Spring and Winter Wheats Compared

Baking Tests Show Comparative Values of Alberta Red Winter and Northern Spring Wheats

An interesting series of tests to deter-mine the milling and bread making qualities of Alberta Red winter wheat as

mine the milling and bread making qualities of Alberta Red winter wheat as compared with those of spring wheat have been made by the Columbus Laboratories, Chicago, for The Grain Growers' Grain Co. The report of the laboratory is as follows:—

"We are enclosing you herewith reports on the several samples of wheat which you sent us. In one of these reports we are comparing the flours produced with a representative Minneapolis spring wheat patent flour. In this report you will also see the relation between the flours from the winter and spring wheats which you sent. We find that there is considerably more gluten in the spring wheat flours and they will make a somewhat larger loaf than the winter wheat flours, but not as large a loaf as will be made from the better spring wheat flours produced in Minneapolis. This appears to be something of a characteristic of the spring wheat flours of Canada as we have found in other trials.

"The color of the winter wheat flours other trials.

"The color of the winter wheat flours "The color of the winter wheat flours is, of course, appreciably better than that of the spring wheat flours. None of them equal the standard which we have used because they are straight grades in comparison with the patent, but the relative difference on the spring wheats is about such as we have on the usual run of straight grade flours as compared with our standard. It is our custom in reporting flours to use a standard patent in preference to some other grade for several reasons.

"In the second report we are comparing the winter wheat flours with our standard soft winter wheat patent of the type produced in Illinois, Indiana and Ohio. Flours from this section are somewhat higher in gluten this year than in former years. Some of them will approach close to the amount of gluten we have found in flours produced from your Canada red winter wheat. They have a somewhat better expanding quality and make a somewhat larger loaf than do your Canada winter wheats, while the color is much better.

"Your Canada red wheats agree in color quite well with some of the hard winter wheats of which there are many different types produced in the United States. In general your Canada winter wheats approach more the nature of the hard wheats than they do the soft wheats, especially in absorption and color, although they do not hake out.

wheats, especially in absorption and color, although they do not bake out into as large a loaf of bread. Many of our hard winter wheat flours, produced especially in Kansas, have characteristics which are very similar to those of the spring wheat flours. The Nebraska flours contain less altered as a transfer of the spring wheat flours. contain less gluten, do not make such a large loaf of bread, but have good absorp-tion. In fact, are quite closely related to the flours we obtain from your Canada red winter wheat."

Trusting this gives the information you wish, we remain,

Yours truly,

THE COLUMBUS LABORATORIES Per G. L. Teller.

Soft Winter Patent 9.5	13580 10.6	13581 10.1	13582
.35	.49	.50	.50
57.	65.	64.	67.
100.0	93.0	93.0	93.0
100.0	104.8	104.2	106.0
100.0	97.5	97.5	97.5
100.0	98.0	98.0	98 0
100.0	98.3	98.2	98.6
100.0	106.0	103.7	107.4
100.0	93.9	95.7	90.2
	Patent 9.5 .35 57. 100.0 100.0 100.0 100.0 100.0 100.0	Patent 13580 9.5 10.6 .35 .49 57. 65. 100.0 93.0 100.0 104.8 100.0 97.5 100.0 98.0 100.0 98.3 100.0 106.0	Patent 13580 13581 9.5 10.6 10.1 .35 .49 .50 57. 65. 64. 100.0 93.0 93.0 100.0 104.8 104.2 100.0 97.5 97.5 100.0 98.0 98.0 100.0 98.3 98.2 100.0 106.0 103.7

13580 is flour milled from sample of wheat marked No. 2 Alberta Red Winter. 13582 " " " " " " " " " "

	Spring Patent	1° 13577	2° 13578	3° 13579	2 R.W. 13580	3 R.W. 13581	4 R.W. 13582
Gluten-Per cent	11.5	11.8	12.1	11.4	10.6	10.1	11.0
Ash-Per cent	.42	.49	.46	.48	.49	.50	.50
Absorption-Per cent	62.	64.	65.	62.	65.	64.	67.
Color	100.0	95.0	94.0	94.0	96.0	96.0	96.0
Loaves per barrel	100.0	101.2	101.8	100.0	101.8	101.2	103.0
Size of Loaf	100.0	97.5	97.5	97.5	95.0	95.0	95.0
Quality of Loaf	100.0	99.0	98.7	98.5	98.5	98.5	98.5
Average Value	100.0	98.2	98.0	97.5	97.8	97.7	98.1
Fermenting Period	100.0	102.3	103.7	100.5	97.7 -	95.2	99.6
Quality of Gluten	100.0	96.9	95.7	98.6	100.4	103.8	98.5

13577 is flour milled from sample of wheat marked No. 1 Northern Spring. 13579 " 2 Alberta Red Winter. 13580 13582

These flours were milled as straight grades with about 5% low grade out. 13577 13578 13579 13580 13581 13582 Straight grade flour produced -66% 66%

Weight per bushel before cleaning 60 lbs. 59 lbs. 57 lbs. 62 lbs. 62 lbs. 60 lbs. Weight per bushel after cleaning . . 61 lbs. 60 lbs. 50 lbs. 63 lbs. 63 lbs. 62 lbs.

Note.—In the above report the gluten and the ash are expressed as parts in each one hundred parts of the flour. The absorption is the amount of water necessary to add to one hundred parts of the flour to make a dough of standard stiffness. The remaining values are so expressed as to show the relation to the standard flour, which for the purpose is given a value of 100 per cent. The loaves produced are made under carefully controlled and uniform conditions and baked in accurately graduated baking cylinders in an electric oven. The value expressed as quality of loaf is based upon the color, flavor and texture of the bread. The AVERAGE VALUE expressed in per cent. is the mean value of color, loaves per barrel, size of loaf and quality of loaf. It SHOULD NOT BE TAKEN ALONE in comparing the value of flours, but each of the factors of which it is made up should receive consider tion.



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