

Summary of regional test of introduced high quality *Agropyron* varieties

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Materials and method Two cultivars of *Agropyron cristatum* cv. Таҗкүмский and Аксенгерский and *Agropyron mongolicum* CK were compared in an experiment located on Desert and Temperate Semi-Arid Steppe in Xinjiang with no-irrigation. The trial design was randomized with three replications. The plot area was 8 8m². Planting was on 20 April 2005, with a row space was 30cm. The experiments were in different ecological areas. Field drought hardiness and physiological ecology were appraised using a 1-5 score (5=drought hardy; 1=drought susceptible). Salt and alkali resistivity was evaluated using 1.0, 1.5, 2.0 and 2.5% NaCl solution to germinate seeds.

Results

Table 1 The growing characteristics of different varieties.

Varieties	Years	Biomass (kg/ha ²)	Regeneration speed (cm/d)	seed yield (kg/ha)	ratio of stem to leaf %
Таҗкүмский	2005-2007	7616	2.18	941.6	69.5
Аксенгерский	2005-2007	8481	2.21	945	69.6
mongolicum(CK)	2005-2007	5637	1.78	734	47.5

Nutrition component For *A. cristatum* Таҗкүмский and аксенгерский respectively the Crude protein (%) were 9.1, 12.2; and NFE (%) 45.5 and 45.3.

Physiological ecology characteristic

Table 2 Physiological ecology characteristic.

Varieties	1.0% NaCl germination(%)	Winter hardiness(%)	Drought hardiness	Resistant lodging	Resistance disease and insect
Таҗкүмский	42	91	+++++	▲▲▲▲▲	resistant
Аксенгерский	44	95	+++++	▲▲▲▲▲	resistant
mongolicum(CK)	0	27	++	▲▲	susceptible

Salt and alkali resistivity When salt concentration of NaCl reached 1.0%, germination percentage of the two introduced varieties of *Agropyron* were 44% and 42%. At higher concentrations of NaCl (1.5, 2.0 and 2.5%), there was no germination.

Reference

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