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Use Best Crop Varieties

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"To plant seed of anything other than the best available variety shows careless indifference — certainly not good farming."

The largest return on the investment in our cropping program can be secured by obtaining and planting the best varieties. We are all looking for varieties which give top yields and have other desirable characters.

The production costs are about the same whether the acre yield is large or small, and we know that with a given soil and season one variety may produce much larger yields than another. To plant seed of anything other than the best available variety shows careless indifference — certainly not good farming.

Where can you find the best varieties? A little booklet is published each year by the Iowa Agricultural Experiment Association, Ames, entitled, "Know the Seed You Plant." This lists sources of certified seed of improved varieties. The booklet may be had for the asking.

We are listing here and briefly describing varieties that are suitable for Iowa.

Corn Hybrids

We speak of corn acreage goals, but we all know that it is the total bushels of sound corn that count.

Many well adapted hybrids are available to Iowa farmers from the several hybrid seed corn companies and from individual growers.

It is not possible even to name all of the well adapted, high yielding hybrids available. We have no accurate information on the relative performance of many of these. The performance of a large number of available corn hybrids, however, has been determined and reported from year to year and these may be regarded as establishing certain standards (Iowa Bulletin P58, Iowa Corn Yield Test for 1943).

A brief statement regarding the adaptation and growth habits of some of the more important hybrids from the experiment stations and the U.S.D.A. follows:

**Iowa Hybrid 939** (L239 x 1205) (Os420 x Os426) is adapted to north central Iowa. It was one of the first hybrids to be released by the Iowa Station and has yielded well for many years under a wide range of conditions. It is somewhat susceptible to stalk breaking and ear dropping. When dry it does not pick clean with a mechanical harvester.

**Iowa Hybrid 4316** (L239 x 1205) (WF9 x M14) is one of the new Station hybrids. It is intermediate in maturity between Iowa Hybrids 931 and 939. It is superior to both of these hybrids in resistance to lodging and ear dropping. In the northern section it has consistently outyielded Iowa Hybrid 931 and in the north central section has been slightly superior to Iowa Hybrid 939 in yielding ability.

**Iowa Hybrid 306** (L239 x 1205) (Os420 x WF9) is of the same general maturity as Iowa Hybrid 939. Over a period of years the two hybrids have similar yield records. Iowa Hybrid 306, however, is somewhat more resistant than Iowa Hybrid 939 to lodging and ear dropping and is much better adapted to mechanical picking.

**Iowa Hybrid 4297** (WF9 x 1205) (187-2 x M14) is adapted to central Iowa. Its yield and resistance to lodging and ear dropping have been quite...
One of the first problems in producing hybrid corn is to inbreed and develop pure lines. Later these are crossed satisfactory. It is also well suited to mechanical picking.

**U.S. Hybrid 35** (WF9 x 38-11) (Hy x R4) is adapted to the southern half of Iowa and has a good yield record. It has excellent resistance to lodging and husks quite satisfactorily with a mechanical picker.

**U.S. Hybrid 13** (WF9 x 38-11) (Hy x L317) is one of the most popular late hybrids throughout the Corn Belt and is recommended for southern Iowa. It is somewhat later than U.S. Hybrid 35 but similar in general performance.

**Popcorn**

**Japanese Hull ess** was for many years more extensively grown in Iowa than any other variety. It has very short, chunky ears with slender shoe-peg type kernels. It is well adapted to northern but not to southern Iowa.

**Yellow Pearl** has a medium high popping expansion, is fairly free from coarse hulls, and is early enough to be safe in northern Iowa.

**South American,** also called Dynamite, TNT and Mushroom, is very popular as a commercial variety. It is late in maturity and crowds the season north of central Iowa.

**Tom Thumb,** the name applied to several small-eared types, is suited only to the home garden.

**Soybeans**

Soybeans in Iowa have increased from a few thousand acres to over 2 million in less than 10 years. The average acre yield has steadily increased, and a considerable part of this gain must be credited to better varieties.

**Habaro** is suitable for planting in extreme northern Iowa on fertile soils. It gives good yields but shatters some if not harvested promptly when ripe. It is not recommended for upland soils and has a lower oil content than most other varieties. It is 6 to 8 days earlier in maturity than Richland.

**Earlyana** is a new variety from the Indiana Station not generally available for 1944. It grows somewhat taller than Richland or Habaro so that it is better suited for less fertile soils. It is 4 to 5 days earlier than Richland.

**Early Manchu** strains are suitable for northern Iowa and are better suited than Habaro or Richland to the less fertile soils because of their taller growth. There is some tendency to lodge on the more fertile soils. Yields are comparable to those of Richland.

**Richland** is recommended for general planting in northern and north central Iowa on the more fertile soils, where its earliness, unusual resistance to lodging and its high yields have made it a favorite. Planting should not be later than May 20 in northern Iowa. In central Iowa, Richland has equaled Mukden in yield on the more highly productive soils.

**Mukden,** previous to the introduction of Richland, was the most extensively grown variety throughout central and north central Iowa. It matures 4 to 6 days later than Richland. It is only slightly earlier than the B. H. Manchu generally grown in central Iowa. With the exception of Richland it shows the least lodging of any variety extensively grown in the state.

**B. H. Manchu** is well suited to north central, central and south central Iowa. For many years this was the most extensively grown variety in the state. It matures a day or two later than Mukden and is not as resistant to lodging. It yields well and is recommended on the medium to less fertile soils.

