

### FINAL REPORT

## ALASKA PEONY CULTIVATION RESEARCH AND WEB VENDING SITE DEVELOPMENT

2009 ALASKA GROWN SPECIALTY CROP COMPETITIVE GRANT PROGRAM

SUBMITTED TO

# ALASKA DEPARTMENT OF NATURAL RESOURCES DIVISION OF AGRICULTURE

SUBMITTED BY

ALASKA PEONY GROWERS ASSOCIATION, INC.



#### **SUMMARY**

The Alaska Peony Growers Association (APGA) was awarded a 2009 Alaska Grown Specialty Crop Competitive Grant to help our members compete in the open market. The project encompassed both a research aspect and a marketing aspect to address important difficulties identified by our members in 2008 and 2009.

The research aspect of the grant addressed a concern shared by many of our growers: poor plant vitality and high mortality rates. A research project was undertaken whereby soil and plant tissue samples collected from Alaska peony farms were compared to similar samples collected from successful Outside peony farms. APGA contracted with a horticultural consultant to develop sampling protocols, visit the participant farms, and evaluate the data. The field visits and samples collections took place over the summer of 2010, his final report was submitted in January 2011 and posted on the APGA web site, and the findings were presented at the 2011 Winter Alaska Peony Conference. A satisfaction survey of the study participants indicates that all participants thought the study was worthwhile and meaningful and would be willing to participate in other similar studies.

The second aspect of the grant addressed a marketing problem first identified in 2009. The first wave of growers to harvest and sell flowers were not able to sell all of their product due to an inefficient method for putting buyers and sellers together. At that time, any request for peonies was simply circulated amongst the APGA membership at large and left to individual growers to respond. This meant that a single buyer got multiple responses -- or none. Neither result was satisfactory, and both buyers and sellers were frustrated with this lack of a systematic interface to conduct business. The idea of a web "availability page" was developed whereby each grower would be able to post product information, availability dates, quantities, and product descriptions on an as-needed basis without needing to contact a web master. APGA contracted with a web designer to develop the availability page and independent grower input system and then expanded the scope of work to upgrade the entire APGA web site. The availability page was put into use during the 2010 field season and the upgraded web site was completed by January 2011.

#### **PEONY FERTILITY STUDY**

APGA contracted with Mr. Don Richards, President of Applied Horticultural Consulting, Inc. in Lake Oswego, Oregon and arranged with three Outside growers to participate in our study: Jim and Carol Adelman (Peony Paradise), Piet Wiestra (Oregon Perennials), and Roy Klehm (Klehm's Song Sparrow). Around the first of June, Song Sparrow contacted us with the unfortunate news that they did not have the manpower to participate in the program because they were preparing for the American Peony Society's annual meeting that included a tour of their farm. Piet Wiestra submitted 50 percent of the required samples, and Adelman's submitted 100 percent of the required samples. The participation by the Outside growers is somewhat disappointing, but the data we did acquire will be immensely helpful for comparison purposes.

Ten Alaska growers agreed to participate in the study, although one grower dropped out after collecting the first round of soil samples (the grower found the sample shipping costs to be un-affordable). Two growers only submitted the last set of samples due to personal time constraints, but all of the other growers

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submitted all of the samples required by the study. One grower submitted two sets of samples (from two different fields) and another grower submitted three sets of samples (from three different fields). Of the nine participating growers, four were from Homer, one from Soldotna, and four from the interior, including the Georgian Botanical Gardens. All of the participating growers were assigned 5-digit code names so the publically released data could not be linked to any specific farm.

The required sampling involved collecting two soil samples, one at or before spring emergence and another at the end of the peony growth season, and four basal leaf tissue samples collected between the 3-leaf stage and full bloom. The results of the study are provided in Mr. Richard's report (attached), and his principal findings are summarized below.

- 1. Alaska plants had symptoms consistent with low boron, such a shortened intermodal spacing and necrosis of leaf tips
- 2. Alaska peonies had symptoms consistent with low phosphorous, including red/purple foliage, thin cupped leaves with wavy edges, and interveinal chlorosis
- 3. Alaska soils are very high in organic matter.

The data from this study are valuable not only to the growers who participated in the study, but also to any peony grower who can wants to collect and compare tissue samples of their peonies with the data from known healthy peonies. This assumes, of course, that healthy peonies will have similar tissue concentrations no matter what climate or soil types they are grown in. If that *is* true, the data from this study form a very preliminary look at what are the minimum, optimum, and excess plant nutrient concentrations for peonies, something that does not appear to have been systematically studied and/or published previously. The tissue data can then be used in conjunction with a farm's soil data to help refine each growers fertilization program. We hope that this study can form the basis for additional research, including such things as testing young leaves rather than basal leaves, testing response to alternative fertilization applications (e.g., foliar vs fertigation vs granular), and farm-specific tests for improving plant vitality.

