

Find Corn Adapted to Resist Drought

Federal and State Experts Report Good Results of Experiments.

(Prepared by the United States Department of Agriculture.)—WNU Service.

Last summer's drought delayed the corn-breeding programs carried on jointly by the United States Department of Agriculture and several of the state experiment stations, from one to three years, but it enabled those in charge of the work to compare various strains of corn under drought conditions and to bring to light unexpected information.

The bureau of plant industry reports that one or more strains of corn at the various stations withstood the lack of moisture and the temperatures of 100 degrees Fahrenheit and upward better than other strains. In some cases resistance was not great enough to be of value; other strains, however, silked and tasseled with little or no apparent damage.

Incommoded by Drought.

Dark Green Lancaster, a self-fertilized strain developed at Ames, Iowa, had shown much promise in favorable corn years. Last summer the strain demonstrated its ability to thrive under drought conditions as well. About 3,000 plants of crosses having Dark Green Lancaster as one parent were included in the tests at Ames. None of these plants had any of the top leaves burned and only 12.6 per cent had burned tassels.

In contrast, 37 per cent of the plants of Krug, the best of 12 commercial varieties in the test, had burned tassels and 13.4 per cent had burned top leaves. The 10 crosses of Dark Green Lancaster averaged a yield of 53.5 bushels per acre, in comparison with 37.5 bushels for Krug.

Promises for the Future.

Many other characters besides yield and drought resistance must be combined to produce a satisfactory strain of corn for practical purposes. This requires time for its accomplishment. The important point at present is that apparent drought resistance has been found in self-fertilized strains of corn which may be expected to breed true and thereby provide a hereditary source for this characteristic for use in future breeding operations.

Scatter Manure for Benefit of Pastures

On farms where there is sufficient stable manure to top-dress pastures, there is some doubt as to best methods of using it to the benefit of pasture, without being in the way. The manure for this purpose should be very fine. C. W. Gay, animal husbandman, Ohio State university, gives the following sensible advice:

"Top-dress pastures in fall or early spring. The manure of one kind of stock should not be put on sod to be grazed by that same kind of stock. Germs of tuberculosis and abortion disease may infect the manure of cattle and spread to stock on pasture. In the same way sheep and hogs may become infested with parasites if grazed on grass top-dressed with sheep or hog manure. But the parasites of sheep do not infest hogs and vice versa. Cattle manure had best go on corn ground, or other ground to be plowed, while cattle pastures may be top-dressed from either the horse, hog or sheep barns."

An old plan which still holds good, is to break up and scatter the large pieces of dry cow manure from the places where dropped. We knew one farmer who, in walking about the fields where cows had run, always carried a stick with a natural crook at the end, making a weapon something like a golf club, which with one blow scattered these dried clumps where they would do good instead of spoiling the pasture grass where they lay.

Save Fruit Trees From Insects and Diseases

Whether they bear or not, fruit trees should be sprayed this year to protect the foliage from insects and diseases, according to W. H. Alderman, chief in horticulture at Minnesota University farm. This is necessary to insure having the trees in proper condition for next year's production.

Mr. Alderman's statement is prompted by indications that some varieties of plums and certain orchards located on low ground have suffered from frost. In such cases, orchardists may be inclined to regard spraying as unnecessary for the balance of the season.

On the contrary, Mr. Alderman points out, healthy foliage is essential for the development of fruit buds which produce the next year's crop, as the leaves manufacture the plant food material which is transferred back to the wood and stored there. He advises at least three sprays distributed throughout the season.

Beef Rations

Shelled corn or ground corn and cob meal are preferred in feeding beef calves to ear corn or even broken ears by L. P. McCann, noted extension specialist in animal husbandry. Oats, barley and a limited amount of wheat may be used with corn for fattening steers but should be ground. Oats are too bulky because of the hulls to use in large quantities but may comprise a third of the ration, while barley or oats may be used to the extent of one-half the grain ration.

Advocates Wheat as Substitute for Corn

Expert Advises Its Use in Rations of Hogs.

Proving an excellent substitute for corn in the hog ration, wheat may be fed with profit as long as its price stays near its present level and does not cost more than 10 to 12 cents more per bushel than corn, states J. W. Wulchet, specialist at Ohio State university.

As a feed for hogs, wheat is worth about 6 to 8 per cent more than the same weight of shelled corn and may be substituted entirely for corn in the ration, according to Wulchet. In fact, some tests show that greater returns are obtained by feeding wheat alone with some good protein supplement than by mixing large amounts of corn in the ration.

To get the most out of wheat, Wulchet believes that it is best ground or crushed, preferably the latter, as grinding fine does not improve the digestibility and only adds to the cost. Soaking wheat improves it about 1 per cent, but grinding adds about 16 per cent to its value.

