Seed Distributions in 1951

By T. E. Stoa[1]

In accordance with North Dakota Agricultural Experiment Station policy regarding release of new varieties, early distributions are made under contract to this experiment station. Under this contract, the experiment station retains an option on from 75 to 90 per cent of the increase obtained the first year. This is to enable this experiment station to help others get seed the following year if they wish, and at a price that is fair to the seed producer and buyer alike.

In 1951 one variety of wheat (Lee) and two varieties of flax (Redwood and Marine) were thus placed with cooperating farmers for further increase. In addition, Nugget durum and Shelby oats were given wider distribution. However, since it is expected that the seed of Nugget and Shelby will be in adequate supply at the end of 1951, they are not under contract and may be purchased directly from growers or regular seed dealers offering them for sale.

Farmers who wish to obtain seed of any of these, particularly Lee wheat and Redwood or Marine flax, for 1952 seeding, all of which are being increased under contract with this station, should inquire of their county agents to learn where the nearest increase fields are. This will give them an opportunity to see fields in production this year.

Application for seed from any one of these fields may then be filed with the county agent or sent directly to North Dakota Agricultural Experiment Station, Fargo, N. D. Where the supply of seed may still be somewhat short, or the demand especially large, some restriction as to the amount allotted to any one individual may have to be made. Other than this, however, it is expected that through cooperation of the contract growers it will be possible to take care of most requests and thus gain wide distribution of these varieties in 1952.

Lee Wheat

Lee wheat, developed at the Minnesota Agricultural Experiment Station and approved for release in the hard red spring wheat growing states, because of its greater leaf rust resistance was given fairly wide distribution in 1951. In North Dakota about 2,000 bushels were released to 134 seed growers, cooperating with the North Dakota Agricultural Experiment Station in the further increase of the seed supply. Increases are also being made on the Agronomy Seed Farm, Casselton, and the North Central Experiment Station and Seed Farm, Minot.

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The advantage of Lee is primarily in greater leaf rust resistance and more satisfactory yields under conditions where leaf rust will injure other varieties. In years or areas where leaf rust is not serious, other varieties will usually do as well. Thus Lee is likely to be grown most extensively in the eastern and northern sections of North Dakota. It has not shown to the same advantage where tested in the southwestern and western sections of the state. Lee, like Mida, is susceptible to loose smut. It has satisfactory resistance to the common races of stem rust and, like the other varieties now in use, is lacking in resistance to Race 15B. Lee is an early ripening, bearded variety.

Redwood Flax

Redwood flax, developed in Minnesota, has also been increased and approved for release in North Dakota. In 1951 the North Dakota Agricultural Experiment Station allotted about 200 bushels of seed to 22 growers cooperating in further increase. A redistribution of 80 per cent of this increase will be made for 1952 sowing. Redwood is a moderately late variety, medium tall, has blue flowers, brown seed, good wilt resistance and is immune to all races of rust known in this region. In the trials to date it has shown good capacity for yield and should be a welcome supplement to other good rust resistant varieties now in use.

Marine (C.I. 1135) Flax

The North Dakota Agricultural Experiment Station and the U.S. Department of Agriculture announce the release of a new variety of flax. This new variety, C.I. 1135, recently named Marine, was selected from a cross of C.I. No. 975 with Sheyenne, made by H. H. Flor, Division of Cereal Crops and Diseases, in cooperation with the North Dakota Agricultural Experiment Station, in 1942. By growing the F_1 and F_2 generations in the greenhouse during the winter it was possible to select Marine as an F_4 line in 1944.

Marine has shown considerable tolerance to pasmo, has been immune from North American races of flax rust, and has satisfactory wilt resistance. Marine is a blue flowered flax. The brown seeds are small to mid-size, slightly smaller than Dakota. It grows about as tall as Dakota and ripens a day or two earlier.

Marine has yielded satisfactorily at most stations where tested in the north central region. In six years of nursery trials at Fargo it has averaged 21.7 bushels per acre compared with 20.3 for Sheyenne, 19.6 for Dakota and 21.9 for B5128. Comparisons covering five years in regional nursery trials at Fargo and Park River, N. D., Crookston and Morris, Minn., Brookings, S. D., and Winnipeg, Manitoba, Canada, gave the following average yields: Marine 20.0, Dakota 20.1, Rocket 19.1, Bison 19.1 and Redwing 17.9 bushels per acre.

For the larger field plot trials in North Dakota, covering 11 station years, comparable average yields were Marine 15.1, Sheyenne 13.9, Dakota 16.0, Bison 15.3 and B 5128 17.1 bushels per acre. There was no serious injury from pasmo to the more susceptible varieties during these years.

