PERENNIAL GROUNDCOVERS MAY HAVE DEEP IMPACT

By Lindsey Giardino

The work of a team of researchers at Iowa State University [ISU] could potentially help farmers protect the environment while also increasing farm profits.

The team of 18 scientists - which includes six other institutions and is led by D. Raj Raman, Morrill Professor of Agricultural and Biosystems Engineering at Iowa State - recently received a five-year, $10 million grant from the U.S. Department of Agriculture's (USDA] National Institute of Food and Agriculture to study tbe potential--·envirn IJlental-beneflts of using perennial grasses as cover crops.

Cover crops protect soil resources and reduce nutrient movement during the off-season. Typically, farmers utilize annual plants like oats or cereal rye, which cost them both time and money each year. In small plots, members of .the research group have shown that perennial grasses can be planted as groundcover in the spaces between rows of crops, while still achieving competitive yield of cash crops. If this approach can be refined, it could provide critical cover crop benefits at an extremely low cost to farmers.

A PATH FOR PERENNIAL COVERS

Researchers are exploring two primary rou_§.$JD.achievelne·vision. One is to find better management practices for existing perennial groundcovers and row-crop varieties. The other is to explore perennial groundcovers that naturally go dormant during the times of the year when crops like corn and soybeans are developing, as well as to identify row-crop varieties that are less sensitive to groundcover.

Finding an efficient perennial groundcover could lead to more farmers adopting the use of perennial cover crops - especially because they could save farmers time and money by suppressing weed growth in fields - ultimately improving the landscape's soil and water quality.

"I believe that if we are clever and a little bit lucky, that we might be able to devel-op a system that-really is implemented widely," Raman says.

This, he adds, is the ultimate goal of the research team: to have more farmers adopt perennial groundcover systems.

"To make a difference, to address the big issues we've been working on for decades, we need to get on a lot of acres," Raman says.

He warns that the system is brittle, though.

"Using current varieties, if you don't suppress the cover crop successfully - if corn emerges and you still have significant green groundcover - you'll knock back corn yield significantly," he says.

He adds, "This entire project is about de-risking this perennial groundcover system so that we are able to encourage farmers to start deploying it without putting them at undue economic risk."

To be successful, the research team must find the right combination of crops,..- perennial groundcovers and management practices. If they do so - and if the practice of planting perennial cover crops is widely implemented - they could help deeply impact the water quality and soil conservation challenges farmers face.

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