As wheat contains more protein than does corn, less protein is necessary to balance it. Corn, he says, requires about 10 per cent tankage to balance it and wheat requires about 8 per cent. So by feeding wheat good results may be obtained although less tankage and other high protein feeds are used.

No More Useful Feed Than Silage on Farm

Silage is one of the most useful feeds that is produced on the average farm. The entire crop is preserved with much less cost than from any other method in handling. Good clean silage that is free from mold is greatly relished by all classes of live stock. With corn silage and alfalfa hay as the basal ration, supplemented with linseed meal and corn, experiments at the Michigan State college experiment station, as well as at other experiment stations, have shown that considerable grain may be saved by inducing the calves to eat more silage and hay in the early part of the feeding period. When starting on feed, calves weighing 375 to 400 pounds will gain practically as fast for the first two months with about six pounds of grain and all the silage they care to eat as if they are eating eight to ten pounds of grain and considerably less silage. In fact, calves fed six and one-half to seven months gained almost as fast and were practically as fat when fed approximately two-thirds as much corn as other calves that ate from a self-feeder. The selling price was the same two years out of three.

Lack of Protein Cause of Rooting by Pigs

Pigs fed a ration deficient in protein rooted more and more as the length of the feeding period extended at the Ohio experiment station. Pigs which had a good ration with plenty of protein and salt rooted very little, according to W. L. Robinson, reporting his year's research work.

Fish meal again proved to be the most economical protein supplement for corn fed to growing pigs. Minerals added 18 per cent gain when fed with corn alone and reduced the feed required 13 per cent. No protein supplement was used.

Ground oats were more productive than whole oats with tankage and alfalfa. A ration of ground corn, oats, tankage and minerals proved to be more profitable than the corn-oat combination. Cost of production was \$8.92 a hundred. Hulling oats was not profitable for pigs.

Ordinary cottonseed meal fed to pigs with the regular corn ration did not do well. Some died after the 40th day. Special cottonseed meal furnished the pigs a good protein supplement and on which they did well.

O. P. V. Suitable for Either Silage or Hay

At one of the Dominion experimental stations in Ontario an experiment has been conducted for a period of years to determine the best time for sowing a mixture of oats, peas and vetch (O.P.V.) for silage or hay. The mixture used was two bushels of oats, one bushel of peas and one-half bushel of vetch per acre. The seed was sown on six different dates each year, at intervals of seven days. The average date of the first seeding over a six-year period was May 23. The average date of the last seeding, June 27.

The experiments showed that good yields may be grown either for silage or hay; that the earlier seedings produce the better yields; yet very good results may be obtained even from seeding later in the summer. Hence, the crop may be grown even on low-lying land, slow to dry up in the spring.

Around the Farm

Nearly half the world's population uses soy beans daily as a protein food.

The amount of oats that can be fed hogs, sheep and chickens is limited. Oats has a place in every laying ration.

Government scientists are experimenting with wheat and oat straw in an endeavor to make use of these farm products in the manufacture of high quality paper.

NEW DEVICE BOON FOR THE SIGHTLESS

A newly perfected device which converts printed words into large raised lines on aluminum foil so that blind persons may read by touch was demonstrated by the inventor, Robert E. Naumburg of Cambridge, Mass. The new printing visagraph, as it is called, rapidly produces enlarged, embossed letters on a wide roll of thin aluminum foil. These letters may be felt by the finger of the blind person in the same way that he reads Braille or other embossed type. The outstanding advantage of the product of the printing visagraph over the old embossed types is that it will enable the blind to have access to books printed in ink. This will increase their present range of reading about 1,000 times. The New York public library contains about 3,000 books in Braille and more than 3,000,000 books printed in ink.

The visagraph, Mr. Naumburg explained, is especially useful to the blind student at school, college or in post-graduate work, and to the blind professional person, whether a doctor, lawyer, writer, teacher, or engineer. It is very helpful to the student of foreign birth, as hardly any literature is available in foreign languages in embossed type.

Mr. Naumburg was assisted in the demonstration by Miss Edith Milner, a student at Perkins Institute for the Blind at Watertown, Mass. After less than one month of practice on the visagraph, she was able to read from a book printed in ink with surprising fluency. A month ago she did not know the shapes of the alphabet printed in ink, having always read Braille, which does not resemble the printed alphabet.

Adults who lose their sight, Mr. Naumburg explained, will welcome the printing visagraph, which enables them to visualize with their finger tips the letters whose shapes they will remember.

The printed letters are magnified in height and width, so that they are about the size of Braille characters, with which most of the blind

are already familiar. The letters are composed of dots and lines. A capital T has a long line across the top, and a row of dots forming the vertical line. These dots are close enough together to give the feeling of a continuous letter.

