

**Minutes of the
Idaho Nursery and Florist Advisory Committee Meeting
9:00 a.m. – 10:00 a.m., October 8, 2009
By Conference Telephone Call**

In Attendance:

Howard Hughes, Horticulture Services, Inc., Post Falls, ID – Committee Chairman
Kevin Allen, Pro-Care Landscape Services, Meridian, ID – Committee Member - **Absent**
Willy Birkholz, Boise, ID – Committee Member
Gary Paulson, Mountain Plants Inc., Victor, ID – Committee Member
Robert Reggear, Reggear Tree Farm, Orofino, ID – Committee Member
Brian Winn, Jayker Wholesale Nursery, Twin Falls, ID – Committee Member
Dr. James E. Johnson, University of Idaho – University of Idaho Representative
Michael E. Cooper, Idaho State Department of Agriculture (ISDA) – ISDA Representative
Ann Bates, Idaho Nursery and Landscape Association – Guest
Ruth Herman, Idaho State Department of Agriculture – Guest

Chairman Hughes called the meeting to order at 9:00 a.m.

New Business:

Review of 2009 Mid-Term Reports:

- 1) NAC/ISDA 2009-1, \$10,920 “Evaluation of Native and Adapted Plants for Landscape Use” – Dr. Stephen L. Love, University of Idaho. A motion to accept the report was made by Brian Winn and seconded by Gary Paulson; the motion was then approved by the full committee.
- 2) NAC/ISDA 2009-2, \$5,050 “Evaluation of Native and Traditional Turfgrass Species for Low-Maintenance Lawns” – Thomas A. Salaiz, University of Idaho. A motion to accept the report was made by Brian Winn and seconded by Willy Birkholz; the motion was then approved by the full committee.
- 3) NAC/ISDA 2009-3, \$23,434 “Determining Salt Leachate Rate and Suitability of Potting Mixes Amended with Anaerobic Digested Cattle Biosolids” – Dr. Robert R. Triepi, University of Idaho. A motion to accept the report and request that Dr. Triepi be asked to provide a summary of the future research of this type was made by Bob Reggear and seconded by Brian Winn; the motion was then approved by the full committee.

Other Business/Discussion:

Dr. Johnson gave a synopsis of the University of Idaho’s budget. He mentioned that he may not be able to travel to the Nursery Advisory Committee Meeting in January; and if he is not able to attend in person may participate through a conference call.

Mike Cooper reported that when he attended the National Plant Board Meeting in Oklahoma, the USDA was talking about starting a national accreditation and certification program for nurseries. It may take years to get the program up and running.

Mike Cooper informed the members that the state of Montana now requires Idaho nurseries doing business in Montana to obtain a Montana Nursery License. Therefore we now require Montana nurseries doing business in Idaho to obtain an Idaho Nursery License due to the reciprocity clause in Idaho Code 22-2322.

Mike Cooper gave a brief overview of the budget situation.

Nursery Research Account Budget Summary

	Receipts	Expenses	Balance
FY2006	\$56,975.00	\$54,671.06	\$129,037.20
FY2007	\$58,491.96	\$54,981.64	\$132,547.52
FY2008	\$62,044.58	\$67,112.68	\$127,479.42
FY2009	\$48,275.00	\$58,922.69	\$116,831.73
FY2010	\$ 1,650.00	\$ 1,152.00	\$117,329.73 as of 9/30/09

Funds obligated but not expended.

Grants – \$17,177 (NAC/ISDA 2009-1=\$5,460; NAC/ISDA 2009-3=\$11,717)
Education and Outreach – \$5,000 (INLA Horticulture Expo, 1/20-23/2010)

The Annual meeting will be held on Saturday, January 23, 2010.

The Committee adjourned at 10:00 a.m.



