Milo Maize, New Crop for Semi-Arid Lands; Extracts from U. S. Government Bulletin

The growth of Milo maize is attracting the attention of progressive farmers in the semi-arid districts at present. A bulletin, No. 322, entitled "Milo as a Dry Land Grain Crop," compiled by Carlton R. Ball, has been issued by the U. S. department of agriculture, from which the following extracts are taken:

Milo is at present the most successful summer grain crop for the southern half of the Plains region. It is an earlier and more drought-resistant crop than corn and makes a satisfactory feeding substitute. The highest average yields of corn under the same conditions have been ten bushels to the acre less than those of milo. The yields of blackhuli kafir have been five bushels less to the acre.

Milo is now a staple crop in a large part of western Texas and in the adjacent portions of New Mexico, Colorado, Kansas, and Oklahoma. This section lies at elevations of 1,500 to 4,000 feet above sea level and has a varying annual rainfall of 17 to 25 inches. Milo is well adapted to the whole southern half of the plains region lying below an elevation of about 4,500.

Soils

The soil requirements for milo are about the same as those for corn. Well-worked sandly loams or clay are best. Light sands and heavy clays are much less desirable. The roots penetrate to depths of 3 to 4 feet in ordinary friable soils. Fair yields result on rather poor lands; better yields in good soils. In the semi-arid country much depends, however, on the way the soil is handled to conserve moisture. Early and deep plowing to catch and hold the rainfall when it comes, with surface cultivation to keep down weeds and prevent evaporation, are the two principal lines of treatment possible.

Preparing The Seed Bed

Fall plowing is preferable to spring plowing where it can be done, because it increases the water-absorbing power of the soil. Deep plowing is better than shallow plowing for the same reason and because it encourages deeper rooting. Harrowing should be through before sowing to mellow the soil for the seed bed and to destroy any weeds that may be started. Increased labor in preparing a field before sowing is almost always well repaid by an increased yield of the crop.

On sandy soils or other soils which blow about in windy weather, fall disking and medium deep spring plowing may be required when the lister is used, Sisking in the fall or early spring is advised or double listing may be practiced. Milo usually makes a fair crop on fresh sod and in the semiarid regions is thought to be the best crop for spring broken sod land. The seed is dropped in every third or fourth furrow while breaking and covered by the next sod turned or is planted with a shoe drill. The crop thus sown cannot usually be cultivated.

Planting the Seed

It should be remembered that the following directions for planting, especially those concerning the rate and the manner of sowing, are for growing milo as a grain crop. Those who are familiar with handling this and other sorghums as forage crops should note the difference required in the rate of seeding and in other practices.

Time of Planting

The time to plant varies, of course, with the latitude and altitude. In general, milo should be shown about two to four weeks later than the average date for planting corn. The average date will therefore vary from about April 13 in southern Texas and the lower Southwest to about May 25 on the higher plains of northwest Texas, and to about June 1 to 15 in Nebraska and South Dakota. Because of its earlier maturity, milo can be planted later than the varieties of kaffir wherever they are safe crops. Milo should not be sown until all danger of spring frost is past and the soil has become warm.

Methods of Planting

Milo may be either listed or surface planted, as the experience in any particular locality has shown to be the best for crops of this class. Listing is a common practice in much of the Hlains region where milo is now, or is likely to become, a staple crop. Certain advantages are secured from listing. The young plants are protected from the strong winds of spring and from the cutting aceion of sand carried by such winds, which sometimes cuts the stems of the surface grown crops entirely off. The root system of listed crops are also said to lie deeper, because of the deeper sowing, but this fact is doubtful, owing to the the later growth of surface roots. On the other hand, listing tends to make the crop ripen later because the young plants at the bottom of the furrow grow more slowly than those planted at the surface. In wet season the lister furrow fills with water and the young plants may be either washed out or covered up with sand or mud.

Surface sowing is the rule in a large part of the milo country and will increase in importance as a method of sowing even in sections where listing is now generally practiced, since better methods of conserving soil moisture is understood.

Whether listed or surface sown the most common way of sowing milo is by means of special sorghum plates used in corn planter or lister planter.

Rate of Planting

For the highest yields of grain from 4 to 6 pounds of seed to the acre is sufficient if the seed is of good quality. Milo is usually sown in rows 3 1-2 feet apart; sometimes only 3 feet apart. The quantity of seed used will vary somewhat with differences in soil and climate. Sections with rich soil and more abundant moisture can sow milo more thickly in the row than sections having thin sandy soils and lighter rainfall. Several years' tests on the experimental farm of the Office of Grain investigators, at Amerillo, in the northern part of the Texas Panhandle, show that one plant to the every six inches of row gives the highest grain yields under the average conditions obtained there. The soil on this farm is a good clay loam, the elevation is about 3,600 feet above sea level, and the average annual rainfall about 22 inches. Four pounds of seed to the acre produce under these field conditions plants averaging 6 to 8 inches apart—the desired stand. Thicker stands than this have generally been recommended for grain production but are not desirable under Panhandle conditions.

