



Division of Agriculture Activities

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Questions or Comments? E-Mail me at Patricia.O'Neil@alaska.gov or call 907-761-3858.



Note From the Director

Well, fall is definitely here in the Valley. Last weekend it was easy to ignore the upcoming season as the sun was out - bright and warm. It was almost without guilt that I set aside the "fall chores" for next weekend - and busied myself with the more enjoyable things that were neither time sensitive or essential. Surely the water lines in the greenhouse and barn will be OK until next weekend? The garden hoses should be fine for another week? As for the wind - what are the odds that either the Matanuska or Knik will kick up and make me to reclaim my deck furniture out of the trees (again)? How many of us put things off, whether due to procrastination or just not having time?

The September 18th Doane's Agricultural Report had an article on the passing of Dr. Norman Borlaug. He was a visionary (not a procrastinator) and the winner of the 1970 Nobel peace Prize and father of the "Green Revolution". It is estimated that his work contributed to saving an estimated 1 billion people in third world countries from starvation. Earlier this summer he predicted that by 2050 there will be nearly 3 billion more mouths to feed, meaning that within four decades farmers will need to double production to keep the ability to feed the population. If he is correct - That figure is absolutely staggering; especially when we consider every single minute of every day, America loses two acres of farmland. In doing the math, I found that it equates to over 1 million acres of farmland lost annually in America! If we further stretch the equation to cover the next 41 years of losses at the same rate - the total amount of agriculture land lost in America will be 43,099,200 acres. The 2007 US Census of Agriculture reports that there were 922,095,840 acres in farms (with a loss of over 6 million acres since 2002). That is approximately 5% of our nation's current total agricultural land base. It is easy to say "only 5%" until you learn that 6% of the US farms produce 75% of the value of US crops. The time is now, to get involved and voice your opinion on the importance of agriculture, maintaining our agricultural land, and America's ability to feed its people!

We need to continue to reach our youth and educate them on the importance of agriculture. These young people will become the policy and decision makers of the future and if the agriculture community does not educate them in their formative years, I saw firsthand, that someone else will.

I was in the grocery store yesterday, picking up some last minute items, when I overheard a 4 or 5 year old boy talking to his mom. I was standing in front of the poultry section contemplating my purchase when this young boy walks to the cooler and peers over the top. Expecting him to ask his mom "one of the thousand of questions I had heard my kids ask" - I was more than surprised to hear the following:

"Mom, do you know all of these chickens were shot? That's how they kill them - they shoot them and put them and their families in these packages?"

The Mom's response "You like chicken, remember - we just had it the other day"

"Mom, they shoot them and put their families in packages!"

The mom put the chicken back in the cooler, looked at me and shook her head and said "I don't know where he hears this stuff but it isn't from me!"



On a different note – I would like to thank Omar Stratman for serving on the Board of Agriculture this past year and for his long term commitment to agriculture and youth education. His years of involvement as well as his historical perspective were a valuable asset to the board.

I would like to welcome Chris Flickinger, from Kodiak, as the newest BAC member. Welcome aboard Chris and I look forward to working with you to move agriculture forward!

Regards,

Franci

Calendar Events—

- Potato Pageant: October 22, 2009 from 6:00 p.m. to 10:00 p.m. at the Palmer Depot . Call William Campbell at 745-8724

Marketing Section

Awarded Grants

We released a "request for proposals" otherwise known as an RFP, for teacher scholarships for \$500, for teachers to introduce or expand agriculture in their curriculum. This scholarship is valid only when focused on specialty crops, which excludes: feed crops (such as barley, corn, hay, oats) livestock, dairy products, eggs and aquaculture products. Teachers could collaborate or work individually on a project. We received both: those who will be working individually, and those who are cooperating with other teachers. Below is a list of project concepts that we will be funding.

To have students "learn by doing" by having them grow flowers and from seed to bloom.

To use a hydro grow system and grow native fruit plants of Alaska.

Begin a village garden that includes purchasing grow lights for winter growing.

Educate through literature and by taking field trips to Carr's and Bell's Nursery.

Create an indoor garden at the school, for the village. Students will grow vegetables and prepare dishes for a community potlatch.

Field trip to Chena Hot Springs to show them flowers and vegetables growing on a hydroponic system. The curriculum will include education on the needs of plants growing in Alaska.

Have students grown their own crops, using a combination of hoop house and cold frames using a school garden site.