Michael E. Cooper, Bureau Chief

Plant Industries Division

**Idaho State Department of Agriculture
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Boise, ID 83701**

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Interim Report
Idaho Nursery and Florists Grant Program
NAC/ISDA 2009-1 “Evaluation of Native and Adapted Plants for Landscape Use”
Stephen L. Love
University of Idaho

The purpose of this research is to evaluate native plants for use in Idaho home landscapes and make superior native plant materials available to wholesale and retail nursery businesses. Emphasis is being placed on water-conserving garden plants. The research strategy consists of collecting native species *in situ*, establishing plants in plots at the Aberdeen R & E Center, evaluating the plants for horticultural performance over multiple years, selecting superior individuals, and increasing seed for distribution to industry.

Beginning in 2006, three cycles of plant establishment and evaluation have been completed. Heavy selection pressure has been applied to plants placed in the field during 2006 and 2007. Within populations, exceptional plants were marked and retained, while inferior plants were rogued and discarded. Seed was collected from exceptional plants and prepared for a second round of selection beginning in 2009. A seed increase block was also established in 2009 for the purpose of producing larger quantities of seed of superior plant accessions. Plants with tremendous landscape potential have been identified among native grasses, mints and hyssops, penstemons, shrubby clematis, buckwheats, columbines, daisies, snowberries, serviceberries, oak-leaf sumac, currants, and other shrubs. Cooperative evaluation arrangements were continued with the Idaho Botanical Garden and the Sawtooth Botanical Garden. Discussions are under way with the Idaho Botanical Garden to establish a plant introduction system for superior plants and a federal grant has been submitted to facilitate this process.

In 2009, little emphasis was placed on collections with new accessions consisting of a few new shrubs and trees. Research efforts were instead directed at evaluating and completing work with species collected during the 2005-2008 timeframe. During the spring of 2009, seed of 330 species collected in 2008 were prepared for transplanting to the field. These populations will be the last of the large collections to be established on the Aberdeen R & E Center. These accessions bring to total species being evaluated to almost 600. Only limited collections of shrub and tree species will be added to the evaluation pool in the future.

In the late summer and fall of 2009, considerable effort has been put into collecting seed from the evaluation plots of the most outstanding individual plants. This seed will be used to establish additional increase plots, complete additional cycles of selection to stabilize superior traits, and to distribute to other interested parties.

As the evaluation process is slowly completed, the largest remaining challenge will be to create a seamless system for introducing the best of the native plant species into the industry. A partnership has been initiated with the Idaho Botanic Garden to explore and develop an introduction strategy. This fall, discussions will begin with the Intermountain Native Plant Growers Association to also help with this process.

The work associated with this grant has progressed very well in 2009 and the expenditures have been in line with the original proposed budget. The award totaled \$10,920. Most of this amount was used for greenhouse and field supplies for establishing plots, labor for plot establishment, maintenance, and evaluation, and for travel to work with collaborators. Of the original award, approximately \$3,105 has yet to be encumbered. This remaining money is budgeted for labor to complete fall plot maintenance and travel to meet with additional potential collaborators associated with the commercialization process.

Please direct questions concerning this report to:

Dr. Stephen Love
Aberdeen R & E Center
1693 S 2700 W
Aberdeen, ID 83210
208-397-4181
slove@uidaho.edu

Interim Report
Idaho Nursery and Florists Grant Program
NAC-ISDA 2009-2 "Evaluation of native and traditional turfgrass species for low maintenance lawns"
Thomas A. Salaiz
University of Idaho

The goal of this research is to determine the adaptation potential of several low-maintenance turfgrass species and mixtures to southern Idaho conditions over two years of a low maintenance regime. In 2008, mowing regimes were started on July 16th which included mowing half the plots at 3.5 inches with clippings removed, and the other half left un-mowed. Plots have been irrigated at 70 % ET replacement in 2008 and 60% replacement in 2009. Mowing treatments were changed in 2009 to evaluate the grasses under two mowing regimes, 3 and 4 inches. The only fertilizer applied to date has been a 1 lb N/1000 ft² in mid-September of 2008 using a 22-2-22 fertilizer with 70% SCU.

Color, quality, ground cover and weed encroachment ratings have been taken at least monthly in 2009. Additional color and quality ratings will be taken in September, October and November.

