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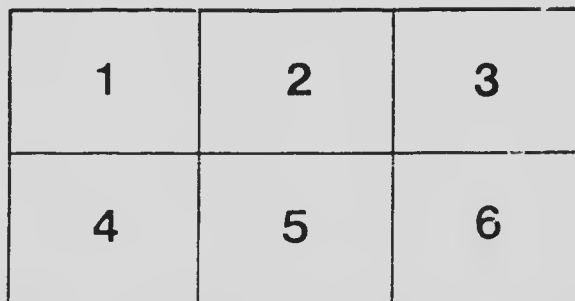
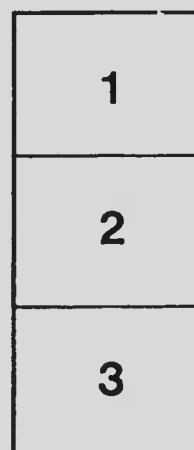
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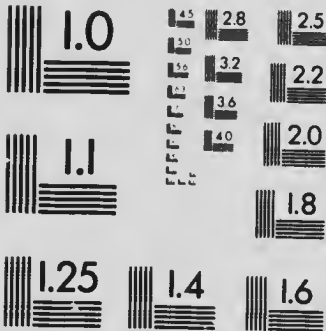
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Field Husbandry Circular No. 31

KUBANKA WHEAT

By

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HISTORY.

Kubanka wheat belongs to the amber durum class of spring wheat which was introduced into the United States by the federal Department of Agriculture for the purpose of establishing a class of wheat which would be adapted to the sub-humid or semi-arid portions of the Great Plains region. A number of varieties were introduced from Russia near the close of the last century. These were tried out on the experiment stations in South Dakota, North Dakota, Montana and other

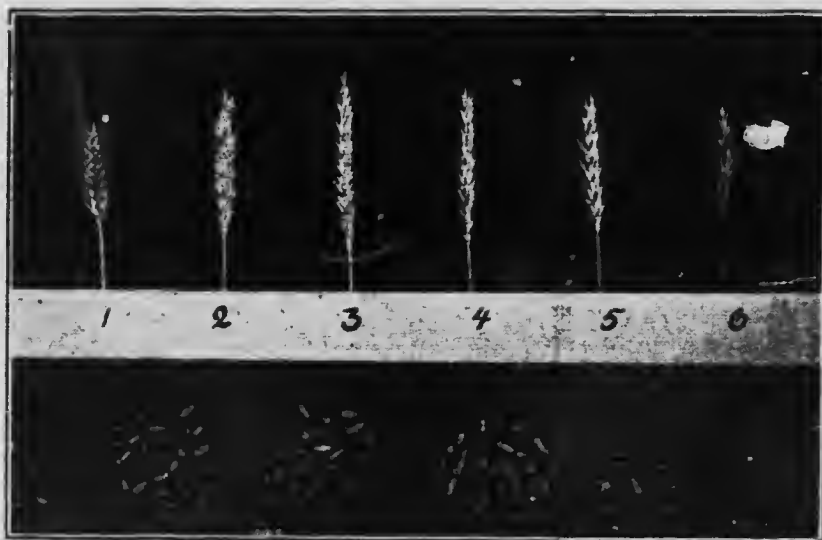


Fig. No. 1. Kubanka and Other Well Known Varieties.

- | | |
|--------------------------|----------------------------|
| 1. Kubanka Durum. | 4. Kitchener Hard Spring. |
| 2. Marquis Hard Spring. | 5. Preston Bearded Spring. |
| 3. Red Fife Hard Spring. | 6. Turkey Hard Winter. |

states. As a result of these trials Kubanka was found to be an outstanding good variety both in yield and quality, in western Dakota, eastern Montana and Wyoming. Its culture has since been taken up in a limited way in Saskatchewan.

USES.

Amber durum wheat is used for making the well known food products, macaroni and spaghetti. It is also in demand for the manufacture of puffed wheat breakfast food preparations and a large percentage is used for blending with common wheat in the manufacture of flour for bread and pastry making. Kubanka wheat is one of the best varieties of durum for milling purposes.