Students will visit a farm, prepare healthy Alaska Grown snacks, and provide more agriculture literature.

Teach students how to cultivate specialty crops in Alaska, expanding their knowledge of agriculture in Alaska, and teach students about survey methodology.

Each grant had to reach at least 20 students. Villages could reach this number by collaborating together, as could home-schooling parents. We are looking forward to Alaska's youth being educated in agriculture!

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We also released an RFP to “enhance the competitiveness of Alaska Grown specialty crops. (Again this excludes feed crops such as barley, corn, hay, oats, livestock, dairy products, eggs and aquaculture products, due to Federal funding requirements.) We received three applications and **Alaska Peony Cultivation Research and Web Vending Site Development** was chosen. Their project is explained below:

APGA members have planted over 33,000 peonies in recent years and an estimated 15 percent have died, with many more categorized as unproductive. The cause for poor growth and vigor is not understood and APGA growers are caught in a dilemma that most Alaska horticulturists have little to no experience with ornamentals and most horticulturists from the lower 48 have little to no experience with Alaska growing conditions. The research will focus on the results of leaf analysis which should indicate what is affecting plant productivity, i.e. a virus, a nutritional deficiency, a disease, etc.

Secondly, APGA growers began harvesting flowers and selling to Lower 48 buyers for the first time this year (2009). Many of these flowers were not sold due to an inefficient method for putting buyers and sellers together. A web portal will be created which allows for more efficient and traceable communication. The funding will allow APGA to research current online tools, pick which product will work best for their needs, and then purchase and implement the tool.

I attended Pyrah’s harvest festival on Saturday September 19th, and I have to say, it was amazing. There were over 3400 people that attended, with counts showing up to 4000! Each year the number of people attending has doubled, and each year it surprises them. The exposure young children had to agriculture impressed me, and how entertained they were with all the “farm” things to do. There were several ag-related games and then there were the leaves that the kids could throw, which seemed extremely popular. There were lines for hay and “train” rides, and people were still out picking the fresh produce to take home. It was a very busy day, but all seemed to be having a great time. The picture depicts this very well!!!



Legislative Farm Tour

VanderWeele Farms



Glacier Valley Farm



Pyrah's
Fall Festival,
September, 19th



Land Sales & Grazing Leases

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Land Sales & Grazing Leases

The Mat-Su borough Assembly adopted the updated Fish Creek Management Plan earlier this month. This plan was created over 20 years ago and has been in the updating process for the last 2 years. Much of the State land classified for agriculture land sales has been put into a "Resource Management" classification that delays specific decisions about disposals until a later date. No land sales will occur within the planning area before legal and physical road access is provided. This requirement is new, but will hopefully avoid some of the past problems associated with access to agricultural land. The new plan still needs to be adopted by the Department of Natural Resources. Check the Division of Agriculture web site for a link once it has been adopted.

Inspection Section

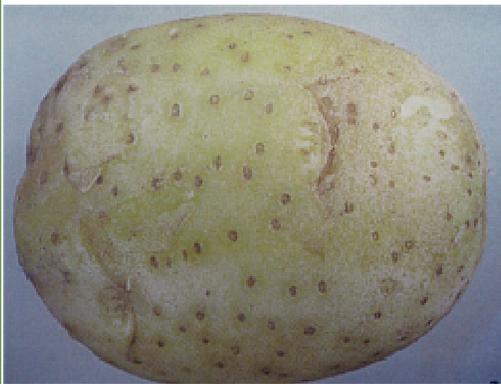
ENLARGED LENTICELS IN POTATOES

Lenticels are aggregations of respiratory cells on the surface of a woody plant and/or its fruit. They act as pores, allowing for air exchange between the atmosphere and the plant's internal tissues. The dark lines in birch tree bark are lenticels, as are the tiny dark spots on apple and pear fruit.

In potatoes, lenticels are the small specks on the surface of the tubers. When potatoes are harvested from tight soils that are saturated with water, the lenticels may swell. Swollen lenticels may appear as small bumps on the potato surface. While enlarged lenticels do not affect the edible quality of the potato, they can affect both the appearance and the storage life of the potato. Enlarged lenticels act as entrance points for bacterial disease, such as soft rot, in storage. Problems with enlarged lenticels can be avoided by not overwatering crops near harvest time.

