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Crop

Variety

Recommendations

for

North Dakota

1957

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NORTH DAKOTA AGRICULTURAL COLLEGE

1957

**CROP VARIETY RECOMMENDATIONS
FOR NORTH DAKOTA**

The relative performance of crop varieties in any one year is influenced by various factors, including inherent capacity of the variety to yield, and environmental conditions such as temperatures, rainfall, rust and other diseases. No one can predict, with any degree of certainty, what crop conditions will be in the next season.

Based on past performance, and variety characteristics, the variety recommendations for 1957 in North Dakota are given in this circular.

WHEAT

Hard Red Spring

In the areas where most rust protection is needed Selkirk should be your first choice. Selkirk is beardless, fairly early, has fairly strong and moderately short straw, has moderate resistance to stem rust, including resistance to 15B and to leaf rust, and also has satisfactory resistance to covered and loose smut. Although there is some indication Selkirk may suffer from late summer drouth, or high ripening temperatures, its 15B stem rust resistance makes it the best choice where most rust protection is desired.

Lee will do well in areas where the rust hazards are not so great. Lee has good leaf rust resistance. It has some tolerance to 15B stem rust. Its earliness offers some protection from the standpoint of ripening ahead of serious injury in a rust season, high ripening temperatures or a later summer drouth.

Conley, a new beardless variety developed by the North Dakota Experiment Station, was allocated to counties for increase under contract in 1956. This variety shows more resistance to 15B stem rust than Selkirk and also resistance to some less prevalent races of stem rust which may be on the increase. It matures 3 or 4 days later than Lee, is resistant to covered smut, moderately resistant to leaf rust and to loose smut. Conley is susceptible to "black chaff" and to septoria, a leaf infection, which may lower its yield in some years. It has excellent milling and baking qualities. While Conley has some shortcomings, it is offered as a supplement to Selkirk.

In western areas, where the rust hazard is usually less, the variety differences would not be so great. However, the widespread occurrence of rust in some years makes it advisable to grow the most resistant varieties available on at least a part of your acreage, even in western North Dakota.

Durum

There should be sufficient seed of the four new durum varieties developed and released by NDAC to plant the entire durum acreage in 1957. Langdon and Ramsey seed supplies are available in larger quantities than Towner or Yuma.

Langdon is about two days earlier than Mindum and has shorter and stronger straw. It is moderately resistant to race 15B stem rust and has good resistance to many other races. Langdon is less resistant to leaf rust than other varieties. It has shown good capacity for yield over a wide range of locations and the test weight and semolina quality are satisfactory. Langdon tends to shed its awns when it ripens.

Ramsey matures about the same time as Mindum, is 1 to 2 inches shorter and has slightly stronger straw. It has resistance to 15B stem rust, but appears to be more susceptible at higher temperatures. Ramsey has shown good capacity for yield. Test weight and semolina quality are satisfactory.

Towner is similar to Mindum in maturity, height and strength of straw. Like Ramsey it has resistance to 15B stem rust but tends to be more susceptible at higher temperatures. Towner has high test weight and smooth kernels. Its macaroni making qualities are satisfactory. Tests indicate its yield behavior is somewhat erratic but best in the northern part of the durum area.

Yuma is about two days earlier than Mindum, with about the same straw strength and 6 to 8 inches shorter. It has good resistance to 15B stem rust. Yuma is a little lower in test weight than the other new durums, holds the kernel tight and so is sometimes hard to thresh. Its macaroni quality, while not as good as the other durums, is satisfactory.

Sentry and Venum are both earlier than Mindum. They have some tolerance to 15B and their earliness gives them a better chance to get by under rust conditions than the more susceptible varieties. Sentry is more susceptible to black point than other varieties.

OATS

A rather heavy infection of oat stem rust occurred in each of the three years 1953 to 1955 in eastern North Dakota. Both races 7 and 8 of stem rust have been present in these years but prior to 1955 Race 7 predominated and was causing the most injury. In 1955 both Race 7 and Race 8 built up to serious proportions in much of the eastern one-third of the state. 1956 was a comparatively rust-free year.