Although the wheatgrasses performed well in terms of competing against weeds during establishment in 2008, they enter dormancy quite readily in the summer, leaving a very brown, dormant turf with stiff, straw-like stems. Streambank wheatgrass remains greener into summer so it may have a bit more potential for use in home lawns. Severe leaf shredding is a problem with streambank wheatgrass. Some differences in color and quality are showing up more this year among the wheatgrasses than was apparent in 2008. All the fine fescues (chewings, hard, creeping red, and sheep), including a mix of all four species continue to look good. Chewings and hard fescue provide a dark green color, but enter some level of dormancy during the hottest parts of the summer. This year, the Idaho fescues performed poorly as they entered dormancy for a large part of the summer. There is a fair amount of variability in the Idaho fescue plots with some grass plants remaining green throughout the summer, but overall, the quality was unacceptable. Buffalograss has completely filled in this year and has performed quite well during the hottest part of the summer. Weed pressure was a problem in the spring and may continue to be as their growth slows during the fall. I was, however, pleasantly surprised with the good color and quality of all the buffalograsses in mid-summer. Prairie Junegrass also has filled fairly well in some of the plots and provides a fairly dense turf with good color and very slow vertical growth rate. Leaf shredding along with extremely slow establishment rate are the major drawbacks of prairie junegrass, but once established, may have a fit as a low maintenance turf. Muttongrass (*Poa fendleriana*) has provided the poorest quality as many plants have died leaving a very clumpy appearance. Additionally, muttongrass enters severe summer dormancy. Blue grama, as in 2008, continues to provide a thick dense turf and the yellow-color issues do not seem to be as much of a problem as they were in 2008.

The award total has been almost completely used for summer labor for care and maintenance. No remaining funds are anticipated to be left from this award.

Title: **Determining Salt Leachate Rate and Suitability of Potting Mixes Amended with Anaerobic Digested Cattle Biosolids**

Principle Investigator: **Robert R. Tripepi
University of Idaho**

Date: **August 31, 2009**

Report Series: **Mid-term Report, January through August 2009**

Grant Agency & Amount: **NAC/ISDA 2009 – 3, \$23,434**

CURRENT STATUS OF THE PROJECT

The experiment, leaching potting media amended with anaerobically digested cattle biosolids, was started in early July 2009. Anaerobically digested cattle biosolids, composted for nine months, were obtained from Whitesides Dairy facility in Rupert, ID. Three potting mixes containing either 0, 30, or 60% biosolids (by volume), 10% sand, and 90, 60, or 30% bark, respectively (to bring the volume of each mix to 100%), were thoroughly mixed and supplemented with MicroMax (micronutrient) fertilizer at 1.5 lbs. per cubic yard. On July 2, five blocks, each containing one 1-gallon pot of the three potting mixes, was leached with 500 milliliters (ml) of tap water (roughly 1 quart) in a greenhouse and the leachate was collected. Later that day, twelve oceanspray (*Holodiscus discolor*) plants in 10-cubic inch plugs were transplanted into 1-gallon pots that contained one of the three potting mixes and watered with 500 ml of tap water. A total of 36 plants (12 plants per mix) were transplanted. Other one-gallon containers filled with medium but lacking plants were leached with 500 ml of tap water. Two, four and six days later, the greenhouse pots (without plants) were leached with 500 ml of tap water, and leachates were again collected. On each of these days, 12 new oceanspray plants were transplanted into each medium (of previously leached potting mix) and watered along with the pots that lacked plants being leached with tap water (500 ml for all potted plants and pots without plants). All potted plants were arranged in a randomized split block design and grown in a modified pot-in-pot system at the Plant Science Farm. The goal of this experimental design was to recover leachate from pots that lacked plants (those pots leached in the greenhouse) while at the same time grow plants in medium that had been leached with similar amounts of water. The objective was to determine changes in the leachates, knowing that the potted oceanspray plants would be undergoing similar leaching, which could affect plant growth. Oceanspray plants were planted in leached potting mixes to determine if plants survived better in mixes that had been leached one to three times compared to those planted directly into new (non-leached) media. The experimental variables in the container growing part of the study were amount of biosolids in the potting mix and number of times leached before planting.

