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Division of Extension—F. S. Cooley, Director

FLAX SEED FIELDS

Instructions to Growers of Certified Flax Seed Fields.

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See description for Figure 1 on next page.

Better Flax Cropping Through:

1. Sowing pure bred seed.
2. Seed fields producing certified seeds.
3. Sowing clean, plump seed.
4. Seed free from mustard and like seed.
5. Treating for diseases.
6. Seeding on firm seed bed.
7. Sowing reasonably early.

CHART I.

and as guides to those who purify the field. The blank strips are very important and must be in all fields from which the owner expects to certify the crop.

Figure 1. This man is purifying a flax seed field by pulling out all such weeds as mustard, false flax, fan weed, and other kinds whose seeds will not be removed by a fanning mill, also diseased flax plants. Notice the blank drill rows which lay the field off in strips twice the width of the drill. These strips give the seed field a different look from other flax fields. They serve to prevent mixing a threshing time,



Figure 2. County agent or seed inspector scoring a field which has been seeded with certified, sealed flax seed. He is examining for mixture, weeds and diseases.

One of the important factors in the efficient marketing of grain is its purity and likeness; standardization, we call it. We look forward to a time when farmers in each community will produce one variety of each

Why Sow Improved Flax Seed?

1. Less disease.
2. No weeds.
3. Gives better yields.
4. It tends to standardization.
5. It makes marketing easier.

CHART II.

kind of grain. Such standardized grain has higher commercial value than mixed grain, and if marketing agencies are fair will sell for more money. The first step in standardizing grain in a neighborhood is for the leading farmers to get together and decide on the varieties which have proven the best yielders, and the next is to produce all seed in seed fields or seed plots.

WHY SEED FIELDS?

While the fanning mill does great service, it cannot separate mixed varieties or take out certain kinds of weed seed. The best way to get seed grain is to raise it on a seed plot. In almost every community there are a few farmers who are naturally careful and take great pains with their seed grains. Their neighbors call them seed "cranks." However, they are pretty good cranks. Every farmers' organization should have a few, and at least one should be on the board of directors of every farmers' elevator. It is these seed cranks who will take the pains to raise pure bred seed fields and who will cooperate with their county agents in trying out the best bred strains that the Experiment Station has of the varieties that are standard in their neighborhood.

SIZE AND LOCATION OF SEED FIELDS.

The size will depend upon whether the grower is going to raise seed for sale or for his own use. In either case it should be large enough not to be a plaything, for threshers don't like to "monkey with a little dab." The field should not be so large that purifying cannot be done easily in a few days. In the matter of location, nothing need be said except that it should be on weed free land. It may either be off by itself or a part of a larger field of flax. New, clean breaking of course is the best.

START WITH CERTIFIED SEED.

The Experiment Stations have taken considerable time and pains in breeding up disease resistant, high yielding strains of flax. It is best to start with certified seed which you are confident is pure, free from weeds, and true to name. North Dakota Experiment Station strains of flax have done well in the eastern and northern part of this state. North Dakota resistant flax Nos. 52, 73, and 114 are recommended for flax seed fields in the northern and eastern counties of the state. If you have a county agent, have him help you locate some pure seed to start with.

HAVE THE SEED BED FIRM.

Flax likes a firm, compact seed bed. If sown on breaking, don't neglect

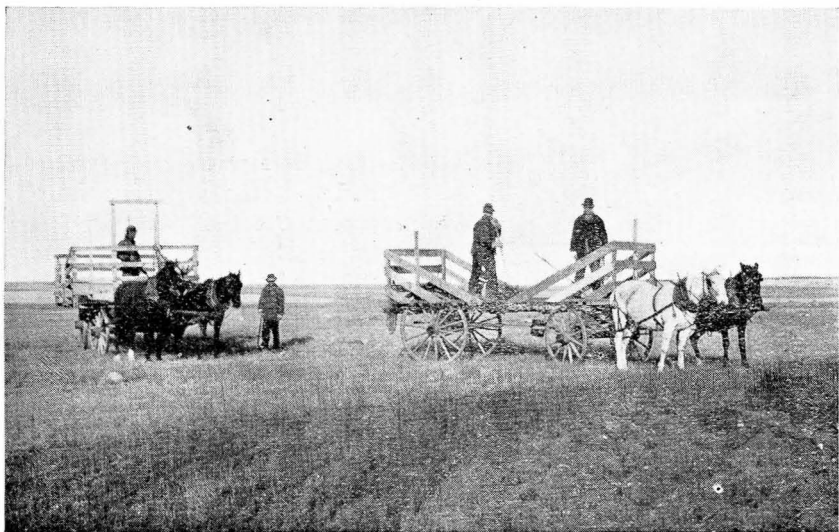


Figure 3 Care should be taken not to mix other flax with that from the seed plot, else the threshed seed will not be pure. These men are carefully cleaning their racks of scattering flax straw and chaff before they start loading from the seed field.



Figure 4. Loading flax from seed field for threshing. Notice how the blank strips mark the certified field so that the haulers will not mix the flax grown for certified seed with the remainder of the field seeded with common seed. This is a careful conscientious seed grower. He takes no chances, so is watching the haulers to see that they load nothing except from the seed field.



Figure 5. Cleaning the threshing machine before threshing the crop from the seed field. It takes only a few minutes and prevents mixture. Don't neglect to do this before threshing seed you expect to certify.

to pack the sod with a heavy roller each day as it is broken. If on old land, use the disc. One very common failing in flax raising is to sow it in a seed bed which is too loose and open.

