Old herbicides enlisted in new 'war on the weeds'
23 May 2012

The emergence of weeds resistant to the most widely used herbicide is fostering a new arms race in the war against these menaces, which cost society billions of dollars annually in control measures and lost agricultural production. That's the topic of a story in the current edition of *Chemical & Engineering News* (C&EN), the weekly magazine of the American Chemical Society (ACS), the world's largest scientific society.

In the story, Melody M. Bomgardner, C&EN senior business editor, points out that glyphosate - introduced in the 1980s - has been the best-selling herbicide for over a decade. The biotechnology giant Monsanto markets glyphosate as Roundup, and in the late 1990s began selling so-called Roundup Ready seeds, engineered to be tolerant to the herbicide. About 94 percent of soybean acres were herbicide-tolerant, as was 73 percent of cotton acreage and 72 percent of corn acreage, according to the U.S. Department of Agriculture. That popularity fostered focused use of glyphosate instead of a range of herbicides, leading to the emergence of weeds resistant to glyphosate and a generation of farmers who aren't well versed in the full spectrum of weed management.

Companies like Monsanto and Dow AgroSciences are introducing crops engineered with resistance to other herbicides such as 2,4-D and dicamba. Bomgardner notes that farmers will still be able to manage most weeds through applications of glyphosate. For any resistant weeds that remain, they will have the option of adding 2,4-D or dicamba without worrying about damaging their crops. However, some scientists, farmers and activists worry that continued over-reliance on chemical herbicides will result in weeds that are increasingly difficult to control.

**More information:** War On Weeds - cen.acs.org/articles/90/i21/War-Weeds.html