After the first week, the greenhouse pots were leached three times a week, and their leachates were collected. Likewise, all potted oceanspray plants were leached on the same days. Twelve leachates were analyzed for their mineral contents until funds allocated for leachate analyses were completely expended. The dates the leachates were collected and analyzed were for Days 0, 2, 4, 6, 8, 11, 13, 15, 18, 20, 29, and 36. Leachates were also collected on Days 22, 25, 27, 32,

and 34, but only pH and electrical conductivity (EC) were analyzed on these dates. We have yet to complete the statistical analyzes for the results, but observations of the raw data provide some insights into the growth of the plants in the field.

To date, three oceanspray plants have died, with two of the dead plants in the 60% mix and one in the 45% mix. The plants seem to have stopped growing. The leachate data provide evidence for the lack of plant growth. We have yet to receive all the leachate data, but results from the first three weeks of leaching showed that after the sixth leaching (12 days after starting the study) the levels of nitrate in the leachate dropped to about 70 mg/Liter (parts per million) for the 30% potting mix. In contrast, the 60% mix had to be leached eight times before its nitrate values dropped below 70 mg/Liter. These low nitrate concentrations in the leachates indicate why the oceanspray plants have failed to grow after the first two weeks in the mixes.

Electrical conductivity (EC) and pH measurements were taken for each leachate. Leachates from the control potting mix (0% biosolids) always had electrical conductivity values below $2 \text{ dS}\cdot\text{m}^{-1}$, but pots containing the 30% mix had EC values drop below $3 \text{ dS}\cdot\text{m}^{-1}$ by the fifth leaching. Three $\text{dS}\cdot\text{m}^{-1}$ is considered a safe EC reading for many woody plants. In contrast, EC values of pots containing the 60% mix decreased to a level below $3 \text{ dS}\cdot\text{m}^{-1}$ by the eighth leaching date. Leaves on oceanspray plants became quite chlorotic by the third week of the study, which coincided with the pH in the leachates rising as time passed. The leachate pH from the 30% mixes averaged 7.3 by the end of the second week of the study (which was the seventh time these mixes were leached). In contrast, the pH of the leachates from the 60% mixes averaged over 7.5 by fourth day of the study, meaning the medium only had to be leached three times to increase the pH above 7.5 in this potting mix.

Initial chemical properties of the compost amended mixes were strongly influenced by the amount of biosolids contained in the mix (Tables 1 and 2). Initial pH was 2.8 units higher (631 times more alkaline) for the 60% mix compared to the control mix (Table 1). The low carbon to nitrogen (C:N) ratio for the 60% mix indicated that nitrogen was readily available to plants grown in this potting mix. The extremely high amount of salts in the two biosolids amended media ($\text{EC} > 7 \text{ dS}\cdot\text{m}^{-1}$) clearly showed these mixes had to be leached for the plants to survive. The high salt levels in the potting mixes were the result of extremely high levels of available potassium (K), available phosphorus (P), nitrate, chloride (Cl) (Table 2) and sodium (data not shown). Excessive chloride levels in the biosolids amended media (Table 2) and high soluble salt content in these mixes (7.9 and $13.0 \text{ dS}\cdot\text{m}^{-1}$, as determined by saturated extract measurements) (Table 1), probably hindered plant growth. However, the high pH in the potting mixes was probably responsible for the interveinal chlorosis of the oceanspray plants rather than mineral phytotoxicity (overdose of Na, P, K, or Cl).

Oceanspray plants continue to be watered three times a week at the Plant Science Farm, and their heights are being measured every three weeks. The experiment will end between late September and mid-October, depending on the weather (mainly frost severity). When the experiment ends, final height measurements will be taken before the plants are harvested for shoot dry weights. A final report of the results will be available by late December.

Table 1. Means of initial chemical properties of potting mixes amended with various percentages (by volume) of anaerobically digested cattle biosolids.

