

EARLY RIPENING WHEAT

PRESTON, STANLEY, HURON AND PERCY VARIETIES.

(Mr. Chas. E. Saunders, of the Experimental Farm, Ottawa, Discusses Their Qualities.)

In response to requests for precise information in regard to the characteristics and qualities of Preston and some other early wheats, the following brief summary of the principal facts has been prepared.

Preston is the best known of all the early wheats grown in Canada. It seems advisable, however, in discussing the subject, to consider at the same time the related varieties, Stanley, Huron and Percy. These four sorts have all been originated from crosses made at the Central Experimental Farm in the year 1888 and are of essentially the same percentage (Red Fife or White Fife crossed with Ladoga). As usually grown they are very much alike in most respects and are not distinguishable from each other after threshing. The kernels resemble Red Fife, but any competent judge can easily detect the difference between that variety and these others, provided all the samples consist of properly matured grain in pure condition. Mixtures of these wheats with Red Fife cannot be accurately separated by examination of the kernels. The statement sometimes made that these early wheats resemble or are related to wheats of the durum or "macaroni" or "Goose" class is absurd. They belong to the Fife class and have no relationship or similarity to Goose wheat.

The distribution of these varieties from the Experimental Farms was begun many years ago, before the characteristics of each sort had been fully fixed by selection; and hence it is now usually possible in an ordinary field of any of these wheats to find heads or kernels of more than one type. In order to overcome this objection, to improve the varieties as much as possible, and especially to get rid of the kernels with a yellow skin (which under the present Grain Inspection Act are considered inferior) a careful re-selection of these wheats was undertaken a few years ago, with the result that improved strains were produced. Some of these are now being distributed, and those of the very best quality (of which only a small amount of seed is yet available) are being propagated as rapidly as possible. A full description of each variety need not be given here; but it may be mentioned that selected Preston is a bearded wheat with yellowish ("white") chaff; Huron, bearded with reddish chaff; Stanley, beardless with reddish chaff, and Percy, beardless with yellowish chaff.

When questions are asked in regard to these wheats the answers are usually desired in the form of a comparison with Red Fife. This method, therefore, seems the best to adopt in considering the various points here discussed.

Earliness.—These varieties usually ripen from about four to twelve days before Red Fife, if sown on the same day and grown under exactly the same conditions. In the Northwest Provinces, Preston on summer-fallow will usually ripen at about the same time as Red Fife on stubble. Hot weather towards harvest reduces the difference in time of ripening. Cool weather lengthens it. Stiffness and length of straw. Resistance to Rust, Smut and other diseases.—In regard to these points the early varieties show no striking differences from Red Fife.

Yield.—Experiments in regard to yield often give contradictory results under some conditions. Speaking generally, however, one may expect a large yield from any of these wheats, often larger than that from Red Fife. On the whole perhaps the bearded varieties (Preston and Huron) are rather more productive than the others. It must be remembered that these comparisons are generally made under conditions favorable to Red Fife. In cases where frost has to be considered the early varieties usually give distinctly heavier yields than Red Fife.

Appearance of Grain, Selling Price.—These early wheats are as hard as Red Fife and when the kernels with yellow skins are eliminated, are of a rich reddish color which is (if any difference be seen) rather darker than Red Fife. So long, therefore, as the Grain Inspection Act requires the higher grades to contain certain proportions of hard, red wheat of the Fife class, these varieties should grade quite as high as pure Red Fife. The grade, of course, largely controls the sale price in Canada.

The opinion of an English expert in regard to samples of Red Fife, Preston, Stanley and Percy, grown at Indian Head, Sask., in 1902, was that the Stanley and Percy would sell in London at the same price as the Red Fife, but the Preston would command about three-quarters of a cent, a bushel less. Of the same varieties grown at Ottawa he believed the Percy and Red Fife would bring equal prices and the Preston and Stanley about three-quarters of a cent a bushel less.

