

Availability of Straw in Eastern Idaho

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The purpose of this report is to provide a partial update to an Idaho Wheat Commission funded project completed in 1995: *The Availability, Alternative Uses and Value of Straw in Idaho*, Patterson, et. al. The update focused only on the counties of eastern Idaho and only on the residue and straw estimates. Current uses and value of straw was not evaluated. Residue estimates were based on grain yield residue coefficients used in the 1995 study. Only irrigated grain production was included since the earlier study showed that for all practical purposes, no straw is available for removal from most dryland (rain fed) grain fields in southern Idaho. The original study used four-year county averages for grain acreage and yields (1990-93) to estimate residue and straw. This updated report is based on revised five-year averages, 1998-2002. This report also estimated the net available straw found within 100-, 75-, and 50-miles of Idaho Falls. These distances were based on road miles, not “as the crow flies.”

Table 1 summarizes the net available straw for eastern Idaho by type of grain and the total for the region. The same breakdown is also provided for net available straw found within three intervals of Idaho Falls. The total net available straw of just over 1 million tons is only three thousand tons less than the 1995 estimate. However, more straw is from spring grain production, reflecting a switch from winter to spring wheat and spring barley. Ninety seven percent of the available straw in the region is within 100 miles of Idaho Falls, 92 percent is within 75 miles, and 75 percent is found within 50 miles of Idaho Falls. Irrigated agriculture is concentrated along the Snake River Plain.

Table 2-5 provide the county specific information used to generate the values summarized in Table 1. The grain residue coefficient shown at the bottom of these tables was developed for the 1995 study and is used to calculate the tons of above ground residue. Straw is defined as the portion of above ground residue that can be readily removed given current harvesting techniques and technology, estimated as 40 percent. Net available straw reflects the removal of any production areas where low residue production would make straw removal impractical, as it would put growers out of compliance with the conservation provisions of the farm bill and make them ineligible to receive government program payments. Net available straw would include an estimate of all straw currently being removed (harvested) for existing uses, such as for livestock bedding or feed, as well as all straw that could potentially be removed to meet additional use demand.

Table 1. Eastern Idaho Net Available Straw: 5-Year Averages, 1998-02.

	Total Tons	Distance in Road Miles from Idaho Falls		
		100 Miles	75 Miles	50 Miles
Irrigated Spring Barley	312,169	302,271	274,448	227,393
Irrigated Spring Wheat	431,433	427,264	411,392	340,757
Irrigated Winter Wheat	263,886	250,610	242,962	189,412
Total	1,007,488	980,145	928,802	757,562

Table 2. Eastern Idaho Irrigated Small Grains Straw Production and Availability Estimate: 5-Year Average, 1998-02

COUNTY	HARVESTED ACRES	TOTAL RESIDUE (TONS)	TOTAL STRAW (TONS)	----- NET AVAILABLE STRAW -----			
				----- Distance from Idaho Falls -----			
				TOTAL (TONS)	100 MILE (TONS)	75 MILE (TONS)	50 MILE (TONS)
Bannock	16,020	63,611	25,444	25,444	25,444	25,444	25,444
Bear Lake	10,880	24,298	9,719	1,109	0	0	0
Bingham	146,120	696,301	278,520	278,520	278,520	278,520	278,520
Bonneville	85,360	310,305	124,122	124,122	124,122	124,122	124,122
Butte	20,000	63,616	25,446	25,446	25,446	25,446	0
Caribou	36,660	117,903	47,161	47,161	47,161	0	0
Clark	15,320	63,898	25,559	25,559	25,559	25,559	25,559
Franklin	16,540	50,536	20,214	19,264	0	0	0
Fremont	59,960	193,210	77,284	77,284	77,284	77,284	77,284
Jefferson	86,240	314,108	125,643	125,643	125,643	125,643	125,643
Madison	74,160	252,475	100,990	100,990	100,990	100,990	100,990
Oneida	10,480	27,091	10,836	6,970	0	0	0
Power	62,620	280,266	112,106	112,106	112,106	112,106	0
Teton	29,020	73,761	29,504	29,504	29,504	29,504	0
Other Counties	5,640	20,911	8,364	8,364	8,364	4,182	0
Total	677,600	2,558,396	1,020,914	1,007,488	980,145	928,802	757,562

Small grains include irrigated spring barley, irrigated spring wheat and irrigated winter wheat.
Distance is road miles measured from Idaho Falls.