Biosolids (%)	pH	EC (dS·m ⁻¹)	CEC (cmol(+)-kg ⁻¹)	C:N Ratio
0	4.3	1.6	33	103
30	6.4	7.9	35	37
60	7.1	13.0	32	22

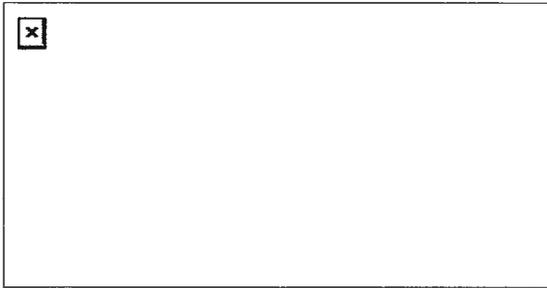
Table 2. Means of initial concentrations of selected minerals in potting mixes amended with various percentages (by volume) of anaerobically digested cattle biosolids.

Biosolids (%)	Available K	Available P	Available B	Nitrate N	Chloride Cl ⁻
0	288	52	4.3	2	10
30	2975	942	9.2	492	815
60	5075	1500	11.8	860	1525

Ruth E. Herman

From: Brian Winn [brianw@jayker.com]
Sent: Monday, October 19, 2009 7:46 AM
To: Ruth E. Herman; abates@inlagrow.org; mtplants@silverstar.com; howard@hortservicesinc.com; djohnson@uidaho.edu; kevin@idaholawncare.com; rtf@cpcinternet.com; jmwbirholz@yahoo.com
Cc: Mike Cooper
Subject: RE: NAC Fall Conference Call Minutes

They look good Ruth. Nice job! I approve



Brian Winn
Jayker Magic Valley Nursery
TEL 208.732.6150
FAX 208.732.6152
brianw@jayker.com
www.jayker.com

From: Ruth E. Herman [mailto:Ruth.Herman@agri.idaho.gov]
Sent: Friday, October 16, 2009 2:41 PM
To: abates@inlagrow.org; brianw@jayker.com; mtplants@silverstar.com; howard@hortservicesinc.com; djohnson@uidaho.edu; kevin@idaholawncare.com; rtf@cpcinternet.com; jmwbirholz@yahoo.com
Cc: Mike Cooper
Subject: NAC Fall Conference Call Minutes

The Minutes of the Fall Conference Call are attached. Please review them and send your comments or approval.

Thanks,

Ruth Herman
Technical Records Specialist
Division of Plant Industries
Idaho State Department of Agriculture
(208) 332-8620

Ruth E. Herman

From: jackie birkholz [jmw birkholz@yahoo.com]
Sent: Tuesday, October 20, 2009 8:17 AM
To: abates@inlagrow.org; brianw@jayker.com; mtplants@silverstar.com; howard@hortservicesinc.com; djohnson@uidaho.edu; kevin@idaholawncare.com; rtf@cpcinternet.com; Ruth E. Herman
Cc: Mike Cooper
Subject: Re: NAC Fall Conference Call Minutes

Looks good.
Thanks!

Willy

--- On Fri, 10/16/09, Ruth E. Herman <Ruth.Herman@agri.idaho.gov> wrote:

From: Ruth E. Herman <Ruth.Herman@agri.idaho.gov>
Subject: NAC Fall Conference Call Minutes
To: abates@inlagrow.org, brianw@jayker.com, mtplants@silverstar.com, howard@hortservicesinc.com, djohnson@uidaho.edu, kevin@idaholawncare.com, rtf@cpcinternet.com, jmw birkholz@yahoo.com
Cc: "Mike Cooper" <Mike.Cooper@agri.idaho.gov>
Date: Friday, October 16, 2009, 2:40 PM

The Minutes of the Fall Conference Call are attached. Please review them and send your comments or approval.

