2002 Progress Report
1998 Hybrid Poplar Initial Evaluation Planting
Field 17, Aberdeen PMC
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The purpose of the Hybrid Poplar Initial Evaluation Planting is to evaluate accessions of hybrid poplar currently being grown in Oregon and Washington for adaptability to northern Utah and the Upper Snake River Plain of southeast Idaho. Hybrid poplar used for fiber, fuel and other lumber products is becoming a large agroforestry business in Oregon, Washington, and western Idaho. Presently there is no commercial production of hybrid poplar in southeast Idaho or northern Utah.

Five accessions of hybrid poplar considered as very productive and the most cold tolerant were obtained from Mount Jefferson Farms, Salem, Oregon. These accessions were planted in a complete randomized block design with 'Imperial', 'Siouxland', 'Robust', and 'Canam' as standards of comparison. The cuttings planted were 9 inches long and approximately 3/4 inch in diameter. The cuttings were obtained from Mount Jefferson Farms and were dormant. The standards of comparison were collected at the PMC after spring growth had initiated.

Weed barrier material was installed prior to planting. The cuttings were then hand planted through the weed barrier on May 28, 1998 so that only one bud was above ground. Allowing only one bud to be above ground increases the chance that the cutting will develop a single trunk which is desirable for wood production. The planting was kept moist during the growing season with solid-set handlines. Weed control needs were minimal because of the installation of weed barrier material. On June 1, 1999 forty-three plots were re-planted. Most of the replacements were for those plots that did not establish during the first growing season.

Between-row weed control was accomplished with cultivation between 1998 and 2000. The between-row area was seeded to a mixture of 'Durar' hard fescue and 'Bighorn' sheep fescue (3.5 pounds PLS per acre of each species) in June, 2001. The grass seeding is established and controlling weeds.

In March, 2002 before buds began to break, the trees were pruned to remove all basal branches to encourage a single dominant trunk that is preferred for saw logs. No more than 50 percent of the branches on a single tree were removed. During the growing season sprouts and side branches below the prune line were removed periodically.

The plots were evaluated on September 20, 2002 and the data is summarized in Table 1. Accession no. 9076418 (OP-367) and 9076421 (52-225) continued to have the best survival. Accession no. 9076418 (OP-367) was the tallest (mean plant height 858 cm) and also had the largest D.B.H. (mean 16.6 cm). This accession appears to be the best adapted to the soil and climate in the Snake River Plains of southeastern Idaho. Accession no. 9076418 (OP-367) and Robust had the best vigor ratings from the original planting. No pests were observed on the plants this year.

Of the plots re-planted in 1999, Robust continued to have the best survival and the tallest average height. Robust also had the largest mean D.B.H. (8.4 cm).

The planting will be evaluated next year and then will be harvested in 7 to 8 years to evaluate wood production.

Table 1.
2002 Evaluation Data
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Accession Number	Number Survived	Percent Survival	Plant Height (cm) Minimum	Mean	Maximum	D.B.H. [1/] Mean (cm)	Vigor [2/]
9076418 (OP-367)	8	88.9	691	858	1000	16.6	1.8
9076419 (184-411)	1	11.1	--	--	429	2.0	3.0
9076420 (50-197)	1	11.1	--	--	642	12.0	3.0
9076421 (52-225)	8	88.9	60	536	800	8.3	4.3
9076422 (15-29)	5	55.5	362	466	545	3.4	3.6
Canam	2	22.2	312	522	732	5.5	4.5
Robust	3	33.3	640	688	760	10.0	2.0
Siouxland	5	55.5	504	670	800	10.2	2.2
Imperial	5	55.5	558	640	748	10.8	2.2

Re-planted Hybrid Poplar 1999

Accession Number	Number Re-planted	Percent Survival	Plant Height (cm) Minimum	Avg.	Maximum	D.B.H. [1/] Mean (cm)	Vigor [2/]
9076418 (OP-367)	1	0	--	--	--	--	9.0
9076419 (184-411)	8	0	--	--	--	--	9.0
9076420 (50-197)	8	12	0	--	420	3.0	6.0
9076421 (52-225)	1	0	--	--	--	--	9.0
9076422 (15-29)	4	0	--	--	--	--	9.0
Canam	7	57	304	454	612	4.8	7.0
Robust	6	83	574	611	686	8.4	4.0
Siouxland	4	50	345	424	503	4.0	6.0
Imperial	4	25	0	--	635	8.0	3.0

[1/] D.B.H. is diameter at breast height (1.4 m from ground surface)
[2/] Rated 1 – 9, with 1 best, 9 worst