These figures are suggestive rather than final. A series of experiments covering three or four different rates of seeding must be carried on for several years at different points in the milo belt before the question of how much to sow to the acre can be fully settled. The best rate may prove to be different for each different set of conditions of soil, moisture, and length of growing season. It will also be dependent to a considerable extent on the cultivation given. Until these facts are more fully known, each farmer should test for himself two or three different rates of seeding. Four pounds, six pounds and eight pounds of seed to the acre are suggested for such trials.

Where the plate on the planter can be set to run at different rates to the acre the proper speed to use for each desired rate can be ascertained by testing the planter on a floor, or a smooth hard piece of ground. The distance at which the seed are dropped can then be very readily observed and the proper distance secured. Where the speed of the plate cannot be changed, several plates with different numbers of holes will be necessary to secure different rates of planting. Each hole should be large enough to drop two small seeds at once, but not two medium-sized or large ones. The holes should be countersunk well on the under side of the plate. The number of holes required in the plates in order to drop seeds 3, or 6, or 8 inches apart, respectively can be readily figured out for each kind of planter, the holes then drilled by the farmer or a blacksmith, and the results tested as described above.

In general, thick sowing produces small stalks and small erect heads, but many more heads on an acre. Thin seeding makes larger stalks and larger heads, but fewer of them. Thin sowing also produces a larger number of the objectionable pendent heads.

Feeding on The Farm

The principal use of milo on the farm will be as feeding grain, similiar to corn. Chemical analyses show that the seeds of corn and milo are nearly identical in composition. Whether their feeding values are as nearly equal is not certainly known. No accurate experiments have been made to determine this fact. Experiments made with grain of kaffir varieties prove them to be a little less valuable than corn for feeding purposes. Milo is equal to or somewhat better than the kaffirs as a feeding grain. Unlike kaffirs milo has a beneficial laxitive effect on the bowels.

More and more milo is being fed as a threshed grain. To prevent waste by imperfect digestion, it is best to crack or grind the milo before feeding. Where hogs follow cattle, the waste in feeding whole grain is reduced, but cattle will do better on the cracked than on the whole grain. The grain, like corn, gives the best results when fed with some other feed containing more protien, such as alfalfa, cotton seed, or cowpea hay.

Where milo is headed in the field or from the stock, the heads may be fed whole, or they may be ground and fed, or they may be threshed and the grain fed. The whole heads are readily ground in any large feed mill, through threshing first and then grinding the seed is said to require no more power.

A considerable amount of milo is fed in the bundle especially in localities where little grain is grown and separators are not common. This is a fairly satisfactory way of handling the crop, provided the stand is fairly thick and it is cut as soon as ripe, before the stalks become bare and woody. When feeding milo in the bundle care should be taken that no more is placed in the feed racks than is eaten that day. Stock will not thrive where their ration becomes moldy or much mussed over in the racks. Many cases of "blind staggers" and other sicknesses have been directly traced to feeding such moldy foodstuffs.

Selling The Grain

There is now a growing market for milo grain. Apparently, increasing quantities are being used in poultry foods and in chops. Some is sold on local markets for seed or for feeding purposes, but most of it is fed on the farms where grown.

Well at Paxton

Arrangements are being made for the drilling of a deep well at a station to be known as Paxton, about eight miles north of Madras on the Deschutes railroad. The railroad company is understood to be behind the move.

Judging from the depths required in neighboring wells to strike water it is believed that it will not be necessary to sink more than 150 feet. A wheat platform has already been constructed there and the building of a grain warehouse during the summer is being talked of. It is said that unless the farmers desire to build their own warehouse that the Balfour Guthrie company will build one. Paxton will be a heavy wheat shipping point. The farmers living in that neighborhood do not expect for any city to spring up there. They hope to get a post office and a good warehouse.

Workers Welcome "Y" Cars

J. W. Flitchwir, who is in charge of the Railway Y. M. C. A. car which is visiting the camps along the Deschutes railway, was in town last Friday. He states that the car is gladly welcomed by the men, providing as it does a library and reading room, and all the attractions possible to be carried in such a manner. The headquarters for the management of all the railway Y. M. C. A. work has been recently located in Portland, in order to be in closer reach of the work where it is being most extensively done at the present.

Grain Doing Fine

Fred Fisher was in from his ranch north of town Friday and says that he has 400 acres in wheat that is looking fine and dandy. The heavy rains of last week have worked wonders with the growing grains. Mr. Fisher also has about 60 acres in oats that is making a splendid growth.