It is not possible to foresee if rust will be a factor in 1957 or if Race 8, as well as Race 7, will be prevalent in epidemic proportions again. However, if environmental conditions favor rust development, Race 7 is likely to again be more prevalent than Race 8. Variety recommendations, therefore, are made first on the basis of resistance to both races, and, second, in regard to varieties of early maturity and resistance particularly to Race 7.

For eastern sections of the state where rust hazards usually are the greatest, Ransom, Garry and Rodney deserve increasing consideration.

Ransom is an early maturing, yellow-oat released by NDAC and increased in southeastern counties in 1956. It has excellent resistance to all known races of stem rust and has moderate resistance to crown (leaf) rust. Ransom is not a heavy yielder and is recommended only for southeastern areas needing maximum rust resistance and earliness to escape high ripening temperatures or summer drouth.

Garry, while slightly late for the most southern sections of the state, also has good resistance to all known races of stem rust and moderate resistance to leaf rust. A good choice for the northern counties is Rodney, which is later than Garry to head and ripen, resistant to both races 8 and 7 (not to 7A), and with a very good capacity for yield. Rodney, too, is moderately resistant to crown (leaf) rust.

Varieties resistant to Race 7 of stem rust, although lacking in resistance to Race 8, are the next choice for eastern North Dakota and are also well adapted to the rest of the state. These include early ripening varieties for the southern area, such as Andrew, Ajax, Marion and Mo. 0-205. Branch and Sauk are slightly later, yield satisfactorily and, along with Ajax, are more suitable for the northern area.

BARLEY

Kindred (L) and Montcalm continue to be varieties preferred by maltsters. Kindred does have a weak straw and in recent years has suffered yield losses from leaf diseases to which it is susceptible. Montcalm, a blue aleurone barley, has a more limited demand for malting. It is a good but more erratic-yielding variety, susceptible to stem rust and later in maturing.

Trall is a new malting variety released by NDAC in 1956. Seed should be available in good supply for planting in 1957. Trall is a medium early, white aleurone, rough awned variety. It is resistant to stem rust. Compared with Kindred it has stronger straw, matures about the same time and yields better. Like other varieties it lacks in resistance to some leaf diseases increasingly prevalent in recent years. Malting and brewing tests have indicated that, except for a relatively smaller proportion of plump kernels, it offers promise as a malting variety.

For feed varieties Tregal, Vantage, Husky and Traill are recommended. Husky yields, though more erratic, have been about equal to Tregal and Vantage. It has moderate straw strength, matures slightly earlier than Vantage, is resistant to rust but susceptible to loose smut. As Vantage is later in maturity, and susceptible to spot blotch, it is recommended only for the northwestern area of North Dakota where the hazards of this disease are less and high temperatures are less frequent. Because of late maturity, Husky, too, will be best adapted in the more northern sections of the state. Traill has yield capacity about equal to feed barley varieties.

All commonly grown varieties of barley lack resistance to Septoria, a leaf disease very prevalent in eastern North Dakota and particularly severe in 1955.

FLAX

For early seeding under favorable seedbed conditions, B 5128, Redwood, Norland and Victory are recommended. These late maturing varieties will produce the higher yields when planted early and growing conditions are favorable. Norland is a selection out of Victory, selected for more uniform plant characteristics and greater rust resistance. In other characteristics it is quite similar to Victory.

For late seeding, or in seasons when drouth or high temperatures may reduce yields of late varieties, earlier ripening varieties, Marine and Sheyenne are recommended. Raja is a good new early rust resistant Canadian variety but appears to have no advantages over Marine and Sheyenne.

Linda is a mid-early variety which has large seed. It is not as resistant to rust as the other varieties. However, in tests to date, it has been a good yielding variety.

De Oro (C.I. 977) is a late maturing, yellow-seeded variety which is an excellent yielder when sown early and when growing conditions are favorable for a late variety. It is resistant to rust but more susceptible to pasmo than other varieties.