Table 3. Eastern Idaho Irrigated Spring Barley Straw Production and Availability Estimate: 5-Year Average, 1998-02

COUNTY	HARVESTED ACRES	BARLEY PRODUCTION (BU)	TOTAL RESIDUE (TONS)	TOTAL STRAW (TONS)	----- NET AVAILABLE STRAW -----			
					----- Distance from Idaho Falls -----			
					TOTAL (TONS)	100 MILE (TONS)	75 MILE (TONS)	50 MILE (TONS)
Bannock	3,960	281,200	9,139	3,656	3,656	3,656	3,656	3,656
Bear Lake	7,440	450,400	14,638	5,855	0	0	0	0
Bingham	20,960	1,990,600	64,695	25,878	25,878	25,878	25,878	25,878
Bonneville	48,000	4,547,000	147,778	59,111	59,111	59,111	59,111	59,111
Butte	14,380	1,247,200	40,534	16,214	16,214	16,214	16,214	0
Caribou	24,620	2,140,200	69,557	27,823	27,823	27,823	0	0
Clark	2,300	198,200	6,442	2,577	2,577	2,577	2,577	2,577
Franklin	9,840	761,400	24,746	9,898	9,898	0	0	0
Fremont	36,020	2,950,800	95,901	38,360	38,360	38,360	38,360	38,360
Jefferson	44,440	4,244,800	137,956	55,182	55,182	55,182	55,182	55,182
Madison	39,580	3,279,200	106,574	42,630	42,630	42,630	42,630	42,630
Oneida	4,540	297,400	9,666	3,866	0	0	0	0
Power	3,860	334,200	10,862	4,345	4,345	4,345	4,345	0
Teton	26,680	2,038,200	66,242	26,497	26,497	26,497	26,497	0
Total	286,620	24,760,800	804,726	321,890	312,169	302,271	274,448	227,393

0.0325 Grain Residue Coefficient

0.4 Available Straw Percent

Table 4. Eastern Idaho Irrigated Spring Wheat Straw Production and Availability Estimate: 5-Year Average, 1998-02

COUNTY	HARVESTED ACRES	WHEAT PRODUCTION (BU)	TOTAL RESIDUE (TONS)	TOTAL STRAW (TONS)	----- NET AVAILABLE STRAW -----			
					----- Distance from Idaho Falls -----			
					TOTAL (TONS)	100 MILE (TONS)	75 MILES (TONS)	50 MILES (TONS)
EAST								
Bannock	4,440	353,200	16,777	6,711	6,711	6,711	6,711	6,711
Bear Lake	2,540	145,000	6,888	2,755	0	0	0	0
Bingham	57,260	5,357,200	254,467	101,787	101,787	101,787	101,787	101,787
Bonneville	31,620	2,762,000	131,195	52,478	52,478	52,478	52,478	52,478
Butte	5,280	448,800	21,318	8,527	8,527	8,527	8,527	0
Caribou	8,060	631,200	29,982	11,993	11,993	11,993	0	0
Clark	12,500	1,159,200	55,062	22,025	22,025	22,025	22,025	22,025
Franklin	920	50,000	2,375	950	0	0	0	0
Fremont	23,820	2,038,000	96,805	38,722	38,722	38,722	38,722	38,722
Jefferson	39,700	3,500,000	166,250	66,500	66,500	66,500	66,500	66,500
Madison	31,660	2,765,000	131,338	52,535	52,535	52,535	52,535	52,535
Oneida	3,820	219,400	10,422	4,169	4,169	0	0	0
Power	33,540	2,920,000	138,700	55,480	55,480	55,480	55,480	0
Teton	2,180	144,600	6,869	2,747	2,747	2,747	2,747	0
Other Counties	5,260	408,400	19,399	7,760	7,760	7,760	3,880	0
Total	262,600	22,902,000	1,087,845	435,138	431,433	427,264	411,392	340,757
Southern Idaho								
Total								

0.0475 Grain Residue Coefficient
 0.4 Available Straw Percentage

Table 5. Eastern Idaho Irrigated Winter Wheat Straw Production and Availability Estimate: 5-Year Average, 1998-02

COUNTY	HARVESTED ACRES	WHEAT PRODUCTION (BU)	TOTAL RESIDUE (TONS)	TOTAL STRAW (TONS)	----- NET AVAILABLE -----			
					----- Distance from Idaho Falls -----			
					TOTAL (TONS)	100 MILE (TONS)	75 MILE (TONS)	50 MILE (TONS)
EAST								
Bannock	7,620	718,000	37,695	15,078	15,078	15,078	15,078	15,078
Bear Lake	900	52,800	2,772	1,109	1,109	0	0	0
Bingham	67,900	7,183,600	377,139	150,856	150,856	150,856	150,856	150,856
Bonneville	5,740	596,800	31,332	12,533	12,533	12,533	12,533	12,533
Butte	340	33,600	1,764	706	706	706	706	0
Caribou	3,980	349,800	18,365	7,346	7,346	7,346	0	0
Clark	520	45,600	2,394	958	958	958	958	958
Franklin	5,780	446,000	23,415	9,366	9,366	0	0	0
Fremont	120	9,600	504	202	202	202	202	202
Jefferson	2,100	188,600	9,902	3,961	3,961	3,961	3,961	3,961
Madison	2,920	277,400	14,564	5,825	5,825	5,825	5,825	5,825
Oneida	2,120	133,400	7,004	2,801	2,801	0	0	0
Power	25,220	2,489,600	130,704	52,282	52,282	52,282	52,282	0
Teton	160	12,400	651	260	260	260	260	0
Other Counties	380	28,800	1,512	605	605	605	302	0
Total	125,800	12,566,000	659,715	263,886	263,886	250,610	242,962	189,412

0.0525 Grain Residue Coefficient
 0.4 Available Straw Percentage