In the years to come, people will look back on December 12, 2015 as a momentous day in the history of climate change. Gathered at the Paris Climate Talks, COP21, most of the world's nations adopted the first international agreement to limit the emissions of carbon dioxide.

Over 180 nations signed on to reduce greenhouse gas emissions and prevent global warming beyond 1.5 degrees Celsius. What's more, they gave a nod to the important role that the world's soils can play in drawing down and storing atmospheric carbon dioxide. One of six major initiatives in the Lima-Paris Action
Agenda (LPAA), called the "4/1000 Initiative: Soils for Food Security and Climate," states that increasing the global stocks of soil carbon at a rate of 4/1000 (0.4%) per year can provide "major leverage" to improve soil fertility, help make farmers more resilient and "contribute to the long-term objective of keeping the global average temperature increase below 2 degrees."

The LPAA highlights how agriculture can respond to the challenges of climate change in a way that helps to mitigate it. As the industry with the largest carbon footprint, agriculture can implement large-scale changes to increase the rate of carbon sequestration, meanwhile making soil more fertile and boosting overall productivity. With this initiative, the CGIAR Consortium of agricultural research centers introduced a five-year, $225 million program that would sequester 25 megatons of carbon and improve farm yields by 20 percent. The leaders expect that their program will aid in the current global effort to take harmful excess carbon out of the atmosphere and put it back into soils, where it belongs.

David Nabarro, the UN Secretary General's special representative for food and nutrition has it right: "The time has come to reshape agriculture but it must be of the right type: regenerative, smallholder centered, focused on food loss and waste, adaptation, soils management, oceans and livestock." Addressing the degradation of soils on agricultural lands is an integral part of restoring nature's ability to sequester carbon, but so far it has been largely ignored in the mainstream conversation on climate change.

While COP21 did not produce a legally binding agreement on GHG emissions, the French government and its partners took a critically important step. In creating the LPAA they acknowledged the global significance of soil carbon farming and placed it under a convenient international spotlight. This is progress worth cheering for.

For additional information on the 4/1000 Initiative, see:


The Next Generation of Young
Farmers

When you picture the iconic American farmer, who do you envision? Is it someone in their mid- to late 20s, firm-bodied and spirit bright, and without many of those facial lines of wisdom? Probably not. Younger farmers remain the minority in this country; the average American farmer is 58 years old. There is but one farmer under 35 for every six over 65. However, the soils may be slowing turning to welcome in the next generation of youthful hands.

While the fastest growing age group among farmers is still the 65 and older crowd, the second fastest segment is those aged 25 to 34. Younger folks—those commonly referred to as "millennials"—are becoming increasingly interested in agriculture. In a romantic resurgence of do-it-yourself living that has led to dozens of how-to sites, blogs and books, homegrown food is right on the radar among many young people. It may be the high prevalence of preventable disease in America or a growing distrust in Big-Ag corporations, but more and more millennials are taking the hoe into their own hands and learning how to grow sustainable, organic food.

Growing numbers of young farmers are especially pronounced in urban areas, including cities like Boston, Seattle, and San Francisco. Not interested in simply growing food, they want to grow it without chemical fertilizers or synthetic pesticides, reducing their dependence on fossil fuels. And often they are farming in very limited space, right in the heart of a bustling city.

Millennial Farmers is a D.C.-based group that works to "de-industrialize the food system by creating easy, simple and cost-effective ways to grow food in the city, using vertical farming methods." Over half the world's population lives in urban environments, but Millennial Farmers believes that living urban need not mean living completely separate from nature and being unable to grow your own food. They provide VEG Towers, four-towered growing systems that urban dwellers can use to grow the equivalent of what they could harvest in 500 square feet of a traditional farm, to people in the environs of D.C.
While the vast majority of farmers in the United States are male, the number of farms operated by women is rising, from 5% in 1978 to 14% by 2007. Growing especially fast is the number of tiny farms: those doing less than $1,000 in annual sales. According to the USDA, about 42% of women-run operations took in $1,000 or less in 2013. But not all women farmers have small operations. By 2007 nearly 2,000 female farmers had sales of $1 million or more. Most produce poultry, eggs, grains or specialty crops.

As the current generation of established farmers begins to hand over more responsibility to their younger protégés, it will be interesting to watch for a larger cultural shift: changing notions of where the food on our plate should come from.

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