LIMA BEAN RESEARCH REPORT—2012

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This was the first year that limas were grown in New York and it is expected that we will have 1500-2500 A in 2013. The DEC told me that New York growers could use any herbicides that were labeled for limas in other states as long as the products were already registered for crops grown in New York. Herbicides used this season by growers included Basagran, Dual Magnum, Prowl H2O, Sandea, and Select. After consulting with my colleague Mark VanGessel in Delaware, a phyototoxicity trial was conducted at the H.C. Thompson Vegetable Research Farm in Freeville, NY.

The varieties grown were 'Kingston' and 'Cypress'. The treatments included most of the currently registered materials for peas and three new products, Grasp, Zidua, and Gulliver. Initially, Pursuit, Reflex, and Grasp caused slight stunting. This was quickly outgrown in the case of Pursuit but worsened in the other two. There was significant stand loss with both Reflex and Grasp. This led to enhanced growth of the remaining plants and this has skewed the yield results. Because we did not have harvest equipment, we chose to hand harvest 25 plants. These were weighed and then the pods were removed and weighed separately. The yields from the most damaged treatments were higher than many of the others due to the fact that the plants were bigger than those grown with traditional stands.

Yields of the treatments that combined a preemergence and a post-emergence herbicide tended to be slightly higher than the preemergence alone, although the differences were not consistently significant. Reflex applied postemergence caused slight, transitory necrotic spotting but did not negatively impact yields. Dr. VanGessel does not recommend using Reflex in Delaware.

Weed control this year was generally excellent, better than average. Most likely this was due to the very hot, dry conditions. The weeds common to the plots were: hairy galinsoga, redroot pigweed, common lambsquarters, and common purslane.

In conclusion, all of the currently registered herbicides for peas that were tested this year worked well in lima beans. Next year more herbicides will be included, e.g. Sharpen, Optill, Command, and the traditional combination of Basagran + Thistrol.

Lima Bean Trial, 2012
Horticulture Department; Cornell University

Location: Freeville, N-2
Investigator: Dr. Robin Bellinder

Crop Variety					Lima bean	Lima bean	Weeds*	Lima bean	Lima bean	Lima bean	Lima bean
Part Rated					Kingston	Cypress		Kingston	Kingston	Cypress	Cypress
Rating Date					7/3/12	7/3/12	7/3/12	8/20/12	8/20/12	8/20/12	8/20/12
Rating Type					Stunting	Stunting	Control	Yield	Yield	Yield	Yield
Rating Unit					%	%	%	kg/ 25 plants	kg pods/ 25 plants	kg/ 25 plants	kg pods/ 25 plants
Trt No.	Treatment Name	Rate	Rate Unit	Growth Stage							
1	Handweeded Check				0	0	95	2.9	1.6	2.7	1.5
2	Dual Magnum	16.1	fl oz/A	PRE	0	0	98	4.1	1.8	3.9	2.0
3	Prowl H2O	25.3	fl oz/A	PRE	7	0	93	3.4	1.5	3.2	1.5
4	Sandea	0.68	oz/A	PRE	0	0	90	2.9	1.4	3.0	1.7
5	Pursuit	0.55	oz/A	PRE	0	0	90	2.9	1.6	3.1	1.6
6	Reflex	11.5	fl oz/A	PRE	93	93	95	4.9**	1.9**	4.0**	1.8**
7	Grasp	1.92	fl oz/A	PRE	53	48	95	4.0**	1.9**	3.3**	1.6**
8	Zidua	0.56	oz/A	PRE	10	7	93	3.2	1.5	3.7	1.8
9	Gulliver	1.28	oz/A	PRE	22	22	96	4.1	1.9	3.3	1.5
10	Dual Magnum	16.1	fl oz/A	PRE	13	13	100	4.9	2.5	4.7	2.4
	Basagran	16	fl oz/A	PST							
	COC	1.0	v/v	PST							
11	Dual Magnum	16.1	fl oz/A	PRE	15	12	99	4.9	2.3	3.5	1.6
	Sandea	0.68	oz/A	PST							
	COC	1.0	v/v	PST							
12	Dual Magnum	16.1	fl oz/A	PRE	28	13	99	3.5	1.7	3.0	1.6
	Reflex	11.5	fl oz/A	PST							
	NIS	0.25	v/v	PST							
13	Dual Magnum	16.1	fl oz/A	PRE	13	7	99	3.6	1.7	3.2	1.8
	Pursuit	0.55	oz/A	PST							
	NIS	0.25	v/v	PST							
14	Dual Magnum	16.1	fl oz/A	PRE	23	18	100	4.0	2.0	4.3	1.9
	Raptor	16	fl oz/A	PST							
	NIS	0.25	v/v	PST							
LSD (P=.05)					7.9	12.3	3.0	1.5	0.5	1.2	0.6
Standard Deviation					4.7	7.3	1.8	0.9	0.3	0.7	0.4
CV					23.7	43.8	1.9	23.2	17.6	20.5	21.4

*Common weeds: Hairy galinsoga, R. pigweed, C. lambsquarters, C. purslane

** Bean plants that survived phytotoxicity had decreased competition within their plots, leading to higher yield data/plant than expected.