ADAPTATION.

Kubanka wheat has been grown in the semi-arid sections of the former Russian Empire for centuries. It is protected from the sun's heat and hot winds by means of long awns or beards. It has a vigorous root system and does not stool out very freely. These characteristics enable it to resist drought to a considerable degree. It also possesses a high degree of rust resistance, rarely rusting enough to injure the crop materially. **ON THE OTHER HAND, IT IS VERY SUSCEPTIBLE TO THE DISEASE KNOWN AS WHEAT SCAB.** The scab develops most freely in seasons that are rainy or wet during the period between heading and maturity. Because of the scab disease it is next to impossible to grow durum wheat in humid regions. This gives a monopoly in the production of durum wheat to the regions of light rain fall. *The range of Kubanka wheat includes the western two thirds of North and South Dakota, and the eastern half of Montana. From a comparatively limited trial it appears to be adapted to southwestern Saskatchewan. In the northern sections, there is reason to believe that it will not do any better than the standard bread wheat varieties.*

YIELDS OF GRAIN.

Kubanka has been compared with Marquis and Red Fife, two of the leading varieties of hard spring wheat, for a period of nine years at Saskatoon with resulting average yields as follows: Kubanka 26.2, Marquis 27.4 and Red Fife 27.8 bushels per acre. It has produced 16.8 bushels per acre as compared with 12.7 for Fife at Brookings, South Dakota as an average for 12 years. At Fargo, North Dakota, in a seven year average, Kubanka yielded 34.3 bushels per acre as compared with 24.7 for the Fife variety. At Highmore, South Dakota, Kubanka produced 16.6 bushels per acre in a ten year average as compared with 11.1 for Ghirka which is a variety quite similar to Fife. The Fife was not on trial during the same ten year period but produced an average of 11.5 bushels for the twelve years that it was on trial. The above results from Dakota are taken from U. S. Dept. of Agr. Bul. No. 618, which gives detailed accounts of experiments with durum wheat in many different localities. These results indicate that in regions where Kubanka wheat is adapted, it is likely to produce more bushels per

acre than the standard hard spring varieties, but that it is of no particular advantage in regions well adapted to the production of bread wheat.

THE SEED.

A limited quantity of seed has been introduced into Saskatchewan so that there is now a considerable amount for sale within the province. This seed is not always pure. A marked improvement can be made by any one who will take the trouble to select enough true to type heads for a seed plot. **OWING TO THE PREVALENCE OF WHEAT SCAB IN THE DAKOTAS, IT IS NOT DESIRABLE TO INTRODUCE SEED FROM THERE UNLESS PRECAUTIONS ARE TAKEN TO MAKE SURE THE SEED IS SCAB FREE.**

As with other wheat, thorough cleaning of the seed constitutes the cheapest and easiest way to improve the crop. In addition to thorough cleaning the seed should be treated in the usual manner with formalin for the purpose of killing the spores of covered smut and any other diseases that may be harboring on the surface of the seeds.

THE SEED BED.

The seed bed for durum wheat like any other wheat should be firm and even with a granular or "pebbly" surface. Any treatment that will give this result is likely to prove satisfactory. If summerfallow is used it is preferably plowed in late May or early June and cultivated sufficiently to keep it reasonably free from weeds until fall. The last cultivation in the fall ought to be deep enough to leave the land ridged to help check soil drifting during winter. In the spring a limited amount of cultivation is desirable to warm the seed bed and destroy weeds that have made an early start.

If land which has produced an intertilled or hoed crop such as corn, potatoes, oats in three row groups, mangels etc., is used, it should be double disked and harrowed once or twice before seeding unless liable to drift. It is not good practice as a rule to try to grow two grain crops in succession in the semi-arid sections but under some circumstances, it may be necessary to do so.

SEEDING.

In general, the earlier the crop is sown, the better will be the yield and quality. Occasional seasons prove exceptions to this rule, owing to distribution of the rainfall, but the rule holds nevertheless. Kubanka wheat resists considerable frost in the spring so that there is little to fear from that source. An early sown crop often dodges rust or drouth better than one that is sown late. Five or six pecks per acre is the most common rate of seeding. As the seed is larger and the plants produce less stools than Marquis or Red Fife, a correspondingly heavier rate of seeding is necessary. A good way to determine the proper rate of seeding is to use one or two more pecks of seed per acre than one is accustomed to use of the common wheat.

