ABOUT MARQUIS WHEAT

United States Official Tribute to a Canadian Product.

Says It Is the Leading Variety for Growing In the Northern Great Plains — Best All Around Common Wheat to Grow for Bread-making.

(Contributed by Ontario Department of Agriculture. Toronto.)

Following is a digest of Bulletin No. 878 of the U. S. Department of Agriculture. Marquis wheat was originated by Mr. Charles Saunders, Dominion Cerealist, Ottawa:

That Marquis wheat is the leading variety of common wheat for growing in the Northern Great Plains is the conclusion reached by specialists of the United States Department of Agriculture as a result of varietal experiments with spring wheat conducted at 11 field stations in the northern half of the Great Plains area chiefly in co-operation with the state experiment stations. Details of the experiments, including discussions on the principal varieties, how and when they come to the region, and how to distinguish them, are contained in Department Bulletin 878, Varietal Experiments with Spring Wheat on the Northern Great Plains, issued by the department.

Introduction to the United States.

Marquis wheat was first introduced into the United States from Canada in 1913, but is now more widely grown than any other variety. It is short-strawed and early maturing, which characteristics sometimes enable it to escape rust and drought.

A demand for information on comparative yields of varieties and their resistance to disease was developed in the Great Plains area by severe losses which have occurred recently, due principally to drought and rust. Although crop yields have sometimes been low, land values have continued to increase in about the same proportion as in other sections. This has increased the cost of production and, with a return to lower prices for wheat, it is essential that the poorly adapted varieties be eliminated.

Hundreds of foreign and domestic varieties of wheat have been obtained by the department and tested. In preliminary nursery experiments many of them did not show themselves fitted for culture in the semi-arid sections. These varieties were rejected and only the more promising ones were selected to be grown in plat experiments.

The Question of Yield.

In Bulletin 878 the annual yields of the spring wheat varieties grown during the seven years, from 1913 to 1919, are shown for each station. A summary of the yields shows that, in general, the Marquis variety is the highest yielding common spring wheat. It has been included in all of the experiments each year. The better varieties of Durum wheat have outyielded Marquis at all stations but one. The Kubanka Durum wheat outyielded Marquis at eight of the ten stations where it was grown.

Data on rust infection were obtained at seven stations. Marquis wheat shows an average rust infection of 17.7 per cent. in twenty observations. Most of the important commercial varieties of common spring wheat showed a higher percentage of rust infection than Marquis, while all varieties of Durum wheat showed less rust.

Milling Tests.

The leading varieties of spring wheat grown at the eleven stations were milled in an experimental mill and the flour baked into bread in order to determine their relative values for flour and bread-making. It was found that growing conditions and disease had much influence on the percentage of flour obtained, Marquis wheat yielding as low as 56.4 per cent. of flour from sections where it had been affected by rust, while under favorable conditions it produced as high as 75.8 per cent. of flour. The average yield of flour from 37 samples of this variety was 70.2 per cent. Several varieties of common wheat produced distinctly lower percentages of flour than Marquis. Preston (Velvet Chaff) and Haynes Bluestem produced about the same percentage as Marquis. Prelude was the only variety of common spring wheat which had a distinctly higher flour yield than Marquis, the difference being 2.6 per cent. All varieties of Durum wheat, however, yielded a higher percentage than Marquis, except D-5, a red-kerneled Durum wheat which is low in milling value. Each wheat sample was analyzed for nitrogen and the crude protein content determined. Marquis wheat had an average protein content of 15.3 per cent., and other common spring wheats differed only slightly from it.

In concluding the experiments, flour made from each variety of wheat was baked in order to determine the expansion of strength of the dough, the quality of the gluten, and the resulting texture and lightness of the bread. The average loaf volume obtained from 37 samples of Marquis wheat was 2,342 cubic centimetres from 340 grams of flour. This was a greater volume than was obtained from any other variety of wheat except one. All varieties of Durum wheat have a smaller loaf volume than Marquis.

Every farmer should keep some sort of account system of his business. It should show the profit and loss of all of his operations.

Sometimes we can not prevent outbreaks of live stock disease on our farms, but we can and should always use every preventive measure and see that proper precautions are taken when the disease first makes its appearance.

