

Research Helping In Fight Against Pigweed

SePRO Corporation has collaborated with weed scientists from universities, USDA, Cotton Incorporated and the National Cotton Council to develop a new herbicide mode of action for cotton. Brake, with the active ingredient fluridone, was discovered approximately 35 years ago and was an outstanding cotton herbicide with excellent crop safety but was not commercialized in U. S. row crops.



Weed resistance is a major problem today.

However the active herbicide, fluridone, has been registered and widely and safely used as an aquatic herbicide (trade name Sonar) for many years.

Due to the proliferation of herbicide-resistant weeds, specifically glyphosate-resistant *Palmer amaranth*, and the limited number of herbicide modes of action available for use in cotton, a renewed effort has begun to develop new

products to deal with the problem.

Perfect Timing For New Tool

Dr. Robert Nichols, senior director of agricultural research at Cotton Incorporated says, "No new herbicide modes of action have been registered for use in row crops since the 1990s. Because of the increase in the number of herbicide-resistant weed species and the increasing prevalence of resistant weeds, weed scientists are

advocating diversification of weed management tactics and products to counter resistance."

Brake F2 is a combination of fluridone and fomesafen that was developed through collaborative research efforts with university scientists. This combination of two herbicides enhances the consistency of the product's performance under different moisture regimes, according to Nichols.

Section 18 emergency exemptions were issued for the use of Brake F2 in four states (Georgia, North Carolina, South Carolina and Tennessee) in 2014.

"The development of Brake took another major step forward this year," says Dr. Tyler Koschnick, vice president of research and regulatory with SePRO Corp. "We had the opportunity to work with growers and crop consultants over some significant acres. As an example, the conditions in Tennessee this year reinforced that Brake performs well under wet conditions."

Special Exemptions Sought

In 2015, as many as eight states (Georgia, North Carolina, South Carolina, Tennessee, Missouri, Arkansas, Mississippi and Texas) are considering a request for Section 18 emergency exemptions for the use of Brake to control glyphosate-resistant *Palmer amaranth*.

Brake looks to be a very effective tool in the fight against glyphosate-resistant *Palmer amaranth* but must be part of a comprehensive weed management program that includes scouting and timely post-emergent applications with overlapping residuals.

In some trait-based weed management systems, no effective over-the top options exist for control of glyphosate-resistant *Palmer amaranth*.

"Cotton Incorporated has been instrumental on the issue of herbicide resistance," says Koschnick. "It has been very supportive in the development of new herbicide modes of action and creating sustainable weed control systems."®

The Cotton Board, which administers Cotton Incorporated's Research and Promotion Program, contributed information for this story.

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