

BEET HERBICIDE RESEARCH REPORT—2014

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The primary focus of the herbicide trial with beets this year was to evaluate crop tolerance to four relatively new products to support possible registrations through IR-4. Trials are being conducted in several states on multiple specialty crops. The products are pyroxasulfone, acetochlor (both showed some crop sensitivity in the 2013 trials so rates were lowered this year), GWN-10293, and A16003. While pyroxasulfone and acetochlor are preemergence herbicides, similar in activity with Dual Magnum and Outlook, the GWN-10293 and A 16003 products have both preemergence and postemergence activity and are potentially new classes of chemistries. A second focus of the trial was to evaluate Eptam applied pre-plant incorporated. Washington State has a special local need (SLN) for this use. Potentially we could expand it to New York.

The planting season was very difficult. The extremely cold weather through the end of March and into April led to virtually frozen soils early in the season. This led to difficulties with soil preparation for planting and also to non-uniform seeding with planters in the early crops, including beets.

Results: There was some early season crop stunting with all of the herbicide treatments, due to the cold soils. That caused by Dual Magnum was relatively minor and was quickly outgrown (Table 1). All of the four new herbicides, and Prowl H2O, caused unacceptable stunting that persisted most of the growing season. The Eptam treatments worked pretty well despite early stunting and yields were equivalent to those of the handweeded check.

While all of the products provided control on common broadleaf weeds (e.g. redroot pigweed, c. lambsquarters, h. galinsoga) there were heavy populations of wild buckwheat, PA smartweed and field pennycress which were poorly controlled.

Evaluating New Herbicides in Beets, 2014 (Crop Injury)

Trt No.	Treatment	Form	Rate	Growth Stage	Stunting 6/10/201	Stunting 6/17/2014	Stunting 6/27/2014	Stunting 7/8/2014	Yield lb/120f
1	Untreated Check				0	0	0	12	41
2	Handweeded Check				0	0	0	0	50
3	Dual Magnum	7.62 EC	2/3 pt	PRE	10	0	0	0	44
4	Dual Magnum	7.62 EC	1 pt	PRE	28	27	17	0	43
5	Prowl H20	3.8 CS	1.6 pt	PRE	37	57	30	13	0
6	Pyroxasulfone	85WG	3/4 oz	PRE	53	70	53	30	0
7	Acetochlor	7 EC	7.3 oz	PRE	60	37	43	18	37
8	GWN-10293	50 WG	1 oz	PRE	87	73	50	30	0
9	GWN-10293	50 WG	1 oz	PST			53	80	0
	NIS 0.25%								
10	A-16003	1.67 L	2.5 oz	PST	93	95	96	96	0
11	A-16003	1.67 L	2.5 oz	PST			53	90	0
	NIS 0.25%		0.25						
12	EPTAM	7 E	2.5 pt	PPI	17	0	15	5	47
13	EPTAM	7 E	3.5 pt	PPI	38	33	10	0	40
14	Nortron	4 SC	1 qt	PRE	0	0	0	0	49
	Stringer	3 EC	8.3 oz	PST					
	Spin-Aid	1.3 EC	21 oz	PST					
	UpBeet	50 DG	.5 oz	PST					

Treatments 9,11,14 1st on 6/18