EFFECTS OF CROPPING

Sure to Exhaust the Best Soil in Time.

Plant Food Must Be Supplied—Mother Earth Has Her Limits—Seven Rules for Poultry Raisers —Breaking Up Broody Hens.

(Contributed by Ontario Department of Agriculture, Toronto.)

Lands that have been farmed for half a century usually show a decrease in crop production. A few farms that have been well managed in the various sections of Ontario are still very productive. Some have been so depleted of the plant food materials that were accumulated during the period of forest development as to be unprofitable under tillage today. Previous to clearing and cropping the process was accumulating fertility. Since cropping has been practiced the process has been reversed and supplanted by one of expenditure. Under a farming practice that exhausts the humus and returns no vegetable matter the soil hardens quickly, dries out and becomes non-productive, simply because there is neither food nor soil life to release such to growing plants.

Mineral Elements Become Exhausted.

Frequently one of the mineral elements—lime, potash or phosphorous—is exhausted by cropping or leaching. Nitrogen exhaustion is a very common condition noticeable in lands that have been cultivated for more than twenty-five years. After all, the soil is only a storehouse for those elements required in the life processes of the food plants that the farmer grows. In that storehouse various forms of life are at work converting the unusable to a usable or food condition for the plant. If we crop for years and exhaust the nitrogen or the potash or the phosphorous to a point where any of such could not be supplied in quantity sufficient to meet the full demands of the growing plant then we have a condition of plant mal-nutrition or starvation.

Plant Food Must Be Supplied.

The plant can develop only to the extent that food is supplied to permit growth. Many of the thin crops noticeable in many sections of the province are thin simply because of soil exhaustion. Some part of the plant's ration is below the minimum requirement for best development. It may be nitrogen or potash or phosphorous. However, if we have robbed the soil of some fertility element to a point where we see a decline in yields we should return to the soil what we have taken away if we are to expect full yields again. Cropping will exhaust a soil if the system of rotation or management does not provide for ample return of the essential elements, nitrogen, potash and phosphorous. Effects of cropping are not noticed on the really well managed farms where clovers and other legume plants are prominent in the crop rotation, where the crops grown are fed to live stock and where some attention is paid to keeping the mineral elements, potash, phosphorous and lime, abundantly supplied.

Mother Earth Wants Only a Fair Show.

The soils of Mother Earth will, if reasonably and intelligently managed by all of the thousands of individual farmers, last for many centuries. Unfortunately all our farmers are not as reasonable as they might be, and we frequently see evidence of overcropping, soil robbing, poor management and lost labor.—L. Stevenson, Secretary, Department of Agriculture, Toronto.

Seven Rules for Poultry Raisers.

Here are seven safe rules for getting the most money from the summer flock:

1. Produce infertile eggs by removing the roosters from the flock in the summer time.
2. Provide clean nests and keep eggs clean.
3. Do not wash eggs.

Gather eggs twice daily during the summer to prevent them from being heated by the hen.

5. Keep them in a cool, dry place, away from the flies.
6. Market them at least twice each week.
7. Insist that they be bought on a quality graded basis.

Breaking Up Broody Hens.

Neglect in breaking up broody hens means a serious reduction in the number of eggs produced by Indiana farm flocks.

Confinement of broody hens in a slat bottom coop has proved satisfactory. This coop should be covered on top with slat or wire sides and may be placed outside, preferably under a tree to insure shade. A slat bottom coop prevents fowls from becoming comfortable and these soon lose their broody traits.

Common practice is to place hens in the coop for three days, releasing them in the evening. If they return to the nest they are returned to "jail" for three more days. This usually breaks up the most stubborn sitters.

Removing the broody hens from the nest the first evening she sits is a very important factor in breaking up broodiness. If hens are allowed to be undisturbed a few days it requires more time to break up broodiness and this results in a longer period of non-production.

Nasturtiums do not require rich soil, in fact, if put on rich soil they will produce more vine than flowers.

The reproduction of fruit and vegetables at home relieves transportation difficulties and solves the marketing problem.

Extra good growth of musk melons may be had by putting a bushel or so of well rotted manure in the bottom of each hill. Plenty of water during warm dry weather also helps.

