CARROT RESEARCH REPORT—2012 Robin Bellinder, Department of Horticulture, Cornell University

A field research trial was conducted at the H.C. Thompson Vegetable Research Farm in 2012. Included in the treatments were four new preemergence herbicides [Zidua, Define, Nortron, Chateau] as well as six new low-dose postemergence herbicides. In general the growing season was somewhat erratic and water availability variable. Lorox (16 oz/A), and two rates of Dual Magnum were used as the 'standard' comparison programs. There was significant stand loss and yield reduction with all of the new preemergence products, as well as with Dual Magnum and Prowl H2O. Crop stunting was also high with plants that did emerge in the new preemergence treatments.

The low rate postemergence treatments were designed following discussions with Clarence Swanton, weed scientist at the University of Guelph. They are seeing major problems in controlling Lorox-resistant weeds in carrots there and are seeking an IR-4 registration for the herbicide Blazer for control of these weeds. Because Blazer is not registered on any crop in New York, I added several other herbicides in this class of chemistry for comparison, Reflex being one of them and which is registered in New York. All of these treatments were applied to plots that had a preemergence application of 16 oz/A of Lorox. In all of these treatments except Grasp and Pre-pare there was no injury, there was complete weed control and yields were equivalent to the Lorox treatment alone.

Because New York is unlikely to register Blazer in the state, I will proceed with trying to get a registration for low-rate postemergence application of Reflex for control of what we think is the beginning of Lorox-resistant weeds in the state.