

# Resistant Growers?

## Dr. Stephen Powles Issues Wake-Up Call To U.S. Farmers Who Depend Solely On Glyphosate

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“It’s going to be an absolute epidemic,” Dr. Stephen Powles, professor at the University of Western Australia, said in a recent telephone interview with MidAmerica Farmer Grower.

Powles was speaking of the time in the not-so-distant future when glyphosate will fail on the big, important weeds of the cotton and corn belt in the United States. He predicts this will happen in the next few years.

An expert on herbicide resistance, Powles has worked in the field for 27 years. He published his first paper on glyphosate resistance in 1998 when resistance was first documented in Australia on ryegrass. He has seen the massive adoption of Roundup Ready crops in the United States by the year 2005, and now in 2010 he sees resistance claiming a strong foothold.

“Australia has had the greatest problem with resistance until now, but the United States will be Number One,” he predicts.

Powles has been as impressed with the performance of glyphosate on Roundup Ready crops as anyone.

“Glyphosate with Roundup Ready crops is a fantastic technology,” he said. “Half of the United States is covered with Roundup Ready crops, so much so, that I have renamed the cotton and corn belt the ‘glyphosate belt’ as the fields are starting to show resistant weeds on them.”

It started first with horseweed and marehail. At least 3 to 4 million acres have glyphosate resistant horseweed. The problem will only double, triple, quadruple and more as resistance is seen in palmer pigweed, waterhemp, ragweed and others.

“It will be much worse,” he warned. “Glyphosate and Roundup Ready crops are so good that everybody is attached to them and they just continue to have great reliance on them. But nature fights back, and that’s what resistance is.”

Powles noted how farmers in the cotton belt are now seeing resistant weeds in their fields. Those who don’t yet have the problem are hearing about it and realizing it’s a problem, but they still are very reliant on glyphosate.

“Those who do not have resistant weeds now, I think they should think about trying to keep that system going as long as possible by putting some more diversity in their program,” he said. “Glyphosate is so good, it’s the world’s best herbicide! But if they over-use it, the resistance will come. So they’ve got to give glyphosate a rest and get more diversity.”

Farmers, however, don’t seem to be getting the message.

“I think the lesson remains to be learned,” he said. “The lesson that remains to be learned is you cannot use one chemical across huge areas every year because resistance will occur.”

There are several options, and one is to get some other herbicide into the system. He suggests using pre-emergent herbicides and non-Roundup Ready crops, anything that makes economic sense. Another option is to use Liberty Link crops.

“Getting some Liberty Link crops into the rotation gives some diversity because it’s a different herbicide,” Powles said. “It’s trying to use as many different tools as possible. It means using good agronomy and using non-herbicide tools that make economic sense for the grower.”

“There are a range of pre-emergent herbicides from several companies and farmers can choose from more than one option. There are choices

and, to me, choice means diversity. It means using as many different tools as possible.”

When Powles talks to Australian farmers he tells them: “If you are getting great weed control with a herbicide, change it.”

“That’s just when we should change, so we keep these tools for a long term, not just a short term,” he stated.

The perspective of most farmers is not changing soon enough. While Southern growers, especially cotton producers, have been forced to change by the resistance, Powles said Midwest-



**An expert on herbicide resistance, Dr. Stephen Powles, Professor at the University of Western Australia predicts the failure of glyphosate on the big, important weeds of the cotton and corn belt of the United States.**

ern growers should take note of that and change now while glyphosate is still working.

“I guess I had hoped people would have recognized this sooner, but Roundup Ready is just a great technology and it’s understandable that farmers would adopt it,” he said. “However, as a biologist, I knew that resistance would appear. My objective is to keep glyphosate working as long as possible.”

While U.S. farmers struggle with resistance, they are not alone. Resistance also is appearing in South America, in Argentina and Brazil.

“All are going down the same pathway and will face the same problems,” Powles said. “Glyphosate will not always work. I think glyphosate is going to fail on the big important weeds of the cotton and corn belt over the next few years. That does not mean the end of cropping. It means change.”

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*Dr. Stephen Powles is one of the world’s foremost experts on herbicide resistance. He has studied at Michigan State University, University of Western Australia and Australian National University. He currently serves as a professor at the University of Western Australia. In addition, he also serves as the director of the Western Australia Herbicide Resistance Initiative since 1998. Besides being a university professor, Powles is also a wheat, barley and canola farmer in western Australia. He has won such awards as the Centenary Medal from the Federation of Australia in 2003, as well as the Plant Science Institute of Scientific Information’s Most Highly Cited Scientist in 2002, among others. With several accolades to his credit, Powles serves as a global expert on herbicide resistance, particularly glyphosate resistance.*