

Reprinted with permission from: Proceedings of Western Society of Weed Science, March, 2000. Vol 53:45.

Published by: Western Society of Weed Science. <http://www.wsweedscience.org>

Weed control with imazapic plus 2,4-D in non-cropland, pasture, and rangeland

KENNETH L. CARLSON, JOSEPH VOLLMER, DANIEL BERAN, JEFFREY BIRK, TODD HORTON, TED ALBY, PAM HUTCHINSON, CLETUS YOUMANS, and BOBBY WATKINS

Senior Field Research Agriculturist, Senior Technical Specialist, Technical Specialist Intern, Technical Strategic Manager, Technical Specialist, Senior Field Research Agriculturist, Field Research Agriculturist, Senior Field Research Agriculturist, and Principal Field Research Agriculturist, American Cyanamid Company, Lincoln, NE 68506 and Princeton, NJ 08543.

Abstract:

Imazapic, a member of the imidazolinone herbicide family, is a broad-spectrum herbicide that expresses contact, translocation, and residual activity at very low use rates with an environmentally responsible toxicological profile. Imazapic is currently sold under the tradename Plateau[®] herbicide, and is registered for the control of over 90 grass and broadleaf weed species, including key perennial weeds such as leafy spurge, johnsongrass, and Canada thistle in non-cropland areas, native prairiegrass renovation and restoration, wildflower establishment and maintenance, and conservation reserve program (CRP) lands. A Section 18 emergency exemption use in pasture, rangeland, and CRP for the control of leafy spurge in Nebraska was granted in the fall of 1999. Registration for pasture and rangeland uses is anticipated in late 2001. American Cyanamid Company is developing a new package mix with a 1:2 ratio of imazapic plus 2,4-D low volatile ester, tradename Oasis[®] herbicide, to be used for weed control in non-cropland, rangeland, pasture, and CRP. Field research trials have been conducted with the package mix of imazapic plus 2,4-D to quantify weed control achieved, and to identify weeds where additional control is achieved over imazapic alone. Initial results indicate that the package mix does provide effective weed control on a multitude of perennial, biennial, and annual weed species. Perennial weeds controlled include hoary cress, diffuse knapweed, Russian knapweed, leafy spurge, perennial pepperweed, Platte thistle, rhizome johnsongrass, and rush skeletonweed. Biennial and annual weeds controlled include baby's breath, downy brome, houndstongue, tumble mustard, musk thistle, plumeless thistle, Scotch thistle, and yellow starthistle. In these initial field research trials it has become apparent that the combination of imazapic

plus 2,4-D does provide improved weed control over imazapic alone on several important weed species. These weeds include baby's breath, common bugloss, common tansy, diffuse knapweed, leafy spurge with spring applications, musk thistle, Platte thistle, plumeless thistle, and spotted knapweed. These improvements in weed control, however, were not enough in every case to provide commercially acceptable weed control. Registration for this new package mix is anticipated in late 2000 for non-cropland and CRP, with rangeland and pasture to follow at a later date.