Thanks,

Ruth Herman

Technical Records Specialist

Division of Plant Industries

Idaho State Department of Agriculture

(208) 332-8620

Ruth E. Herman

From: Gary Paulson [mtplants@silverstar.com]
Sent: Wednesday, October 21, 2009 8:58 AM
To: Ruth E. Herman
Subject: Re: NAC Fall Conference Call Minutes

I approve the minutes as drafted- Gary Paulson

----- Original Message -----

From: "Ruth E. Herman" <Ruth.Herman@agri.idaho.gov>
To: abates@inlagrow.org, brianw@jayker.com, mtplants@silverstar.com, howard@hortservicesinc.com, djohnson@uidaho.edu, kevin@idaholawncare.com, rtf@cpcinternet.com, jmwbirholz@yahoo.com
Cc: "Mike Cooper" <Mike.Cooper@agri.idaho.gov>
Subject: NAC Fall Conference Call Minutes
Date: Fri, 16 Oct 2009 14:40:40 -0600

The Minutes of the Fall Conference Call are attached. Please review them and send your comments or approval.

Thanks,

Ruth Herman

Technical Records Specialist

Division of Plant Industries

Idaho State Department of Agriculture

(208) 332-8620

<< Idaho Nursery Advisory Committee Minutes 10_08_09 draft.doc >>

Ruth E. Herman

From: Howard Hughes [howard@hortservicesinc.com]
Sent: Wednesday, October 28, 2009 7:14 PM
To: Ruth E. Herman
Subject: RE: Reminder: Please review NAC Fall Conference Call Minutes
Attachments: Howard Hughes (howard@hortservicesinc.com).vcf

Ruth,

I approve the minutes of the 10-08-09 meeting.

Thank you

Howard Hughes

From: Ruth E. Herman [mailto:Ruth.Herman@agri.idaho.gov]
Sent: Wednesday, October 28, 2009 12:40 PM
To: howard@hortservicesinc.com; rtf@cpcinternet.com
Subject: Reminder: Please review NAC Fall Conference Call Minutes

Please review the attached minutes and reply to me if you approve.

Thanks!
Ruth

From: Ruth E. Herman
Sent: Friday, October 16, 2009 2:41 PM
To: Ann Bates (abates@inlagrow.org); Brian Winn (brianw@jayker.com); Gary Paulson (mtplants@silverstar.com); Howard Hughes (howard@hortservicesinc.com); James B. Ding Johnson (djohnson@uidaho.edu); Kevin Allen (kevin@idaholawncare.com); Robert Reggear (rtf@cpcinternet.com); Willy Birkholz (jmw@birkholz@yahoo.com)
Cc: Mike Cooper
Subject: NAC Fall Conference Call Minutes

The Minutes of the Fall Conference Call are attached. Please review them and send your comments or approval.

Thanks,

Ruth Herman
Technical Records Specialist
Division of Plant Industries
Idaho State Department of Agriculture
(208) 332-8620

Ruth E. Herman

From: Robert [rtf@cpcinternet.com]
Sent: Monday, November 02, 2009 10:32 AM
To: Ruth E. Herman
Subject: Re: Reminder: Please review NAC Fall Conference Call Minutes

Ruth
I approve of the minutes of the fall conference call. Bob

----- Original Message -----

From: Ruth E. Herman
To: howard@hortservicesinc.com ; rtf@cpcinternet.com
Sent: Wednesday, October 28, 2009 11:40 AM
Subject: Reminder: Please review NAC Fall Conference Call Minutes

Please review the attached minutes and reply to me if you approve.

Thanks!
Ruth

From: Ruth E. Herman
Sent: Friday, October 16, 2009 2:41 PM
To: Ann Bates (abates@inlagrow.org); Brian Winn (brianw@jayker.com); Gary Paulson (mtplants@silverstar.com); Howard Hughes (howard@hortservicesinc.com); James B. Ding Johnson (djohnson@uidaho.edu); Kevin Allen (kevin@idaholawncare.com); Robert Reggear (rtf@cpcinternet.com); Willy Birkholz (jmwbirkholz@yahoo.com)
Cc: Mike Cooper
Subject: NAC Fall Conference Call Minutes

The Minutes of the Fall Conference Call are attached. Please review them and send your comments or approval.

Thanks,

Ruth Herman
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