

Time is ticking for some crop's wild relatives

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A botanist brings a species of alfalfa from Siberia, to the United States. His hope? The plant survives, and leads to a new winter-hardy alfalfa. But what also happened during this time in the late 1800's, isn't just a story of legend and lore. The truth of the matter is creating a current revival in both interest and conservation of what's now called a crop's "wild relative."

And several researchers members of the American Society of Agronomy (ASA) and Crop Science Society of America (CSSA) say it couldn't come at a better time. The lack of attention has put crop wild relatives in a precarious position, says ASA and CSSA member Stephanie Greene. Green is a [plant geneticist](#) with the USDA-ARS in Prosser, WA and the U.S. National Plant Germplasm System, the country's primary steward of seed and other crop genetic material. Twenty percent of all [wild plants](#) are now threatened with extinction, according to recent estimates, and that's before the potential [impacts of climate change](#) are factored in. Yet, "as the world moves forward with all these initiatives to conserve biodiversity," Greene says, "it's recognized that crop wild relatives have been left behind."

Green is leading new efforts to tally crop wild relatives living in the United States, identifying which are most important to global and American agriculture, and developing a nationwide strategy for protecting the plants both in gene banks and in the wild. But conserving crop wild relatives is only the first step. The real goal is to get the diverse stock of genetic material, or germplasm, into the hands of plant breeders, especially those seeking to adapt crops to the increased

drought, greater disease pressure, and erratic weather [climate change](#) is expected to bring.

But few are studying crop wild relatives more intensely or championing for protection more vigorously than Nigel Maxted, a scientist at the University of Birmingham in England. Maxted is pressing for conservation in many ways, most significantly by developing a step-by-step, standardized protocol countries can use to identify and protect the crop wild relatives within their borders. The first countries he worked with to execute a plan were Syria, Lebanon, and Jordan. Most recently, he helped Portugal, Switzerland, the U.K., and several other European nations complete conservation strategies, and he's now collaborating with several more. Two of his graduate students currently work in China and North Africa. And a former student is now assisting Greene with the U.S. strategy. Greene says, while threatened by climate change just like all wild species, these wild relatives are the same plants that could help us adapt our food systems to the new conditions. "That's why it surprises me. Why aren't these plants the poster children [for plant conservation]?" she says. "We know they have value."

More information: For more information, see "Crop Wild Relatives and Their Potential for Crop Improvement," as featured in the current edition of CSA News: [www.crops.org/files/publicatio ... p-wild-relatives.pdf](http://www.crops.org/files/publicatio...p-wild-relatives.pdf)

The full article is available for no charge for 30 days following the date of this summary. View the abstract at [www.crops.org/publications/cs/ ... dGVtPWZhbHNIJnNvcnQ9](http://www.crops.org/publications/cs/...dGVtPWZhbHNIJnNvcnQ9)

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