

PROWL H₂O: FIELD PERFORMANCE. Troy D. Klingaman, Leo D. Charvat, Dan E. Westberg, Jon K. Sweat, Paul M. Vassalotti, and Gary M. Fellows. Biology Area Manager, Biology Area Manager, Biology Group Leader, Technical Market Manager, Senior Technical Service Representative, and Technical Market Manager, BASF Corporation, Research Triangle Park, NC 27709.

Field efficacy and crop tolerance trials were conducted with Prowl[®] H₂O, a new aqueous capsule suspension formulation of pendimethalin from 1998-2003. A consistent trend for improved crop safety was present with Prowl H₂O compared to pendimethalin emulsifiable concentrate (EC) formulations in all crops tested. The absence of organic solvents in the aqueous formulation results in increased tank-mix flexibility and reduced crop response compared with the EC formulations of pendimethalin. Weed efficacy of both grasses (including *Setaria spp.*, *Digitaria spp.*, *Panicum spp.*) and broadleaves (including *Abutilon theophrasti*, *Chenopodium album*, *Amaranthus retroflexus*, *Amaranthus tuberculatus*) with the aqueous capsule suspension formulation of pendimethalin shows a consistent trend for increased weed control compared with the pendimethalin EC formulations. Prowl H₂O was shown to have reduced binding to crop residues in both lab and greenhouse experiments. The reduced binding of the aqueous formulation was reflected in increased weed control in no-till soybean field trials with either fall or early preplant applications when compared to the EC formulation.