Milling etc.—In their conduct in the flour mill these four wheats closely resemble Red Fife. The bran separates readily, the proportion of middlings produced is large and the middlings are not unusually difficult to reduce. This means a high yield of "patent" flour. The total yield of flour is very good and not much "break" flour is produced. These facts are stated as the outcome of twenty milling tests of

samples of pure Red Fife and twenty-three tests of samples of the four earlier wheats, all the tests having been carried out during the past few years by the writer, personally.

Color of Flour.—Preston and these other wheats have, like Red Fife, the disadvantage of producing flour not pale enough for the popular taste. Indeed, as now generally grown they yield flour of a deeper yellowish color than made from Red Fife. Some millers find it advisable to artificially bleach Red Fife; and such treatment would be necessary with Preston if it were desired to bring it to a very pale shade of color. The color of the flour produced from the best selected strains of these wheats shows a great improvement in some cases over that made from the ordinary samples. Flour from the best selection of Stanley (Stanley A) is of the same color as from Red Fife. The best Preston, Huron and Percy have also been improved, but not quite to the same extent.

Baking Strength.—It has sometimes been suggested that a comparative baking test should be made to settle once for all the relative merits of these wheats. It is very easy to draw precise conclusions from a single test, but unfortunately such conclusions are usually wrong. During the past few years the writer has baked flour from thirty-eight samples of these five wheats, having made 170 test loaves. This amount of work enables one to draw certain conclusions, but by no means answers all the questions that naturally arise. The chief general conclusions may be here stated. As a rule Red Fife gives flour distinctly higher in baking strength than these other wheats, provided the samples compared have been grown under similar conditions and properly ripened. Even when the conditions have not been alike the Red Fife usually gives the stronger flour. In some cases, however, one or other of the early wheats has the advantage. By "strength" is meant the ability of the flour to absorb water and to produce a large, tight loaf of fine texture and good shape. On a scale of points for strength where 75 indicates weak, 85 medium and 95 or more very strong, Red Fife has varied from 84 to 102 and the other wheats from 69 to 93, the Red Fife being usually about 10 or 12 points ahead. This indicates a considerable difference in favor of Red Fife in this important matter, the "strength" of the wheat from the Manitoba Inspection Division being one of the chief factors in maintaining its high price in England. The most desirable strength for any flour is a matter of taste, if the flour is to be used in pure condition. The strongest flours do not necessarily make the best bread. For mixing purposes, however, the strongest wheats or flours usually (not always) command the highest price; and while in England all kinds of clean wheat are readily saleable, the demand for really strong wheat is generally very great. With all due respect to the views of anyone who judges by appearance only, I am of the opinion that if their relative qualities were clearly understood the difference in price between pure Red Fife and these other wheats on the London market would usually be considerably more than three-quarters of a cent, a bushel. It must be remembered, however, that the ordinary western graded wheat is by no means pure Red Fife, though consisting chiefly of that variety.

Conclusion.—In spite of their many admirable qualities, I cannot recommend these four early wheats for the purpose of replacing Red Fife, as a variety for export purposes, in those districts where early autumn frosts are not feared. Wherever, in the western prairie provinces, Red Fife can be depended upon it should be the main wheat sown, these earlier sorts, if used at all, being sown in relatively small quantities merely to make possible a somewhat earlier commencement of the harvest.

In those districts where Red Fife does not usually escape frost these early wheats (particularly Stanley, Preston and Huron) should be tried. In many cases they will no doubt prove of immense value. They are the only suitable varieties available at present for such districts, except Pringle's Champion, a bearded wheat of similar parentage and character, which can also be recommended.

Farmers in localities where a fair degree of success is obtained with Red Fife but where it is occasionally touched with frost must use their own judgment to decide, from the foregoing statements of fact, to what extent they should use these earlier wheats.

CHAS. E. SANDERSON, Cerealist, Central Experimental Farm, Ottawa, March, 1908.

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N FIRE WITH COMRADES

SCENES AT A BURNING COLLIERY IN ENGLAND.

Splendid Heroism of Englishmen—Attempts to Rescue Burning Miners.

While twenty-two imprisoned miners roasted slowly to death in the Mamstead colliery, near Birmingham, comrades with grandest heroism not only counted their own lives as naught in the attempt at rescue, but complained bitterly when compelled to desist.