The impressions on the aluminum roll may be preserved for future reference and for instruction purposes, or they may be erased by passing the aluminum foil through a pair of rollers, like a clothes wringer. The aluminum may then be used over again. The roll of aluminum resembles, in size and shape, the music roll of a pianola. The printing visagraph is about the size of an office desk.—Boston Transcript.

Electric Eye Aids Blind

"Electric eyes now are being used to 'see' for blind persons in guiding them about their homes by giving them a sense of direction as they move about. The electric eye, or photoelectric cell, is made up like a flashlight with a small buzzer connected to its battery, according to Popular Mechanics Magazine. Conventional electric lights are then placed about passages and hallways, particularly at turns.

The blind person turns the electric eye about much as a person flashing his light would direct a flashlight. When the device points to a light source, contact is made and the buzzer sounds. As long as the buzzer is sounding the blind user knows he is on the right path.

Sometimes Seems So

"The lawyers make some glowing pleas for these prisoners." "To hear the orations, anyone of them has led a better life than I have," commented the weary court clerk.

The Blame

"Poets are born and not made." "Yes, blame it on the parents! They get the blame for everything else."

If we keep in mind our comparative unimportance, our troubles won't worry us so much.

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A HOTEL OF KNOWN REPUTATION

Cave Sound Reason for Multiplicity of Wives

Maurice Hindus, the Russian author, was talking about his experiences in Russia.

"In Russia the unrestricted divorce law is abused," he said. "Its abusers don't think so, though."

"I lunched one day in Moscow with a commissar who had already had 14 wives, and he was only twenty-nine years old.

"He said it was to his wives that he owed his success, so naturally the more wives the merrier. He said without his wives' counsel and support he'd still have been a stoemaker's apprentice.

"Then he wound up with an epigram.

"The born leaders of men," he said, "are women."

Village Built for Bombers

To provide target practice for airplanes in a recent aviation meet in Italy an elaborate reproduction of an Arabian village was built in miniature. The model was raked with aerial bombs shot from airplanes, fly-

ing low. Big bombers and small scout machines were used in the attack, and the maneuvers were carried out in strict accordance with the latest Italian military development. The speed in which the village was completely destroyed was declared to be an indication of the effective offensive of the present airplane in waging war.

Thank Goodness

The mayor had just laid the foundation stone of a new wing for the hospital, and the spectators awaited his speech.

"What can I do, Mary?" whispered the mayor to his wife. "I've laid the stone on top of it."

Worth Pondering Over

If the devil car have first chance at our children it doesn't make a particle of difference to him how high we build our church steeple. —Capper's Weekly.

No Age Limit

There doesn't seem to be any age limit to antique collectors.—American Magazine.

CAR OWNERS bought more Firestone Tires

during May, June and July than in any like period in History

THERE are reasons for this—Firestone is building the Greatest Tire Values in history, with the result that Firestone factories are operating 24 hours a day, 6 days a week, to meet public preference.

This is the year everybody is scrutinizing his purchases. This is particularly true in tire buying because of the many confusing and misleading statements made about tires.

To give car owners the facts, Firestone published comparisons showing quality, construction and prices. Then the public went to Firestone Service Stores and Service Dealers—made their own comparisons with cross sections cut from Firestone tires—and from special brand mail order tires and others.

When they saw the facts, they bought more Firestone Tires during May, June and July than in any like period in Firestone history.

Let the Firestone Service Dealer show you these Firestone Extra Values and have your car equipped for Safe, Trouble-Free Motoring. Drive in today.



COMPARE CONSTRUCTION and QUALITY

Firestone Gives You	4.75-19 TIRE		4.50-21 TIRE	
	Firestone Standard Type	Special Brand Mail Order Type	Firestone Standard Type	Special Brand Mail Order Type
More Weight, Pounds	19.00	17.80	17.02	16.10
More Thickness, Inches659	.605	.598	.561
More Non-Skid Depth, inches261	.250	.250	.234
More Flies Under Tread	6	5	6	5
Same Width, Inches	5.20	5.20	4.75	4.75
Same Price	\$6.05	\$6.05	\$4.85	\$4.85

