

Yield and time of harvest of tall wheatgrass for biomass energy in New York

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Two tall wheatgrass *Thinopyrum ponticum* studies were established on 9/4/07 in Corning, NY on a Unadilla silt loam soil. A variety trial evaluating 4 varieties of tall wheatgrass, 'Alkar', 'Jose', 'Largo' and 'Szarvas-1' and one variety of intermediate wheatgrass, *Thinopyrum intermedia* acc. # 9051920 at two seeding rates 22.4 and 44.8 kg/ha were compared to 2 varieties of reed canarygrass *Phalaris arundinacea* 'Bellevue' and 'Chiefton' at only the 22.4 kg/ha rate. The grasses were managed under a two cut harvest regime cut on 6/24/08 and 9/22/08. The plots were fertilized twice with 74 kg/ha on 4/29/08 and immediately after the first cutting. The second study evaluated 2 varieties of tall wheatgrass 'Alkar' and 'Szarvasi-1' with two cutting dates and the above two seeding rates, fertilized once with 84 kg/ha on 4/29/08. The first cutting dates were 7/3/08, 7/10/08, 7/17/08 and 10/10/08 the second cutting for all first cutting dates was on 10/10/08. In the cultivar trial the Intermediate wheatgrass at the 22.4 and 44.8 kg/ha seeding rate, 'Largo' tall wheatgrass at the 22.8 and 44.8 kg/ha rate, and 'Szarvasi-1' tall wheat grass at the 44.8 kg/ha rate yielded: 11.2, 13.7, 11.9, 11.9, and 10.8 Mg/ha respectively, there was no significant difference. The average yield for the reed canarygrass was 9.3 Mg/ha. In the cutting study for 'Alkar' there was a trend for higher yields with the lower seeding rate 11.2 Mg/ha vs. 9.0 Mg/ha and for increased yield for the later in season cutting dates with yields of 10.5, 11.1, and 11.7 kg/ha for 7/3, 7/10 and 7/17/08 cutting dates. There was a yield reduction for the cutting date on 10/10/08 with a yield of 9.0 Mg/ha. The average second cutting yield for 'Alkar' for both seeding rates was 1.4 Mg/ha indicating low regrowth potential. There is potential for high one cut yields for tall wheatgrass.