After the alarm was given, about six o'clock on the evening of March 4, Mr. Waterhouse, the manager of the colliery, was sent for, and immediately formed a rescue party. Through the anxious crowd which surrounded the pit head, the eight men hurried in the dense smoke, but found themselves unable to reach the bottom of No. 1 shaft, and returned, several being in a state of collapse.

DESOLATE SCENE.
About half-past nine a second descent was made by the rescue party, who succeeded this time in reaching the bottom of the shaft, but could hear no sound from the entombed miners. A little later another attempt was made but the rescuers were driven back by the smoke. At half-past one in the morning a final effort was made with the same result. Messrs. Wright and Owbridge being drawn out of the cage in a fainting condition.

Slowly the night passed, and the grey light of morning showed a desolate scene—row upon row of men, with strained, eager faces, the muscles of their mouths twitching with the long vigil and the agony of their emotions. The men who had waited all night had to be held back almost by force, so eager were they to join in the work of rescue. There was not a miner who would not have risked his life to save those below.

"WAITING FOR DADDY."
At three o'clock, his tear-stained face lit up by the glare of a fire which had been built on a mound, a small eight or nine-year-old boy stood sobbing his heart out. He was "waiting for daddy," he said. But "daddy" had gone down into the pit to seek another relative, and the poor little chap was led away to spend his vigil in more comfortable surroundings.

Women waited all night through.

DOCTORS STOOD READY.
Beginning at four o'clock in the morning on Thursday wonderfully daring but fruitless attempts, in one of which poor Welby lost his life, were made to get to the miners. At nine o'clock Friday four men went down the shaft. A code of tapping signals had been agreed upon, and the grimy men at the top listened intently and called for "Silence" as the daring quartette were slowly lowered. The attempt was as futile as the others. They did not even reach the bottom. Whilst they were still fifteen yards away they gave the signal to be drawn up.

Canvas was unrolled on the earth, and the doctors stood ready with their phials and their instruments. The four queer figures stepped out of the cage, and it was seen at once that all of them were suffering severely from the effects of their descent.

When they went down they took with them a frightened linnel. When they returned the bird was dead.

WAS RAGING FURNACE.
Another fruitless descent was soon made, and one of the men who came up said that there was a raging furnace at the bottom, and that the hiss and crackling of the wood could be heard distinctly. Later in the day all available hands were set to work at the pithead giving effect to a scheme for reversing the ventilation, which scheme had been formed by mining experts called to the scene.

The instant the decision of the conference was made, fifty men swung off their coats, and, seizing pick and spade, worked mightily, digging a trench for new pipes to the engine room. Little they recked of the rain and the cold if their efforts could save their comrades.

THREE MEN OVERCOME.
When Welby, the Yorkshire man, went to his death, groping, stumbling, dying, in the hazy of heat and smoke, three other men went with him. When he was overcome they tried to get him to the cage, but on the way back two more collapsed. The fourth man, Thorne, acted with tremendous heroism. He carried and dragged one man for nearly a quarter of a mile to the bottom of shaft No. 2, and brought him to the surface.

Then he went down again and brought up another of his comrades. At last he was overcome.

People were horror-stricken, and another rescue party quickly stepped into the cage, and set out in search for Welby, who had been left below. They came up at 10.30 having failed to find him, and all hope of saving his life was gone from that hour, as he had evidently wandered a long way into the workings.

DEVOTION OF MINE OFFICIALS.
The courage and devotion of the mine officials was beyond all praise. For forty hours Mr. Insley, the check-weighman, did not close his eyes, and David Ross, the surveyor, during all the terrible days of anxiety, scarcely

THE SALVATION OF THE WORLD

The Spirit of This Age Moves to Better Things.

"The kingdoms of this world are become the kingdoms of our Lord and of his Christ; and he shall reign forever and ever."—Rev. ix., 15.

Once the church set up an ideal separation between the worldly and the unworldly, between those who were interested in and occupied in the affairs of our daily lives and those who withdrew from these secular pursuits and gave themselves to the contemplation of heaven or to what was called the pursuit of the higher life.

