The gospel of high-tech genetically modified (GM) crops is not sounding quite so sweet in the land of the converted. A new pest, the evil pigweed, is hitting headlines and chomping its way across Sun Belt states, threatening to transform cotton and soybean plots into weed battlefields.

In late 2004, “superweeds” that resisted Monsanto’s iconic “Roundup” herbicide, popped up in GM crops in the county of Macon, Georgia. Monsanto, the US multinational biotech corporation, is the world’s leading producer of Roundup, as well as genetically engineered seeds. Company figures show that nine out of 10 US farmers produce Roundup Ready seeds for their soybean crops.

Superweeds have since alarmingly appeared in other parts of Georgia, as well as South Carolina, North Carolina, Arkansas, Tennessee, Kentucky and Missouri, according to media reports. Roundup contains the active ingredient glyphosate, which is the most used herbicide in the USA.

How has this happened? Farmers over-relied on Monsanto’s revolutionary and controversial combination of a single “round up” herbicide and a high-tech seed with a built-in resistance to glyphosate, scientists say.

Today, 100,000 acres in Georgia are severely infested with pigweed and 29 counties have now confirmed resistance to glyphosate, according to weed specialist Stanley Culpepper from the University of Georgia.

“Farmers are taking this threat very seriously. It took us two years to make them understand how serious it was. But once they understood, they started taking a very aggressive approach to the weed,” Culpepper told FRANCE 24.

“Just to illustrate how aggressive we are, last year we hand-weeded 45% of our severely infested fields,” said Culpepper, adding that the fight involved “spending a lot of money.”

In 2007, 10,000 acres of land were abandoned in Macon country, the epicentre of the superweed explosion, North Carolina State University’s Alan York told local media.

The perfect weed
Had Monsanto wanted to design a deadlier weed, they probably could not have done better. Resistant pigweed is the most feared superweed, alongside horseweed, ragweed and waterhemp.

“Palmer pigweed is the one pest you don’t want, it is so dominating,” says Culpepper. Pigweed can produce 10,000 seeds at a time, is drought-resistant, and has very diverse genetics. It can grow to three metres high and easily smother young cotton plants.

Today, farmers are struggling to find an effective herbicide they can safely use over cotton plants.

Controversial solutions

In an interview with FRANCE 24, Monsanto’s technical development manager, Rick Cole, said he believed superweeds were manageable. “The problem of weeds that have developed a resistance to Roundup crops is real and [Monsanto] doesn’t deny that, however the problem is manageable,” he said.

Cole encourages farmers to alternate crops and use different makes of herbicides.

Indeed, according to Monsanto press releases, company sales representatives are encouraging farmers to mix glyphosate and older herbicides such as 2,4-D, a herbicide which was banned in Sweden, Denmark and Norway over its links to cancer, reproductive harm and mental impairment. 2,4-D is also well-known for being a component of Agent Orange, a toxic herbicide which was used in chemical warfare in Vietnam in the 1960s.

Questioned on the environmental impact and toxicity of such mixtures, Monsanto’s public affairs director, Janice Person, said that “they didn’t recommend any mixtures that were not approved by the EPA,” she said, referring to the US federal Environmental Protection Agency.

According to the UK-based Soil Association, which campaigns for and certifies organic food, Monsanto was well aware of the risk of superweeds as early as 2001 and took out a patent on mixtures of glyphosate and herbicide targeting glyphosate-resistant weeds.

“The patent will enable the company to profit from a problem that its products had created in the first place,” says a 2002 Soil Association report.

Returning to conventional crops

In the face of the weed explosion in cotton and soybean crops, some farmers are even considering moving back to non-GM seeds. “It’s good for us to go back, people have overdone the Roundup seeds,” Alan Rowland, a soybean seed producer based in Dudley, Missouri, told FRANCE 24. He used to sell 80% Monsanto “Roundup Ready” soybeans and now has gone back to traditional crops, in a market overwhelmingly dominated by Monsanto.

According to a number of agricultural specialists, farmers are considering moving back to conventional crops. But it’s all down to economics, they say. GM crops are becoming expensive, growers say.

