

Gallatin Barley

by

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Gallatin (PI491534) is a midseason two-rowed, spring barley. It was developed cooperatively by the Agricultural Research Service, USDA and the Montana Agricultural Experiment Station. This variety was jointly released by the Agricultural Research Service, USDA and the Montana and Idaho Agricultural Experiment Stations. In Montana, Gallatin is recommended as a feed barley. It is expected to be a variety that will be well adapted on dry and irrigated land in the Pacific Northwest and the Northern Great Plains.

Origin and Development

Gallatin was developed from the cross of 'Summit'/'Hector' by E.A. Hockett in 1975. It was tested as MT 313104 with 32 progeny lines being selected to establish the variety in 1984. Gallatin was named after Gallatin County, Montana.

Agronomic Characteristics

Gallatin is a midseason, two-rowed, white kernalled, spring, feed barley. The spike is mid-long, mid-lax and semi-nodding prior to maturity. The spike is nodding at maturity, very similar to Hector. Gallatin has rough awns, with glume awns equal to the length of the hair-covered glume. The rachis is edged with hairs. The kernels are mid-sized, with short rachilla hairs, the hull is adhering, finely wrinkled with no barbs on the lateral veins. Data from the Montana Intrastate Barley and Western Regional Nurseries from 1981 to 1985 are summarized in Table 1. Gallatin headed approximately two days earlier than Hector or Clark, and one day earlier than Lewis or Piroline. Gallatin is somewhat shorter in height than Hector, Clark, Lewis or Piroline under irrigation and equal in height to Lewis and Piroline on dryland. It has stiffer straw and more lodging resistance than Hector, Clark, Lewis or Piroline.

TABLE 1
Heading date, height and lodging comparison of Gallatin and other barley varieties in Montana and Western Regional Nurseries (1981-1985)

Variety	Approximate Heading Date	Plant Height Inches		Lodging Percentage
		I*	D*	
Gallatin	6-21	32	26	12
Clark	6-23	33	27	24
Hector	6-23	34	27	28
Lewis	6-22	34	26	17
Piroline	6-22	33	26	21
Steptoe	6-18	34	25	19

I*-Irrigated; D*-Dryland

Disease Resistance

Gallatin has not been thoroughly tested for disease resistance at the time of this publication.

Recommended Areas

Gallatin is recommended as a feed barley for irrigated and dryland in all districts in Montana.

Field Performance

Gallatin exceeded Hector at yield levels above 40 bushels per acre as shown in Table 2. Gallatin has yielded slightly more than Lewis at all yield levels. Gallatin has outyielded Clark and Piroline by 3 to 5 percent at 40 to 60 bu/acre and 6 to 8 percent at yield levels above 60 bu/acre. Although Steptoe yielded more than Gallatin, the 12 percent deficiency in test weight of Steptoe would make Gallatin a better variety choice for both dryland and irrigated conditions.

TABLE 2
Yield in bushels per acre for selected barley varieties in trials at various Montana locations in—1980-1986

Variety	Yield Levels of Hectar						Trials
	20	40	60	80	100	120	
Gallatin	20.1	41.1	62.0	83.0	104.0	125.0	89
Clark	19.4	39.6	59.8	80.0	100.2	120.4	232
Lewis	20.0	40.8	61.6	82.5	103.3	124.1	178
Piroline	21.1	39.9	58.8	77.6	96.4	115.3	182
Steptoe	21.3	44.3	67.3	90.3	113.3	136.3	175

Test Weight

Gallatin, when grown under irrigated and high moisture environments, has a test weight slightly less than Lewis and Piroline, but is a little heavier than Hector or Clark. Gallatin, grown on dryland, has a test weight equal to Hector, Piroline and Lewis. It averages one pound heavier than Clark and approximately five pounds per bushel heavier than Steptoe under both irrigated and dryland conditions in Montana (Table 3). The kernels of Gallatin are equal in plumpness to Hector.

TABLE 3
Test weight comparisons of Gallatin and other barley varieties under several moisture levels in Montana, 1981-1985

Variety	Irrigated		High Moisture		Avg.
	1981-85		1982-84	1981-85	
	Bozeman	Huntley	Sidney	Kalispell	
	5-yr. average		3-yr. avg.	5-yr. avg.	
Gallatin	52.5	51.3	52.4	50.4	51.6
Hector	51.2	49.9	50.0	50.4	50.4
Lewis	52.2	51.5	52.5	51.1	51.8
Clark	50.9	50.6	50.3	49.9	50.4
Piroline	52.1	52.0	53.5	50.7	52.1
Steptoe	46.1	46.4	45.9	45.4	45.9

¹ Agronomists, Montana Cooperative Extension Service, and Research Agronomist, Agricultural Research Service, USDA, respectively.