

ENVOKE™, WEED CONTROL FOR THE FUTURE
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Abstract

ENVOKE™ herbicide (CGA-362622) is being developed for post-emergent and post directed weed control in cotton. Federal registration was granted October 1, 2003. Envoke will be registered for use in the Southeast and Mid-south regions of the US, as well as Eastern Texas. Subsequent registrations in CA, AZ, and NM are planned. The proposed ISO common name is trifloxysulfuron-sodium. Envoke is formulated as a 75% water dispersible granule, and will be packaged in a three-ounce container. Envoke can be utilized in conventional, Roundup Ready® and BXN® cotton production systems. The signal word for Envoke will be Caution

Proposed Envoke rates for post-emergence over-the-top (POT) application, starting at a minimum of 5 true leaves in picker-type cotton varieties, are 0.10-0.15 oz per acre. Proposed rates for post-emergence directed (PD) application are 0.10-0.25 oz per acre. A non-ionic surfactant (NIS) should be included at 0.25% v/v to all POT applications and NIS or COC may be used when applications are made PD.

Crop response when observed was transient and had no impact on cotton yield. Envoke applied over the top of cotton can cause chlorosis and shortening of the internodes. By 21 days after application, crop response was <5% for Envoke 0.1-0.25 oz/A.

Envoke dissolves quickly under normal agitation in the spray tank and the solution is stable for a period of time. It is recommended that no more spray be mixed than what can be sprayed during one day. Translocation studies indicate Envoke applied to cotton will remain in the treated leaf. Weeds such as morningglory and nutsedge readily translocate Envoke throughout the plant providing control of target weeds.

At recommended use rates Envoke will provide systemic control of many of the more troublesome weeds in cotton, including, but not limited to, pitted and entireleaf morningglories (*Ipomoea lacunosa* and *I. hederacea*), sicklepod (*Senna obtusifolia*), common cocklebur (*Xanthium strumarium*), and hemp sesbania (*Sesbania exaltata*) and Nutsedge (*Cyperus esculentus* and *C. rotundus*), control may require sequential applications.

Envoke's spectrum of activity on difficult to control weeds will complement current cotton herbicide systems. In Roundup Ready® cotton, a typical program may include Sequence® (a mixture of Touchdown and Dual Magnum) applied E-POT followed by Envoke POT followed by a PD application of Suprend™ (a mixture of trifloxysulfuron and prometryn with registration also expected in January 2004). In conventional cotton, a program starting with a pre-plant incorporated or pre-emergence herbicide followed by Envoke POT followed by a PD application of Suprend will provide excellent control of troublesome weeds.

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