THE THINKER

Back of the beating hammer
By which the steel is wrought,
Back of the workshop's clamor
The seeker may find the thought.
The thought that is ever master
Of iron and steam and steel,
That rises above disaster
And tramples it under heel!

The drudge may fret and tinker,
And labor with lusty blows;
But back of him stands the thinker,
The clear-eyed man who knows.
For into each plow and sabre,
Each piece and part and whole,
Must go the brains of labor
Which gives the work of a soul.

Back of the motor's humming,
Back of the belts that sing,
Back of the hammer's drumming,
Back of the cranes that swing.
There is the eye which scans them,
Watching through stress and strain,
There is the mind which plans them—
Back of the brawn, the brain!

Might of the roaring boiler,
Force of the engine's thrust,
Strength of the sweating toiler,
Greatly in these we trust.
But back of them stands the schemer,
The thinker who drives things through;
Back of the job—the dreamer,
Who's making the dream come true!

—Burton Braley

The Blazed Trail

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ent need of success which he had created for himself, absorbed all other sentiments. He demanded it of others rigorously .He could do no less than demand it of himself. It had practically become one of his tenets of belief. The chief end of any man, as he saw it, was to do well and successfully what his life found ready. Anything to further this fore-ordained activity was good; anything else was bad. These thoughts aided by a disposition naturally fervent and single in purpose, hereditarily ascetic and conscientious—for his mother was of old New England stock—gave to him in the course of six years' striving a sort of daily and familiar religion to which he conformed his life.

Success, success, success. Nothing could be of more importance. Its attainment argued a man's efficiency in the Scheme of Things, his worthy fulfilment of the end for which a divine Providence had placed him on earth. Anything that interfered with it,—personal comfort, inclination, affectation, desire, love of ease, individual liking,—was bad.

Luckily for Thorpe's peace of mind his habit of looking on men as things helped him to keep to this attitude of mind. His lumbermen were tools,—good sharp, efficient tools, to be sure, but only because he had made them so. Their loyalty aroused in his breast no pride nor gratitude. He expected loyalty. He would have discharged at once a man who did not show it. The same with zeal, intelligence, effort—they were the things he took for granted. As for the admiration and affection which the Fighting Forty displayed for him personally, he gave not a thought to it. And the men knew it, and loved the man all the more for the fact.

Thorpe cared for just three people, and none of them happened to clash with his machine. They were Wallace Carpenter, little Phil, and Injin Charley.

Wallace, for reasons already explained at length, was always personably agreeable to Thorpe. Latterly, since the erection of the mill, he had developed unexpected acumen in the disposal of the season's cut to wholesale dealers in Chicago. Nothing could have been more better for the firm. There after he was often in the woods, both for pleasure and to get his partner's ideas on what the firm would have to offer. The entire responsibility of the city end of the business was in his hands.

Injin Charley continued to hunt and trap in the country round about. Between him and Thorpe had grown a friendship the more solid in that its increase had been mysteriously without outward cause. Once or twice a month the lumberman would snowshoe down to the little cabin at the forks. Entering he would nod briefly and seat himself on a cracker-box.

"How do, Charley," said he.

"How do," replied Charley.

They filled pipes, and smoked. At rare intervals one of them made a remark, tersely,

"Catch um three beaver las week," remarked Charley.

"Good haul," commented Thorpe.

Or:

"I saw a mink track by the big boulder," offered Thorpe.

"H'm!" responded Charley in a long-drawn falsetto whine.

Yet somehow the men came to know each other better and better; and each felt that in an emergency he could depend on the other to the uttermost in spite of the difference in race.

As for Phil, he was like some stranger, shy animal, retaining all its wild instincts, but led by affection to become domestic. He drew the water, cut the wood,—none better. In the evening he played atrociously his violin,—none worse,—bending his great white brow forward with the wolf-glare in his eyes, swaying his shoulders with a fierce delight in the subtle dissonances, the swaggering exactitude of time, the vulgar rendition of the horrible tunes he played. And often he went in to the forest and gazed wondering through his liquid poet's eyes at occult things. Above all, he worshipped Thorpe. And in turn the lumberman accorded him a good natured affection. He was as indispensable to Camp One as the beagles.

(To be Continued)