

**Review: The Potential for Bindweed Control with Matrix, and
Reflex Herbicide Newly Registered in Potatoes**

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Bindweed Control

Hedge bindweed *Calystegia sepium* **CAGSE** (also called hedge false bindweed) is an occasional but difficult perennial weed infesting potato fields on Long Island. This weed overwinters by underground rhizomes produced the previous year. It is a very aggressive climbing viney species that is slow to start in the spring, but that can quickly overgrow potatoes and seriously interfere with production and pest management. Because of its sporadic occurrence, it is difficult to establish replicated field trials to evaluate herbicide efficacy.

A container study was conducted to evaluate the effect that Matrix (rimsulfuron) has on young hedge bindweed plants growing from rhizomes segments. The treatments were applied to young plants (6-12)" that had regenerated from field-dug rhizomes. The treatment array consisted of Matrix applied from 1 to 4 oz (product) with and without nonionic surfactant. 2.5% Ammonium Sulfate (AMS) was evaluated as an activator of Matrix at 1 and 2 oz.

Following treatment, the plots were evaluated periodically until they were harvested for fresh weight evaluations at 24 days after treatment. The results suggest that adding AMS to the surfactant increased Matrix control very significantly at 1 and 2 oz /a. Although these were small plants at treatment time, a ninety percent suppression should translate into a manageable level of control for this weed in most vegetable crops. The question remains whether the addition of the AMS would also cause unacceptable crop injury.

Reflex Herbicide Registration

Research trials have been conducted with this herbicide at the H.C. Thompson Vegetable Research Farm in Freeville since 1993 and it has largely been shown to be safe for use in potatoes. In June 2014 Reflex was registered for use in potatoes in New York, however not in Nassau and Suffolk counties. Reflex is an herbicide that controls largely broadleaf annual weeds, of special interest are pigweeds, galinsoga, Eastern black nightshade and purslane. Lambsquarters, morningglories, and ragweed are suppressed as is crabgrass. Reflex is to be applied at 1 pt/A as a broadcast preemergence application after planting but before potato emergence. It is recommended that it be applied with other registered herbicides for control of weeds not controlled, e.g. annual grasses, nutsedges, etc. While it does have some

postemergence control of broadleaf weeds, if applied to emerged potatoes it will cause some crop injury and may result in decreased yields. It cannot be applied preplant-incorporated. There is a 70 day pre-harvest interval and potato varieties may vary in sensitivity. Also, there is a two year crop rotation restriction in New York. So planning rotations is critical.