

Interim report: Organic Row Cropping of Threatened Medicinal Herbs for Market in the Northeast

2002 Summary

After completing the second year of our three year research project we have gained a wealth of knowledge about the feasibility of cultivating these “threatened” species of medicinal herbs here in Vermont. Mother nature once again kept us on our toes with torrential “gully washing” downpours in the spring followed by droughty conditions throughout most of the summer. Our irrigation pond and it’s delivery system are still under construction and therefore field crops were manually irrigated on a life saving basis only. Luckily our high percentage of soil organic matter retained enough moisture that the droughty conditions had very little noticeable effect on the trial species. However, the spring deluges challenged the three species which are native to the prairies of the Midwest. *Echinacea angustifolia* and *Asclepias tuberosa* suffered nominal losses due to saturated soils and rampant weeds. As soon as the soils dried out in June we were able to get ahead of the weeds and the plants showed remarkable resiliency. *Baptisia tinctoria* has proven to be extremely susceptible to saturated soils and suffered losses of 70% to 80%. We have learned that the cultivation of this species of *Baptisia* is probably not feasible in this region as it needs extremely well drained soils and seems to thrive in the droughty conditions that dominate it’s native home on the prairie. We will continue to grow *Baptisia tinctoria* for container sales as it seems to perform well in the managed conditions of our nursery stock. We have had wonderful success at potting up extra transplants that don’t make it into the field and are finding that this “value added” approach is quite profitable. We have encountered a huge demand for live, potted plants, especially those species which are threatened and or rare in this region. This is an area we are focusing more energy on as the profit margins can be higher than field grown, dried bulk versions of the same species.

Project methods:

The following data was collected for the 2002 season and is attached.

- 2002 Plant health and vigor
- 2002 Size attained/Pest and disease damage rating
- 2002 Weekly external observations for June-August
- 2002 yield and cost of production data for *Lobelia inflata*

Work With Collaborators:

We utilized the knowledge of all of our collaborators during contact on the phone, e-mail and in person at several workshops related to medicinal plant cultivation.

Outreach:

We took advantage of several opportunities to promote our SARE research to the public. We hosted several farm tours highlighting our research including a NOFA sponsored tour based solely on our SARE research, two groups of 40 apprentices from the Sage Mountain Native Plant Preserve and Education center, and a group from Purple Shutter Herbs in Burlington. On September 14, we hosted the 3rd annual Hyde Park Herb Festival. Over 150 people attended this event which included two farm tours highlighting our SARE research. Ellen Ogden wrote a feature article for *Vermont Magazine* on the medicinal herb industry in which we were the featured herb farmers. This article mentioned our research on threatened species of herbs though neglecting to cite SARE specifically.

[illegible]

SIZE ATTAINED/PEST AND DISEASE DAMAGE 2002				Jul-02	
	PEST DAMAGE	DISEASE SUSCEPTIBILITY	FINAL SIZE AND MASS (ht, width, root)	ROW FT / SPACING / # OF PLANTS	OBSERVATIONS
ARNICA (<i>Arnica chamissonis</i>) 1st year	none	none	ht. 3.5" width 6"	3" spacing; 200 rf	healthy
BLACK COHOSH (<i>Cimicifuga racemosa</i>) front 1st year	none	none	ht 50" width 20"	18" spacing; 100 plants	very vigorous
BLOODROOT (<i>Sanguinaria canadensis</i>) 3rd year	none	none	ht. 11" width 10.5"	12" spacing; 325 plants	beginning to die back as expected
PLEURISY (<i>Asclepias tuberosa</i>) 1st year	none	none	ht 11" width 6"	400 rf; 12" spacing	healthy; monarch loving them
ECHINACEA (<i>Echinacea augustifolia</i>) 1st year	none	none	ht 6" width 3.5"	200rf; 8" spacing	slow growing; weed competition
GOLDENSEAL (<i>Hydrastis Canadensis</i>) 1st year	none	none	ht 7" width 5"	6" spacing; 4200 plants	looks great
LOBELIA (<i>Lobelia inflata</i>) planted 7/01	none	none	ht 8" width 7"	6" spacing; 100 rf	flowering
SLIPPERY ELM (<i>Ulmus rubra</i>)	n/a				
WILD INDIGO (<i>Baptisia tinctoria</i>)	none	none	ht. 6" width 2"	75 planted; 100 rf; 20 remain	slow growing

SIZE ATTAINED/PEST AND DISEASE DAMAGE 2002

AUGUST DATA

	PEST DAMAGE	DISEASE SUSCEPTIBILITY	FINAL SIZE AND MASS (ht, wdth, root)	ROW FT / SPACING / # OF PLANTS	OBSERVATIONS
ARNICA (<i>Arnica chamissonis</i>) 1st year	none	none	ht. 9" wdth 6"	3" spacing 200rf	healthy plants
BLACK COHOSH (<i>Cimicifuga racemosa</i>) front 1st year	none	none	rts 2# fresh ave ht 72" wdth 30"	18" spacing plants 100	very vigorous & healthy
BLOODROOT (<i>Sanguinaria canadensis</i>) 3rd year	none	none	ht 14" wdth 20" root wt. 20 grms	12" spacing 325 plants	plants dying back as expected
PLEURISY (<i>Asclepias tuberosa</i>) 1st year	minor damage from monarchs	none	root wt. 8 oz. ht. 18" wdth 20"	400 rf 12" spacing	very vigorous & healthy
ECHINACEA (<i>Echinacea augustifolia</i>) 1st year	none	none	root wt. 40 grams ht. 18" wdth 3"	8" spacing 200rf	slow growing diminutive roots
GOLDENSEAL (<i>Hydrastis Canadensis</i>) 1st year	none	none	ht. 10" wdth 5"	6" spacing 4200 plants	very healthy, despite dry conditions
LOBELIA (<i>Lobelia inflata</i>) planted 7/01	none	none	ht 12" wdth 5"	6" spacing 100 rf	drought stress (yellowing)
SLIPPERY ELM (<i>Ulmus rubra</i>)	n/a				
WILD INDIGO (<i>Baptisia tinctoria</i>)	none	none	ht. 11" wdth 4"	75 plants 100rf 20 remain	very slow growing; weed competition

Common Name: Lobelia
Latin Name:
Plant Part:

General Comments:

Harvest Specifications: Some fresh? check in v.

	Date Harvested	Weight Harvested	Date Dried	Weight Dried	PO #	Growing Location	Bed Size	Conditions
1	8/7		8/11	2#				
2	8/11		8/15	1 1/4				
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								