Infected lenticels appear as circular, water-soaked areas that are slightly sunken and darker in color, tan to brown. Under dry conditions, the lenticel soft rot may dry up, leaving a sunken spot on the potato.

The USDA Grade Requirements for potatoes define damage in a U.S. No.1 potato as enlarged lenticels that "materially detract from the appearance of the potato". Damage to a U.S. No.2 potato is defined as that which "seriously detracts from the appearance of the potato". Photos of the maximum allowable damage to a U.S. No.1 and a U.S. No.2 potato are below:



Upper Limit - U.S. No.1 Potato



Upper Limit - U.S. No.2 Potato



Plant Materials Center (PMC) -

Time and time again I hear someone say "Alaska is 20 years behind the lower 48." We are very lucky that this is the case with respect to invasions of weeds and other agricultural pests.

In Alaska we remain insulated from many persistent invasive species that have plagued other regions due to our geographic isolation, but we are far from immune to the problems that invasives can cause, and the size and frequency of newly discovered infestations are on the increase. Wise and well-coordinated efforts are crucial at this time.

Preventing the introduction of invasive species to Alaska is a bit like plugging the hole in the dyke. Small fingers can try to hold back a big storm surge, but for how long? In reality, we can and are doing much more than simply plugging leaks. Resource managers across the state are surveying for weak spots that need reinforcement, and the locations of inevitable leaks (shipping containers, vehicles, imported horticultural products and animal feed, heavy equipment, etc.) are being identified. Agencies throughout the state are coordinating to increase monitoring of these major pathways, but we also must have pumps at the ready to reverse the inevitable floods and we need educated residents to sound the alarms. It will be a continual fight to improve early detection and prevention efforts in order to out finesse and outpace the invaders.

The Plant Materials Center was joined in August by Andrew Weaver, who assists Gino Graziano in the management of invasive weeds and agricultural pests across the state. Andrew is working on several projects which will decrease the introduction and spread of invasives while increasing public awareness.

1. Early Detection and Eradication of Spotted Knapweed, *Centaurea stoebe*, in Alaska.

Knapweed is widespread in North America and especially problematic in the northwest where it displaces important forage species and increases soil erosion. Ten known populations exist in Alaska, where seeds were likely introduced by vehicles and heavy equipment. A coordinated eradication effort is underway.



Spotted Knapweed at Beluga Point, on the Seward Highway. Please report this plant if seen in Alaska, ideally by e-mailing PMC staff a photo for identification, or by calling 1-877-INVASIV.
Photo by Michael Rasy, UAF CES

2. Developing the Invasives Free Cooperator Program

Nursery products are a significant pathway for accidental introductions of invasive species. A spring 2009 survey of nursery/greenhouse operators and landscapers in Alaska showed that industry members are interested in a certification process to encourage and acknowledge business practices that will reduce the industry's role in spreading invasives and increase consumer awareness of problems posed by invasives.

3. Developing a Weed-free Gravel Certification Program

Plant Material Center

http://dnr.alaska.gov/aq/ag_pmc.htm

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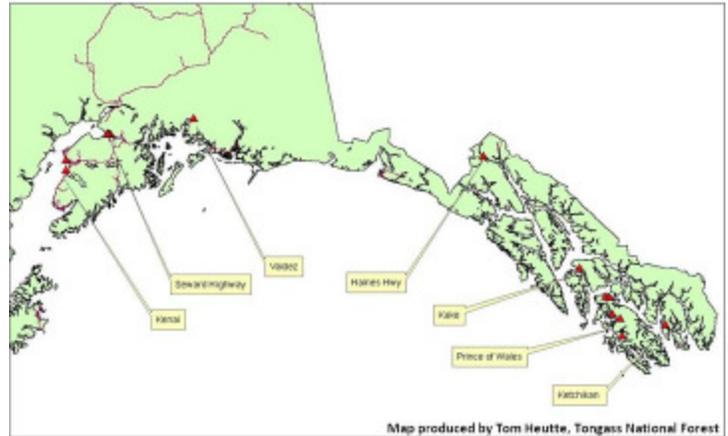
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Gravel transport can be an important intrastate vector of invasive plant propagules such as seeds and rhizomes. In cooperation with the Bureau of Land Management, this project will determine the level of threat to natural resources and wild lands posed by gravel pits in Alaska, inventory existing BLM pits, and develop a weed free gravel certification program based on national standards.