The ideal depth of seeding is two to three inches, but to insure even and prompt germination it is necessary to place the seed in moist earth.

CULTIVATION.

Ordinarily, no cultivation is needed but in sections where the Russian thistle is prevalent, the harrow can be used to destroy the small seedlings after the grain is well up. The thistles start later than the grain if the seed bed has been well prepared. Harrowing after the grain is well established will destroy myriads of the seedling of thistles without material injury to the grain.



Fig. No. 2.

A Field of Kubanka S.D. 75 Wheat at Eureka Experimental Farm.
By courtesy S. D. Agricultural College.

Kubanka wheat is harvested exactly the same as other wheat except that the straw is inclined to be longer so that harvester or header must be adjusted accordingly. An occasional crop leans so that it has to be cut one way. Shocking is somewhat more difficult than with common wheat because the bundles are long and the large heads and beards tend to make the bundles top heavy. A shock of from 8 to 12 bundles makes a convenient and satisfactory size. If threshing cannot be done promptly it is worth while to stack the bundles in the usual round form.

MARKETING.

When any new crop is grown in a community, there is always difficulty in marketing it. The dealers may be slow in awakening to the fact that there is such a crop grown in their locality and neglect to adjust their business accordingly. In such communities, at first, it will be necessary to ship individual car loads. Owing to the many uses of the crop there is not likely to be much difficulty with the terminal markets absorbing all that is produced. Minneapolis is the leading

market for durum wheat in the United States. The Minneapolis price of durum wheat has usually been a little lower than for the same grade of hard spring but there have been years when durum wheat brought a better price than hard spring wheat. This was true during the Balkan wars when Russian wheat for the Italian macaroni and spaghetti manufacturers failed to find an easy outlet, so that American durum had to be substituted. The increasing importance of puffed wheat, macaroni, spaghetti and other durum wheat products, as well as the fact that a certain percentage of durum wheat flour can be used in making flour for ordinary uses should tend to hold the market price fairly close to that of hard red spring. The fact that the area in which durum wheat can be produced in North America is comparatively limited ought also to have a beneficial effect upon the market price in the future. For the first few years a good percentage of the Saskatchewan crop may be in demand for seed. It is of vital importance that mixing be avoided.

KUBANKA COMPARED WITH MARQUIS.

Kubanka wheat yields slightly less than Marquis at Saskatoon but has exceeded Marquis in yield at several other stations farther south. Kubanka resists drought better than Marquis and is perhaps 85 per cent. resistant to rust while Marquis is very susceptible. Kubanka is more subject to lodging owing to its tall straw, is a few days later in maturing and is more subject to wheat scab than Marquis. Both varieties hold their seed well but the Kubanka is superior in this respect being very free from shattering. Marquis is the leading bread wheat variety while Kubanka is a leader among durum varieties.

SUMMARY.

1. Kubanka is the leading variety of amber durum wheat introduced from Russia.
2. It is used for making macaroni, spaghetti and puffed wheat and to mix with other flour for bread.
3. It shows promise of being adapted to southern Saskatchewan more particularly the southwestern portion. It requires dry weather during the maturing period.
4. Kubanka is quite resistant to rust but is susceptible to wheat scab attacks.
5. Saskatchewan seed is to be preferred because there is danger of introducing scab if Dakota seed is shipped in.
6. Seed should be thoroughly cleaned and treated for smut.
7. Summerfallow or intertilled crop land is preferred as a seed bed.
8. Five or six pecks sown into moist ground as early in spring as land can be prepared usually gives good results. Cultivation is unnecessary, save harrowing to destroy small Russian thistles.

9. Harvesting is similar to the harvest of other wheat except for minor adjustments.

10. Marketing by individual car lots may be necessary in some localities at first but there is little doubt about its final market owing to its many uses and to the limited area in which it can be successfully grown, if natural economic laws are permitted to operate.

