PULLMAN PLANT MATERIALS CENTER

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Finding Vegetative Solutions to Conservation Problems

May 1, 2000

To: Field offices
Plant Materials Centers
Plant Materials Specialists

Subj.: Update of Pullman PMC activities for Jan. 1 – Mar. 31, 2K.

The Pullman PMC quarterly update is intended to provide field staff with a short description of PMC current activities. Please take a few minutes to read it, pass it along to others in your office, and when fully routed, feel free to file it in your recycle bin.

PLANT DEVELOPMENT

The Pullman, WA started 185 Mockorange plants from hardwood cuttings. These plants will be tested in field plantings in Idaho and Utah. Along with these plants, Crowder started plants of superior accessions of Serviceberry and Blanchard-source Elderberry. No field plantings are slated for WA or OR this year.

Plants of Ninebark originating from a collection at the Lind Dryland Experiment Station will be added to the shrub plantings along Highway 195. These plantings are designed to identify a superior spreading shrub material for stabilizing roadcuts. We will also be testing our Snowberry release that originates from Okanogan County.

Over 2000 plants of several native legume species were started in the greenhouse. The lupines, vetches, and Astragalus species established extremely well. The Trifoliums and Psoraleas did not perform nearly as well. We may need to test these species in cooler conditions.

Serviceberry is an important riparian shrub and the PMC has completed evaluation of 210 collections. Three collections exhibited excellent qualities: T33548 from Pend Oreille county, T33580 from Latah county, and T33672 from Okanogan county. Crowder compiled and reviewed all of the data, and he is preparing documentation for the release of these shrubs. Official release of these collections will occur this year. Rooted plants were provided to the Idaho PMS for field plantings.

Evaluation data on Fourwing Saltbush was provided to the Aberdeen, Idaho PMC. We will jointly release a collection of Fourwing Saltbush. This species has performed extremely well in plantings at Squaw Butte, Saddle Mountain, Lind, and Central Ferry. This release grows well in very droughty sites and will be 5-feet tall and 12-feet diameter when mature. It is also an excellent wildlife plant. Quail and other birds use it for cover. Deer have regularly browsed the plantings at the Lind Station.

TECHNOLOGY TRANSFER

Plants and seed for the WSU Plant Growth Center demonstration planting were received from several PMCs from around the nation. Among these plants are a dwarf sandcherry from NY, tulip poplar from IL, thickspike gayfeather from KS, purple coneflower from ND, grayhead coneflower from KS, redosier dogwood from WA, covar sheep fescue from WA, penstemon from ID, and perennial flax from ID. More plants will be added to the planting in the future. A 2-row windbreak will also be established around the north and east boundaries of the complex to demo this important conservation practice.

A poster paper on the establishment of Western Wheatgrass in the Intermountain West was presented at the Society for Range Management meeting in Boise. This paper summarized work on seed conditioning trials, rhizome spread trials, and long term persistence data. Western wheatgrass has great potential for stabilizing critical areas and suppressing cheatgrass. The USDA Forage and Range Research Lab in Utah has developed germplasm that emerges much faster than conventional western wheatgrass germplasm. We hope to test this line of germplasm in Washington soon.

Soil samples were collected from a site near Lewiston, Idaho where yellow starthistle and bluebunch wheatgrass communities grow adjacently. The samples were placed in a germinator and watched for 4 weeks. Even though no adult yellow starthistle plants occurred in the bluebunch wheatgrass community, starthistle seedlings emerged from the samples. This indicates that yellow starthistle seed was well dispersed in the bluebunch wheatgrass community and waiting for conditions to develop for its emergence.

A presentation was made at the Society for Range Management on the impact bluebunch wheatgrass on yellow starthistle. Our first study shows that even though yellow starthistle emergence was hampered by proximity to adult bluebunch wheatgrass plants, no allelopathy was detected. The second study showed that seed dispersal of yellow starthistle was not limiting establishment of seedlings in bluebunch wheatgrass communities. The last of this series of studies showed that disturbance of the soil/crytpogamic crust was a key factor in the successful establishment of yellow starthistle in bluebunch wheatgrass communities. We concluded that where yellow starthistle infested land boundaries high quality bluebunch wheatgrass range, a buffer zone should be established and disturbance needed to be minimized to prevent rapid movement of the weed across the native range.

The PMC participated in a meeting held by the WSU Cooperative Extension Service to discuss the use of Triticale as winter forage. A few irrigated growers in the Columbia Basin are working with beef growers to grow winter Triticale. This crop is proving to be a win-win-win situation. The irrigated farmers have a winter crop that they can sell to the beef growers. The beef growers get a very productive, palatable, inexpensive winter-feed. The soil gets outstanding winter cover and any excess nutrients left in the soil by the previous crop are taken-up and recycled by the Triticale. An excellent article in the March 1999 issue of the Washington Farmer-Stockman describes this operation from a grower's standpoint.

MISCELLEANEOUS

Geoff Lentz, a senior at WSU and majoring in Management Information Systems, was hired by the PMC to convert our UNIX-based plant evaluation database system (PEAS) to a friendlier Windows-based platform. PEAS served the PMCs well for many years but like all dinosaurs, it needed to be put to rest.

Haley Guenther, WSU work-study student, arranged to have new signs built for the PMC entrance. The signs are high class and show that we are now part of the NATURAL RESOURCES CONSERVATION SERVICE and not the Soil Conservation Service. WSU Facilities built the signs, and the USDA Plant Introduction Station shared the cost of the materials with the Pullman PMC. Haley also established a garden of native Palouse Prairie plants at the sign. The garden will help to demonstrate what the PMC and the Plant Introduction Station are all about…. Plants and Conservation.

Mark Stannard
PMC Team Leader