The mark of a saint then was his separation from this world and his absorption in another; his disdain for the real, the practical, the everyday and commonplace, and his devotion to the ideal, remote, imaginary, and other worldly. The church proposed to effect the salvation of the world by separating itself from the world.

For a long time this conception prevailed. Theological seminaries set themselves off in quiet retreats, the ideal church meetings were those where the noise of this busy world could not penetrate; the desirable religious life was that of the recluse. One was scarcely likely to look for saintliness or piety in the market or on the street.

We still too readily charge our moral shortcomings and our personal imperfections to the taint and contact of the world, the daily interests and activities is so easy to think of

HOW GOOD WE COULD BE
were we but where the wicked cease from troubling, where there would be nothing to provoke us to wrath or lure us to selfishness.

Yet what is the use of a religion that is not for daily use? What is its value if it cannot make us strong for this daily fight and through this strife of living? This world in which we now are and no other is for us now the workshop of character. With what other worlds may be and do we only remotely are concerned. The present needs a present piety, a present power in religion.

If we make up our minds that this present social order is doomed; if we gloomily talk of this world as the object of omnipotent wrath, how foolish are all our efforts for its betterment, how hypocritical all our talk about its salvation. Is there any more sure way

left the pit's mouth. Five rescue parties were headed by Mr. Waterhouse, the manager, whose noble efforts will not soon be forgotten by the English people.

THE DEED OF A HERO.
A Mere Lad Was the Means of Saving the Indian Empire.

Not all the courage of war is expended on the battle-field. A man died lately in Calcutta who performed a deed which contributed greatly to save the Indian Empire. At that time, in 1857, he was a mere lad, employed as an assistant in the telegraph service. His name was W. Brendish, and he sent, at the risk of his life, a despatch from Delhi to Umballa, which bore the first news of the outbreak. This message, repeated to every town which could be reached, proved of priceless value. Col. Edward Vibart, in his "Sepoy Mutiny," tells the story of how, to quote the judicial commissioner of the Punjab, "the electric telegraph saved India."

It was the custom to close the telegraph offices on Sunday between the hours of nine and four. On May 10, as the operator at Delhi was about to close his station, he received a message from the Meerut office announcing an uprising in that section. At four o'clock, when the office was reopened, connections with Meerut were found to be interrupted.

The telegraph force at Delhi consisted of the chief and two young assistants, Brendish and Pilkington. The office was situated outside of the city, about a mile from the gates.

On discovering the break in the connections, the chief sent the two lads to test the cable across the river. They found that they could signal to Delhi, but not to Meerut, and reported the fact on their return. It was too late to do anything that night, but the next morning Mr. Todd, the chief, went out himself to investigate the line. He never returned, and although his fate is un-

known, there is little doubt that he was murdered.

The office was thus left in charge of the two lads. Signs of trouble began to be evident close at hand. Brendish, stepping from the door, met a wounded officer, who cried out to him, "For God's sake get inside and close your doors!"

The revolt crept closer and closer. The boys felt that their lives were in danger; soon they became sure of it. But before they fled to a place of comparative safety they waited to send out to the Indian world the news of the revolt.

Brendish ticked out the message which caused Sir Edward to say: "Look at the courage and sense of that little boy! With shot falling all round him, he stayed to manipulate the message that was the means of saving the Punjab."

The Government rewarded Brendish for his services by giving him a life pension, and the other day the old man died in the India he had helped to preserve.

AT THE DINNER TABLE.
He sat at the dinner table
With a discontented frown;
The potatoes and steak were underdone
And the bread was baked too brown;
The pie was heavy, the pudding too sweet,
And the meat was much too fat;
The soup so greasy, too, and salt,
'Twas hardly fit for the cat.

"I wish you could taste the bread and pie
I've seen my mother make;
They are something like, and 'twould do 'you good
Just to look at a slice of her cake."
Said the smiling wife: "I'll improve with age—
Just now I'm but a beginner;
But your mother has come to visit us,
And to-day she cooked the dinner."

HENRY F. COPE.

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