

A NEW HERBICIDE FOR AQUATIC USE: BAS 693H. Kathie E. Kalmowitz, Jeffrey H. Birk, Jennifer L. Vollmer, and Dan D. Beran, Market Development Specialist, Registration Specialist, Public Lands Specialist, and Market Development Specialist, BASF Corporation, Research Triangle Park, NC 27709.

BAS 693H herbicide is currently under review by Environmental Protection Agency (EPA) for an aquatic use label. The active ingredient, imazapyr, has been registered and used as an effective broad-spectrum herbicide in forestry and vegetation management sites for over 15 years. BAS 693H has been evaluated under an Experimental Use Permit (EUP) since 1995 for aquatic and terrestrial/ wetland uses. Currently 25 states are participating in the EPA approved EUP including: Arizona and Nevada and all states east to Virginia for the south/southwest; the MidAtlantic states of New Jersey and Pennsylvania and the North Central states of Ohio, Indiana, Michigan, Illinois, Wisconsin and Minnesota. Washington State, Nebraska and Montana are also approved in the BASF Aquatic EUP Program.

BAS 693H is in the imidazolinone family of chemistry and has low toxicity to mammals, birds, fish and reptiles. Research and EUP data supports BAS 693H for use on floating, emersed and riparian species for aquatic and wetland sites. No biological activity has been reported for control of algae species when BAS 693H was evaluated in laboratory and small tank studies by university researchers. Research results indicate specific submersed species would require elevated rates (higher than proposed use rates evaluated) and prolonged exposure times, for BAS 693H to provide significant control of the plant species. The half-life of BAS 693H is approximately 7-14 days in an aqueous environment; breakdown occurs through aqueous photolysis and microbial action to end products carbon, hydrogen, oxygen and nitrogen. Application methods to deliver the herbicide can provide selective control of targeted weed species and flexibility for time-of-application at the site.

Data demonstrate that BAS 693H when registered can provide season-long control of key invasive emergent and shoreline species. Examples of excellent control reported in research and EUP trials are purple loosestrife (*Lythrum salicaria*), cattail species (*Typha* spp.), alligator weed (*Alternanthera philoxeroides*), sedge species (*Carex* and *Cyperus* spp.), common reed (*Phragmites* spp.), water hyacinth (*Eichhornia crassipes*) and waterlettuce (*Pistia stratiodes*) when evaluated at rate ranges of 0.5-1.5 lb a.e. /surface acre. Elsewhere in the country, effective use of BAS 693H has been observed with control of invasive terrestrial species saltcedar (*Tamarix* spp.), Malaleuca (*Melaleuca quinquenervia*), and Chinese tallow tree (*Sapium sebiferum*).

BAS 693H, when registered, can provide a new aquatic-weed-control option for restoration of aquatic, wetland and riparian areas.