#### **BUYER/SELLER WEB SITE**

Before starting the design for the buyer interface, APGA first surveyed potential buyers for suggestions of what to include on a seller/buyer web page. The suggestions received included:

- Variety type, color, and height in cm's
- Price per stem and price per bundles of 5
- Packaging info, boxing charges, method of shipping
- Schedule for varieties' availability
- Photographs of each cultivar
- Photographs of the farms themselves and how the peonies are grown.

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APGA had an unfortunate experience with the first web developer we contracted with which resulted in delaying the web schedule by several months. APGA then contracted with Mr. Tom Kerns with Tundra Technologies in Homer which led to a satisfactory outcome. Mr. Kerns along with a 3-member web committee worked almost night and day to have the desired interface available for the 2010 growing season, and the site went public on July 18<sup>th</sup> as a link on the APGA web site. Unfortunately, the interface's release was rather late for our growers to fully utilize but our members were so enthusiastic about Mr. Kerns' work that APGA authorized additional upgrades, not only to the seller/buyer interface but also to the APGA entire web site. The upgraded site became available on January 26, 2011. The new site provides an updated look, a picture gallery of Alaska-grown peonies, enhanced navigation controls (both top bar and left side navigation), improved information management with dynamic databases for instant updates and modifications, and improved connectivity between buyers and our member farms.

APGA continues to be enthusiastic about Mr. Kerns work. We feel that he brings a large measure of professionalism to our web site that was previously lacking. We want to continue enhancing our web services, with such things as a members forum (using the same software the Association of Specialty Cut Flower Growers use on their web site), a ListServ to help us with our emails, and potentially a regular newsletter.

#### **BUDGET**

The attached table compares the original grant budget with the actual costs incurred for the project. It turned out that APGA spent more money and provided more in-kind labor than had been anticipated to bring this project to a successful completion. The fertility study participants had more in-kind labor and out-of-pocket expenses (due to sample shipping costs) than had been anticipated. The fertility study committee spent more than 60 unbudgeted hours compiling data and preparing graphs to keep the consultant's billings within budget. The web committee estimates that they spent more than 600 hours over the past year working on the availability page and the site re-design, although we only show 100+ on the budget status table! All in all, we feel that APGA members made outstanding contributions to this project to ensure that the grant funds were well utilized.

#### **CONCLUDING STATEMENT**

APGA wishes to thank the Department of Agriculture for their long-standing support and encouragement for our emerging industry in general and the APGA organization in particular.



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Budget Reconciliation
APGA Alaska Grown Specialty Crop Grant

	BUDGET					ACTUAL						
COST CATEGORY	EST'D HRS	ACTUAL HRS	GRANT DOLLARS	•••••••••••••••••••••••••••••••••••••••		<b>GROWERS</b> CASH	SUBTOTAL	GRANT DOLLARS	APGA  CASH IN-KIND <sup>1</sup>		<b>GROWERS</b> CASH	SUBTOTAL
Horticultural Consultant (labor)			\$10,000				\$10,000	\$13,734				\$13,734
Consultant Travel and Expenses			\$4,000				\$4,000	\$1,291				\$1,291
Web Master			\$6,000				\$6,000	\$4,975	\$2,586			\$7,561
Direct Expenses												
<ul><li>Sample shipping (APGA + Outside growers)</li></ul>				\$500			\$500				\$740	\$740
■ Sample analyses (APGA growers)				\$1,000		\$1,000	\$2,000		\$965		\$965	\$1,930
■ Sample analyses (Outside growers)				\$1,000			\$1,000		\$306			\$306
■ Domain name + web host (5 years)				\$500			\$500		\$780			\$780
In-Kind Labor												
<ul><li>Solicit consultants, and develop SOWs, training</li></ul>	40	40			\$800		\$800			\$800		\$800
■ Collecting samples	20	37			\$400		\$400			\$740		\$740
<ul><li>Compiling and graphing lab data</li></ul>	0	60								\$1,200		\$1,200
■ Testing web site	20	100+			\$400		\$400			\$2,000		\$2,000
■ Preparing 6 and 12-month reports	10	10			\$200		\$200			\$200		\$200
■ Tracking expenses and invoicing DNR	20	8			\$400		\$400			\$160		\$160
<ul><li>Conducting short courses at 2010/11 winter conventions</li></ul>	40	40			\$800		\$800			\$800		\$800
SUBTOTAL	150	295+	\$20,000	\$3,000	\$3,000	\$1,000		\$20,000	\$4,637	\$5,900	\$1,705	
TOTAL:							\$27,000					\$32,242