**Lincoln** will have an important place in north central, central and southern Iowa. Its maturity is between B. H. Manchu and Illini. It is very similar to Manchu in growth habit but has given significantly better yields than any of the varieties heretofore generally available in the state. The total seed available for 1944 is now in the hands of seed increase growers. Con-

These are Lincoln soybeans, released this year for increased seed production. They are adapted to central and southern Iowa. The acre yield and percentage of oil is superior to other varieties with which they have been compared over a 5-year period in Iowa, Illinois, Ohio, Indiana, Missouri and Nebraska.
siderable quantities should be available for 1945 plantings.

**Dunfield** is recommended for central and southern Iowa. It yields well and matures a day earlier than Illini.

**Illini** probably is the best yielding variety available for general planting in southern Iowa. On fertile soils this variety is likely to vine and lodge more than other varieties generally available.

**Chief** has a limited place in extreme southern Iowa if planted early. It is about 6 days later than Illini and is particularly adapted to medium and poor soils.

**Oats**

The oat crop is the most important small grain on Iowa farms. Iowa farmers are rapidly adopting the new improved varieties. A recent survey predicts that 80 to 85 percent of the 1944 Iowa oat acres will be sown to the new varieties released from the experiment stations within the past 5 years.

Tama, Boone, Control, Cedar, Vikota and Vicland are selections from the cross of Victoria and Richland. In cooperation with the United States Department of Agriculture all of these were selected in early generations at the Iowa Station on the basis of resistance to stem and leaf (crown) rusts and to the smuts. It superior also in yield, bushel weight and strength of straw. It is well adapted throughout Iowa. It may not grow tall enough on high land of low fertility.

**Boone** is very similar to Tama but has been found susceptible to a leaf spot disease which somewhat depressed the yield.

**Control** is similar to Boone in all general characters. It has yielded slightly less than Tama.

**Marion** is about 3 days later in maturity and 4 to 5 inches taller than Tama, Boone or Control. This variety has not stood up as well on low land of high fertility as the other recommended varieties. It has shown high resistance to stem rust and the smuts and is moderately resistant to leaf rust. It appears to be better suited to northern than to southern Iowa.

**Barley**

Wisconsin 38 is a smooth-awned variety now grown more extensively in Iowa than any other. It is too late to give best results in most sections of southern Iowa.

Glabron is a smooth-awned variety less likely to lodge than the Wisconsin 38 and may be successfully grown farther south. It is classified on the market as a feed barley.

Spartan is a two-rowed barley that has shown marked resistance to lodging. This variety has given excellent results in western and southwestern Iowa. It is a feed and pearling variety.

**Winter Wheat**

Pawnee is an early, short, stiff-strawed variety — recently released by the Kansas and Nebraska stations — recommended for southern Iowa.

Iowin is resistant to several forms of rust prevalent in the state. Its chief weakness is its tendency to lodge, especially on the more fertile soils of north-
In Iowa practically the entire acreage of rye is grown for pasture or as a cover crop. The relative value of available varieties is dependent, very largely, upon their winter-hardiness, which is in the order of: Dakold, Swedish, Imperial, Rosen, Emerald and Balbo. Balbo, unlike other rye varieties, does not taint the milk when pastured by dairy cows.

The most common cause for oats going flat is rust. The new rust-resistant lines (left) are compared with non-resistant lines (right).

Alfalfa

Ladak, over a period of years, has given higher yields than any other variety. It is winter-hardy, somewhat tolerant to bacterial wilt and persists considerably longer than Grimm or Common. Its extremely heavy first crop may be considered a disadvantage.

Cossack has given almost as high yields as Ladak, is winter-hardy, ranks well above Grimm in persistence of stand and recovers rapidly after cutting.

Ranger is a new wilt-resistant variety developed by the United States Department of Agriculture. Its yield has been slightly less than Cossack or Ladak but because of its wilt resistance should be a desirable variety. The supply of seed is limited.

Grimm has been more widely grown than any of the other winter-hardy, variegated varieties. It is susceptible to wilt and is not recommended where alfalfa wilt is serious.

Common northern grown strains are satisfactory for use when stands are not to be left for more than 2 or 3 years.

Other Forages

There is considerable interest in improved strains of other small seeded legumes and grasses. Some of these are listed here.

"Southern Type" Bromegrass has been found superior to the northern type in yield, heat and drought resistance and ease of getting stands, particularly in western and southern Iowa. The seed supply of this type is being rapidly increased, but as yet only a limited supply is available. The three recognized strains of this southern type, all of which are very similar in productiveness and character of growth, are Fischer, Lincoln and Achenbach. The supplies of seed for 1944 spring seeding are exhausted but there should be good supplies for 1944 fall seeding and for 1945.

Midland Red Clover is a composite variety developed by combining several superior Corn Belt strains and is recommended for general use.

Ladino White Clover is a mammoth form of white clover which under favorable conditions may grow to a height of 8 to 12 inches. It gives enormous yields under irrigation and in sections of high relative humidity where the summer temperatures are not extreme.

Early Korean Lespedeza can be expected to mature seed and to carry over from year to year as far north as central Iowa, whereas the ordinary Korean cannot be depended upon north of the southern two or three tiers of counties. The Early Korean (No. 19004) is susceptible to a bacterial wilt disease, which limits its usefulness.

Birdsfoot Trefoil is a perennial legume with a rather wide range of soil adaptation. It appears promising as a pasture plant to be grown in association with the pasture grasses. It must be tested more widely before it can be generally recommended. Of the two types, the "broadleaf" and the "narrowleaf," the broadleaf appears to be more promising.

Many Corn Belt strains as well as introduced strains and varieties of clover have been compared at Ames through a period of years. Extreme differences are found as below. Midland is a composite of the best from several states.