Locations of Known Spotted Knapweed Infestations in Alaska

Data from Alaska Exotic Plant Information Clearinghouse and Turnstone Environmental Consultants



Pest Detection Surveys in Alaska

Pest Detection: Gypsy Moth Trapping in Alaska

Have you seen any green traps this summer hanging in trees? Did you wonder what they were? If your guess was an insect trap, then you're right. More specifically, the Division of Agriculture, along with Cooperative Agricultural Pest Survey cooperators (see archived issue vol. 1, n. 2 for a detailed explanation of CAPS), monitors for several different unwanted species of moths that are currently not present in Alaska. And we do not want them here either. Three to four different styles of traps, depending upon the targeted species, are utilized for our detection efforts. You may have seen other traps in the vegetation as well; those too are for attracting invasive insects. In this issue, however, the Gypsy Moth will be discussed.

If you have seen a delta type trap hanging in a tree, like the one in the picture, it is likely that it was baited with a pheromone to attract the male variety of Gypsy Moth. That is because the pheromones used in the traps mimic that of the associated female moth. The moths in the following picture below illustrate the female (top) and male moths.



The Gypsy Moth occurs naturally in Europe, Asia, and North Africa. They were accidentally introduced into Massachusetts from Europe in 1869 by a French naturalist attempting to breed them with silkworms. Several caterpillars escaped and the Gypsy Moth quickly became established. As a caterpillar, it can feed on many different species of trees and shrubs, many of which occur naturally or are grown here in Alaska.



Photo: USDA APHIS PPQ, Bugwood.org

Today, the Gypsy Moth infests most of the North Eastern United States, with detections occurring throughout the U.S., parts of Canada, and several in Alaska. Historically, there has been little Gypsy Moth activity in Alaska.

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Pest Detection Surveys in Alaska

Monitoring in Alaska began in 1983; however, we do not have records of the numbers or locations of traps placed prior to 1992. Forest Moth trapping in Alaska is conducted via a cooperative agreement between the State of Alaska and the Federal Government through CAPS. Each year, participants from various agencies operating throughout the State coordinate to set traps and manage data in order to detect early any forest moth pest introductions into Alaska. On average, about 6 – 7 hundred moth traps are set out each year for detection purposes.

Historically, only the European Gypsy Moth has been captured in Alaska. Genetic testing has revealed that gypsy moths found in Alaska to date represent European gypsy moth haplotypes that have been present in North America for many years and are therefore not new foreign introductions. All adult Gypsy Moth captures in Alaska have been single moth detections and appear to be associated with recreational vehicle traffic into the state or outdoor equipment shipped from infested areas.

However, there is an increasing concern of a possible port introduction into Alaska. Alaska has approximately 44,000 miles of coastline, with ports dispersed throughout much of its southern latitudinal ranges (below 62° N), particularly in the southeast and Southcentral coastal regions. Alaska ports receive marine vessel traffic throughout the year from Asian ports where the Asian Gypsy Moth occurs in its native range. The potential for port introductions increases when outbreaks occur overseas in the native range.

The Asian strain poses a much greater risk to Alaska's forested resources as it differs from the North American type in several significant ways. First, the Asian female moths have the ability to fly, as opposed to the North American flightless female moths. This characteristic would greatly increase its ability to disperse throughout North America if introduced. And second, the Asian moths have a much broader host range to include many conifer species (about 600 total species compared to roughly 250 species for the North American type).

Currently, surveyors throughout the state are collecting the traps now that fall is here. If you happen to find a trap, please remember to not disturb the trap. The survey traps are one of our BEST early detection systems for finding Gypsy Moth and other unwanted moth pests before they become a problem in our State. The traps are not toxic to humans or pets, but it is not recommended that you touch them.

What You Can Do:

If you are driving a vehicle up from the lower 48 states where Gypsy Moths occur, remember that female Gypsy Moths deposit egg masses on a variety of surfaces, such as recreational outdoor equipment. This includes but is not limited to grills, lawn chairs, recreational and personal vehicles, tents, backpacks, and firewood.

Always inspect outdoor equipment and vehicles for "Hitchhikers" and remove them.

And please remember, Gypsy Moths are not the only invasive species that can "Hitchhike" their way to Alaska. Thank you for your cooperation.



Female Gypsy Moths laying eggs on a tire.

Photo: R. Haskell, UFL, Bugwood.org