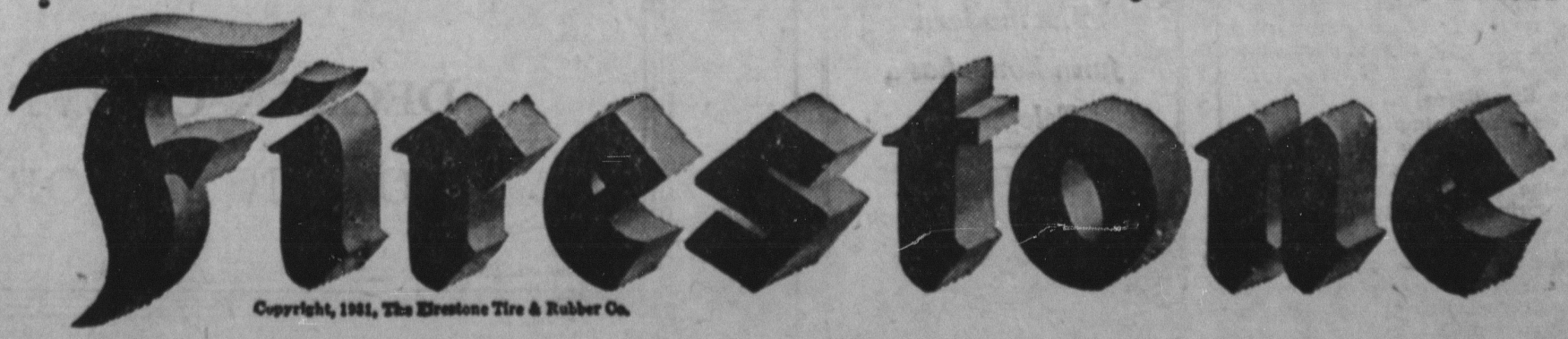
*A "Special Brand" tire is made by a manufacturer for distributors such as Mail Order houses, oil companies and others, under a name that does not identify the tire manufacturer to the public, usually because he builds his "best quality" tires under his own name. Firestone puts his name on EVERY tire he makes.

Double Guarantee—Every tire manufactured by Firestone bears the name "FIRESTONE" and carries Firestone's unlimited guarantee and that of our 22,000 Service Dealers and Service Stores. You are doubly protected.

COMPARE PRICES

MAKE OF CAR	TIRE SIZE	Firestone Standard Type		Special Brand Mail Order Type		MAKE OF CAR	TIRE SIZE	Firestone Standard Type		Special Brand Mail Order Type	
		Cash Price Each	Mail Order Price Each	Cash Price Each	Mail Order Price Each			Cash Price Each	Mail Order Price Each		
Ford	4.40-21	\$4.98	\$4.98	\$4.35	\$4.35	Oldsmobile	5.25-18	\$7.90	\$7.90	\$15.30	\$15.30
Chevrolet	4.50-20	5.80	5.60	10.90	4.78	Jordan	5.50-18	8.75	8.75	17.00	17.00
Ford	4.50-21	5.99	5.69	11.10	4.85	Ess	5.50-19	8.90	8.90	17.30	17.30
Ford	4.75-19	6.65	6.65	12.90	5.68	Chrysler	6.00-18	11.20	11.20	21.70	21.70
Chevrolet	4.75-19	6.65	6.65	12.90	5.68	Viking	6.00-18	11.20	11.20	21.70	21.70
Whippet	4.75-19	6.65	6.65	12.90	5.68	Franklin	6.00-19	11.40	11.40	22.10	22.10
Erskine	4.75-20	6.75	6.75	13.10	5.75	Hudson	6.00-19	11.40	11.40	22.10	22.10
Plymouth	4.75-20	6.75	6.75	13.10	5.75	Hupp	6.00-19	11.40	11.40	22.10	22.10
Chandler	5.00-19	6.99	6.98	13.60	5.99	LaSalle	6.00-20	11.50	11.50	22.30	22.30
Deloitte	5.00-19	6.99	6.98	13.60	5.99	Packard	6.00-21	11.65	11.65	22.60	22.60
Dodge	5.00-19	6.99	6.98	13.60	5.99	Pierce-Arrow	6.50-20	13.10	13.10	25.40	25.40
Durrant	5.00-19	6.99	6.98	13.60	5.99	Stutz	6.50-20	13.10	13.10	25.40	25.40
Graham-P.	5.00-19	6.99	6.98	13.60	5.99	Cadillac	7.00-20	15.35	15.35	29.80	29.80
Pontiac	5.00-19	6.99	6.98	13.60	5.99	Lincoln	7.00-20	15.35	15.35	29.80	29.80
Rosevelt	5.00-19	6.99	6.98	13.60	5.99						
Willis-K.	5.00-19	6.99	6.98	13.60	5.99						
Esser	5.00-20	7.10	7.10	13.80	6.10						
Nash	5.00-20	7.10	7.10	13.80	6.10						
Esser	5.00-21	7.35	7.35	14.30	6.35						
Nash	5.00-21	7.35	7.35	14.30	6.35						
Oldsmobile	5.25-21	8.57	8.57	16.70	7.37						
Buick	5.25-21	8.57	8.57	16.70	7.37						

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