While farmers and specialists are reluctant to blame Monsanto, Rowland says he’s started to “see people rebelling against the higher costs.”
Water was in Agent Orange too...
By Anonyme - Rochester, NY, USA
Water was in Agent Orange, should we stop drinking it? Water is in Roundup as well, should we stop using water for irrigation? Saying that 2,4D was in Agent Orange is specious and doesn't really prove that it is toxic any more than saying that because Hitler was European all Europeans are genocidal psychopaths. Please use facts rather than hyperbole, thanksmuch.

Monsanto and Roundup are Evil and Deadly
By Norm Grant Smith - Chilliwack, Canada
The "bad guy" in this story is not pigweed. Pigweed is just Mother Nature saying "you can't outsmart me". Monsanto’s Genetically Modified(GM) “frankenfoods” have proven very dangerous in independent animal studies. They have been 100% proven to kill off butterflies, and they are a top suspect in the current Honey Bee holocaust (Colony Collapse Disorder). Let's permanently ban GM foods before they destroy the planet. Monsanto and the deadly poison Roundup must be stopped.

Stop Monsanto!
By Anonyme - CA
More bad news for Monsanto. Thank God! Farmers: Please stop using any chemicals from this company. GMO is not the way to go. Monsanto is probably the most hated company in the world.

Apologist--HUH?
By Isabel from react #1 last night - USA, Milledgeville, GA
Anonymouse, I think you are confused as to my position. Read the blog. I neither support nor apologize for Monsanto. Wish they’d stop brainwashing people that we need all that poison on our land and in our waterways, yes. At least I used my name.

I did something about it!
By Isabel from react #1 last night - USA, Milledgeville, GA
I really got mad when I saw this article, which was posted to Facebook by Georgia Organics, so I created a blog http://ilovepigweed.com/ All the positive useful facts about pigweed you'll ever want to know!

I was told about Roundup resistant pigweed by local farmers in Georgia as early as 1991.

herbicide resistance
By Christophe Lathevary - Raleigh, NC, USA
Interesting point, m_astera, I agree that with increased biological activity in the soil, i.e. microorganisms or insects, weed seeds or seedlings might be predated upon, damaged by pathogens or encounter more difficult conditions for germination. Establishment of cover crops and true rotations could be a good way to do this. My main criticism of this article is the author's too easy association of the problem of herbicide resistance with GMOs. Indeed, glyphosate resistant weed populations are an increasing problem, but only because repeated application of the chemical has allowed the selection, reproduction and dispersal of resistant individuals. The same phenomenon has occurred...
long ago with other chemistries and modes of action. It's an agronomic problem, caused by, as the author points out correctly, an over-reliance on a too convenient product.

21/04/2009 04:33:29
pigweed monsanto
By Anonyme - USA
Perhaps the evil pigweed might prove a boon to biofuel efforts.

21/04/2009 02:01:44
Soil mineral imbalance
By m astera - Venezuela, Porlamar
Weed problems indicate soil mineral imbalance and/or lack of biological activity in the soil. Most of these crop areas affected by the frankenweeds are probably very low in organic matter, and for sure these soils have only been given chemicals for years and years. Balance the minerals and get the soil alive again and most weed problems will disappear. The seeds of some types of pigweed (amaranthus spp) will not even germinate in a soil with high levels of humus, balanced minerals, and biological activity. Try a web search for soil minerals.

20/04/2009 00:50:29
First poster reeks of Monsanto
By Anonymouse - USA
No doubt the first poster is a Monsanto apologist. Getting too common these days on blogs where the corporation be outed uses flim-flam to post support and act as if the public actually supports their fascist tactics. Monsanto is a weed.

20/04/2009 20:17:24
superweeds
By Christophe Lahovary - Raleigh, NC, USA
It is only the repeated application, year after year, of the same active ingredient, that causes herbicide resistant weed populations to increase in size, not a particular chemical or a particular crop, transgenic or not. Herbicide resistance in weeds has existed for years. The only way to avoid it is to apply the very old principle of crop rotation, herbicide rotation and non chemical control.

20/04/2009 06:34:25
Roundup on Pigweed in the Southeastern USA
By Isabel Crabtree - USA, Milledgeville, GA
It's completely disgusting that chemical companies continue to spray without reason. But there's a solution for pigweed. Check out http://ilovepigweed.blogspot.com/ Permaculture sees solutions, not problems.