ITEMS OF INTEREST

YOUNG COW for sale, good milker. C. K. Loucks, Madras, Oregon. m25-j1-pd

WANTED—To buy several young breeding sows. Address Frank H. Pratt, Madras, Oregon. m11-25 pd

FOR SALE—At the Pioneer Office, Legal Blanks of all kinds; Carbon and Typewriter paper, Installment Sale contracts, Notes and Receipts.

FOR SALE—6 good work horses; 4 sets double harness; 2 good wegons. Inquire at Pioneer office.

FOR SALE—Horses, harness and wagons. Terms reasonable. C. E. Bye Madras, Oregon. m16

FARM LOANS!! Madras State Bank.

MONEY TO LOAN ON FARMS. See Madras State Bank.

HAVING—lately settled in Oregon would like to hear from owners of farms, dry or irrigated: grazing or timber lands. Want something that will turn into money within the next three or four years. Only replies from owners considered. Address B, care of Madras Pioneer.

Town residence lots for sale in the north end of Madras. For terms please write A. Eagles, Centralia, Wash.

SAPHIR—Imported Belgian Stallion will make the season of 1911, commencing April 1, at the following places: W. C. Moore's ranch Mondays and Tuesdays, Madras. Wednesdays and Saturdays,, Metolius, Thursdays and Fridays. Farmers Belgian Horse Co. J. A. Coulter, Secretary. m 16

HORSES LOST—Dark brown mare, harness marked, and black three-year old gelding, both branded with pipe brand, strayed from Bob O'Donnell ranch on Deschutes near mouth of Trout creek, six weeks ago Reward of $20 offered for the return of the horses to J. H. Stuart, Youngs, Oregon. m18-j8-pd

HOW TO KILL GARDEN PESTS

College Man Tells What to Do to Save Plants

Ways to control the common pests of the vegetable and flower garden are described in a new bulletin which is in preparation for publication by W. F. Wilson assistant entomologist at the Oregon Agricultural College.

"Destructive insects secure their food either by eating portions of the plants, or by sucking the juices therefrom," says Mr. Wilson. "The first general group are controlled by food poisions taken into the stomach, the second by contact or external insecticides.

The internal insecticides are divided into two groups which may be termed the wet and dry sprays. The wet sprays consist of arsenicals applied with water or lime-sulfur as a distributing agent.

"About the only one in use at the present time is arsenate of lead, which, when properley made and unadulterated, is efficient and does not burn the foilage, as Paris green sometime does. For ordinary use two pounds of arsenate of lead to 50 gallons of water is effective. At times it is necessary to use five pounds of arsenate of lead to fifty gallons of water as some insects do not readily succumb to a small amount of poison. "The dry sprays are applied in a powdered form, and there are number of these on the market, including several brands of powdered arsenate of lead. Paris green and arsenate of lead, when pure, are as efficient as any, although at the present time Paris green is more in use than the other. Paris green applied to plants in an unadulterated condition may seriously burn the foilage. To obviate this difficulty it should be mixed with 20 or 25 pounds of air-slaked lime, fine road dust or wheat flour for every pound of the Paris green. This may be applied with a dust gun or sifted on with a gunny sack. Hellebore in a powdered form and fresh is valuable to poison such insects as injure small fruits or vegetables which are nearly ready for market and thus are too far advanced for poision to be desirable. It should be dusted over them when they are wet with dew.

New Paper at LaPine

The first issue of the La Pine Inter Mountain, a neat five column folio, published by E. N. Hurd, has been received and is a welcome addition to our exchange list. From the first issue we glean the following:

The land in and around LaPine is of the finest tillable soil, of great depth, free from stone, very level and water of the purest and clearest can be had at a depth of from ten to twenty feet which means much to the farmer and homesteader.

Much credit is due to the promoters of LaPine for their far-sightedness as to location. Situated in the center of the beautiful southern Deschutes valley, thirty-three miles south of Bend and one hundred miles north of Klamath Falls, in the heart of what promises to be one of the most fertile irrigated tracts in Central Oregon, where there is an abundance of wood, and which covers an area of forty-five square miles of valley, surrounded on the north, east and south by the Paulina and Walker mountains and west by the Cascades, with their beautiful snow caps, which can be seen from most any point in the townsite as well as from all parts of the entire basin.

At present LaPine is about eighty miles from the railroad which is pushing through Central Oregon.

Word was received here from a reliable source in Portland, last week, to the effect that the contract had been awarded for the completion of the Hill road from Bend to Medford at once, and that already plans are being made for the work by those in charge.

The Southern Pacific and Hill lines are building in from the south and judging from the easy grade which is in evidence a large portion of the way, will reach LaPine as soon as the one from the north.