exchange stories and experiences from young people, women, farmers, small-scale producers who work to promote, improve and strengthen family farming and achieve prosperous and inclusive rural societies.

This initiative was conceived to provide a space to highlight the human, cultural and social dimensions of family farming, including the human rights embedded in family farming and its social and economic organization.

The stories presented in this compilation - selected among those written during the writeshops, highlight the different ways in which family farmers responsibly and creatively manage their natural resources, landscapes and ecosystems as well as the cultural and symbolic values that define their identity.

Cover photo by FAO

Grandma and the Bees: My connections to Agroecosystems

by Preeti S. Virkar, India

I spent my summer vacations at my grandma's after my 6th-grade examinations. Grandma lives in a small village in Kerala in India. It was always fun to be at her place, spending my days playing, helping in the kitchen and feeding the cows. I rarely visited grandma every year as I lived far away from my paternal home. Grandma was happy to have my company yet must have been about anxious how she could keep me busy for a whole month with no modern toys to play with. On the other hand, I was mindful not to annoy her with my pranks and was on my best behaviour.

The warm and humid weather kept me mostly outdoors in grandma's colossal garden, playing with bare feet and hands in the soil. The hot weather and my careless playing around obviously gave me an eye condition quite common in the tropics called a "Stye". It was big and painful, making my bubbly self quiet and sluggish. Grandma noticed and must have felt pity to see her little one in agony, but she wasn't the kind who mellowed down when crisis struck. She had a solution to everything and offered me a dab of honey from a small glass bottle that she treasured in her wooden cupboard. After applying the honey dab every morning, the stye disappeared within 3 days, as if nothing had happened. The honey, to my surprise, cured my condition, and I became curious to know where this miraculous cure came from.

Coincidentally, my uncle took up an adventure in the coming week to harvest the stingless bee honey from its nest in the crack of a stone wall. These bees were tiny like mosquitoes, and when I saw them rushing out, I wanted to run in any direction. My uncle informed me these bees do not sting but only tickle. This reassured me a little, yet it took some courage to stand there. Within seconds, several bees flew over my face, and they tickled just as my uncle told me. I caught a few, and they seemed sticky. Maybe it was their way to tickle predators off! But I was fascinated by how nature gave us the gift of bees that produced honey with medicinal value. Little did I know then that this summer vacation would be my gateway to a lifelong vocation, a connection to bees and their importance to ecosystems.



Photo by FAO

Twelve years in future, I was a PhD candidate exploring bees in the forests and agroecosystems of Doon Valley at the foothills of the Himalayas in India. My doctoral research was a unique opportunity to explore and understand bees in various directions. It introduced me to a plethora of bee facts. There are approximately 20000 bee species across the world. Bees are essential for their pollination services, helping in fruit and seed production of flowering crops. Honeybees pollinate up to 80% of the approximately 100

food crops globally, ensuring food security. They also maintain the biodiversity of flowering plants. Many indigenous communities worldwide depend on honeybees for their honey and other by-products for medicine, cultural values and beekeeping as a livelihood.

Unfortunately, bees and many other pollinators are declining worldwide. The main drivers of bee declines are monocultures, agricultural chemicals, habitat fragmentation and diseases. Learning about the threats bees face triggered my instinct to work towards their conservation.

My research gave me insights into the amazing world of native wild bees. The bees consisted of groups such as the honeybees, stingless bees, leafcutters, bumblebees, carpenter bees and many more. I saw that natural ecosystems are essential for bees to survive. Wilderness in or around agroecosystems is vital to bees as they provide wildflowers and nesting habitats for their survival. And the best way to mimic nature in agroecosystems is to have biodiversity of many different types of flowering crops growing and keeping wildflowers on farm boundaries intact.

While working on bees, Navdanya Biodiversity Farm in India was one of my study sites. Navdanya rejuvenated biodiversity-based agroecological farming cultures with rich indigenous knowledge of organic farming. Here, I learned that the farmers in the Himalayas traditionally practice the mixed biodiverse farming technique of “Baranaja” (Bara = twelve and Anaj = seeds of crops). The interface between these different food crops encourages wildflowers, thus providing food and nesting habitats to bees when flowering crops are absent. Houses

in the Himalayas were built with hollow spaces in walls with tiny openings at places to let native honeybees nest inside them. Thus, the farmers already knew bees and their behaviours far more than any scientist. Unfortunately, modern agricultural policies have started luring farmers to shift to chemical monocultures over health through food diversity. It fosters extracting from Nature rather than caring for the Earth and the wellbeing of all.

These realities strengthened my determination to do my bit to conserve bees. The best way to contribute was through my doctoral study outcomes and the learning journeys from farmers’ age-old knowledge. Working in agroecosystems helped me appreciate that farmers have time tested wisdom in comprehending Nature. I began connecting farmers to the importance of bees in productivity and food security through my research findings and their rich indigenous knowledge. Navdanya Biodiversity Farm played a crucial role in providing me with a platform to reach out to thousands of farmers. Over the last 9 years, I have learned and shared many bee and biodiversity insights with the farmers through this platform. Navdanya is a firm believer and practitioner in the philosophy of “Vasudhaiv Kutumbakam” - the Earth as one family and all species as its members with irreplaceable roles to play. With Navdanya’s efforts, the farmers and I can embrace this philosophy and foster it.

What began with a childhood experience of grandma’s indigenous knowledge of medicinal honey from stingless bees moulded my career. Grandma and the bees connected me to agroecology. And I hope my story inspires many more.

 Family Farming Knowledge Platform

 Agroecology Knowledge Hub

 Family Farming & Agroecology Community of Practice

 Family Farming & Agroecology Community of Practice
for the Africa Region

 Family Farming & Agroecology Community of Practice