In yield of oil, Marine has averaged higher than Sheyenne, Dakota and Redwing; and about the same as Bison, Victory, B 5128 and Rocket. The oil, as indicated by the iodine number, is of excellent quality.

While Marine has yielded satisfactorily at most stations where tested, it is a relatively early variety and therefore should not be expected to have the capacity for high yields common to later ripening varieties like B 5128, where these can ripen without injury from late drought or high ripening temperatures. Marine, therefore, appears best suited to the more southern sections of the north central flax growing area and elsewhere where an early variety is desired. Date of sowing tests show it to be satisfactory for late sowing.

Increasing the seed of this new variety was begun in 1950. In 1951 about 410 bushels of Marine were released to 33 North Dakota farmers, who are cooperating with the North Dakota Agricultural Experiment Station in its further increase. Thus it is expected that a considerable supply of this seed will be available for general distribution in 1952.

In North Dakota this new variety is expected to supplement Sheyenne, where an early ripening variety is desired, and to take over a part of the acreage previously given to Dakota, a variety which no longer can be considered resistant to the races of rust now present in this area.

Nugget Durum

Nugget (Ld 303) is an early ripening amber durum, developed cooperatively by the U. S. Department of Agriculture and the North Dakota Agricultural Experiment Station. Nugget was released for increase in 1950 and put into wider distribution in 1951. From the distributions made in 1951, and the increase expected, there should be a sufficient supply of seed at the end of the 1951 season to take care of any urgent demand. Nugget is expected to supplement rather than replace other varieties of durum, except where earliness is especially desired.

Nugget will head and ripen from six to seven days earlier than Stewart. It has shorter straw, is equal to Stewart in resistance to leaf rust and the common races of stem rust, but like Stewart is lacking in resistance to race 15B. Nugget threshes easier than Stewart.

Since it ripens several days earlier than Stewart, Nugget does not have the capacity for yield which a longer growing season

variety usually has. Nugget, therefore, is expected to have its chief use in the southern sections of the durum area, or other sections where earliness is desired to escape late summer drought, high ripening temperatures or rust injury. Nugget has excellent macaroni qualities, being superior to Stewart in this respect.

Shelby Oats

Shelby is a selection from the cross Anthony x Bond, made at the Iowa Agricultural Experiment Station and first released to growers in 1950. A fair-sized acreage of this variety was also sown in North Dakota in 1950 and 1951.

Shelby, like Clinton, is resistant to the common races of stem rust, including Race 8, but not Race 7. Race 7 increased in prevalence throughout the oat area in 1950. Some North Dakota grown varieties which resist Race 7, but not Race 8, include Marion, Ajax, Andrew, Vicland, Rainbow and Beaver.

Shelby is resistant to most of the races of crown (leaf) rust, including more tolerance to Race 45 than Clinton. It is slightly taller and later than Clinton. Under North Dakota conditions it has been yielding better. Shelby has moderately strong straw, white kernels and good test weight. Because of the prevalence in this area of Race 7 in 1950, Shelby is not expected to take over any large acreage in North Dakota, and is offered primarily as a supplement to Clinton, because of more tolerance to Race 45 and a promise of higher yields.

In the absence of serious rust infection, varieties such as Ajax, Marion, Rainbow, and Beaver usually have outyielded the more rust-resistant Bond hybrids, such as Clinton, Benton and others. In western North Dakota, where both stem and crown rust injury are less common, early maturing Gopher has continued to be among the better yielding varieties.

LISTERIA IN SWINE

Listeriosis of swine may assume several different forms, varying from encephalitis and septicemia to the presence of the organism in only isolated tissues. Many veterinarians have suspected that apparently healthy animals may be carriers of listeria and that, under certain environmental conditions, the organisms increase in pathogenicity and produce disease. F. M. Bolin and D. F. Eveleth of the North Dakota Agricultural Experiment Station veterinary medicine staff, tell in a recent issue of the JOURNAL OF THE AMERICAN VETERINARY MEDICAL ASSOCIATION (Jan. 1951, p. 7) of a postmortem examination of two dead pigs from a drove of 40 to 50 pound feeder pigs. Examination showed the snout and stomach of each pig were found to be severely burned. A diagnosis of lye poisoning was made. This later was confirmed. Livers of both pigs were cultured. From one a mixture of staphylococci and streptococci was obtained, while from the other a pure culture of "Listeria monocytogenes" was obtained.