DRILLING.

Stop up the last hole in one end of the drill. This will leave a blank strip about eighteen inches wide, or the width of two unseeded rows, with each round of the drill. These blank spaces are very important and should be in all seed fields. They make the seed field look different from other fields and lay it off in strips; so when it comes to purifying, a man takes one strip at a time. In so doing there is not the danger of missing weeds or diseased plants that there is when one wanders in an unsystematic manner over the field, pulling out a weed here and there. The blank strips give the seed field an identity which distinguishes it from other flax fields. These blank spaces need not be closer together than the width of a drill round. Of course they can be made by driving so that in going one way the drill wheels track instead of lap. However, most men have formed the habit of driving the drill so that the first disc seeds in the wheel track, and it is the experience of men who have raised seed fields with blank spaces in them that the surest way of drilling is to stop up one outside hole with an old rag and drive the drill as usual.



Figure 6. County agent sealing seed from seed field shown in Cuts 1, 2, and 4. This field was grown from sealed N. D. R. No. 52 flax. It was sown in strips by plugging one end feed hole in the drill. The seed field was thoroughly purified, taking each strip at a time, before it was cut. Next it was scored by the county agent, who found it free from weeds and disease. The bundle racks and separator were carefully cleaned before it was threshed. The county agent is putting a lead seal on each bag, and the grower will certify that it is pure bred N. D. R. No. 52 flax, free from all weeds.

Purifying means going through the seed field, taking one strip at a time, and pulling up all weeds that the fanning mill will not take out, such as mustard, false flax, fan weed, etc., and also diseased plants which show blight or the "breaking off" or disease canker. One should have an old bag with one top corner and one bottom corner tied together so it can be carried over the shoulder as a sling. The weeds, etc., should be put in the bag as pulled. The bag should be emptied at the end of the field. In this way the possibility of getting the weeds mixed with the seed crop is prevented.

Scoring. After the seed field has been purified, notify the county agent and he will come and inspect it for purity of variety and freedom from disease and weeds. In case you expect to sell the seed, he will make a record of this on a score card. It is not much use to try to clean seed for sealing

Blank Strips in Seed Fields Necessary.

1. Give field identity.
2. Serves as guides to purifying.
3. Prevents mixing at threshing.

CHART III

side, and a whisk broom for the inside of the separator, are handy, it will take less than five minutes to clean it up. Threshers as a rule are glad to cooperate in keeping the certified seed pure. If the seed field is a part of the general flax field, the haulers are almost sure to mix it with the common flax unless the field was sown with the blank strip. Be sure the haulers understand about the seed field before they start loading.

Certifying and Sealing. It will be practically impossible for the Agricultural College to guarantee to seal and certify pure seed in counties in which there are no county agents. Where there are agents, an honest effort will be made to seal all certified, pure flax seed. Before the agent puts the lead seal on the bag, he must know the source of the seed sown, know that the field was purified and care taken to prevent mixing used in threshing. If this is the case, he will place lead seals on the bags and the grower can certify that the contents of the sealed bags are pure and true to variety name. Such seed should sell for enough to make it profitable for the seed "crank" to take pains which are necessary.

if it has weeds mixed with it.

Threshing. It would certainly be a misfortune for one to allow his pure seed to become mixed at threshing time. The seed grower must insist that the separator be thoroughly cleaned inside, and swept on the outside with a broom before threshing the seed crop. If a couple of old brooms, for use on the out-



Figure 7. Cross section of new breaking, showing air spaces beneath furrow slices. A heavy roller should immediately follow the breaking plow. It forms the sod and eliminates air spaces

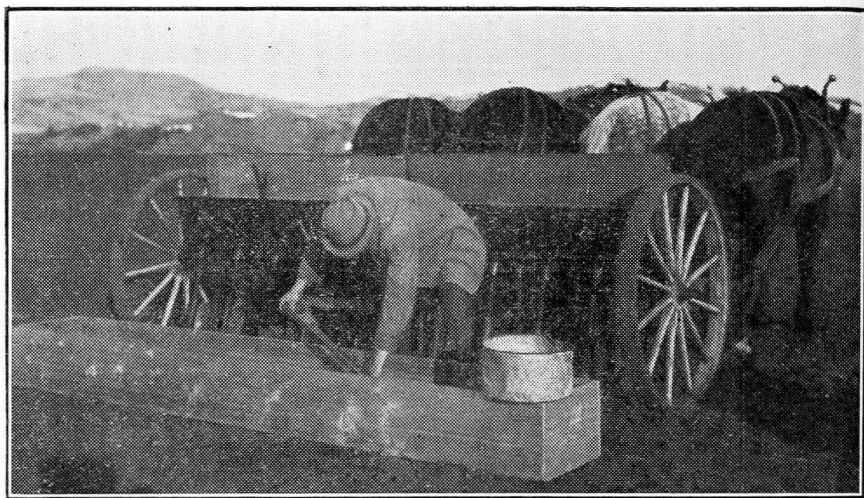


Figure 8. Treating flax in field. All flax seed should be treated. This is a good way. For particulars see Montana Experiment Station Circular 22.

STEPS IN RAISING CERTIFIED FLAX SEED.

1. Sow certified flax seed.
2. Sow on clean, new land.
3. Drill so as to leave blank spaces.
4. Purify before cutting crops.
5. Use special care in threshing to prevent mixing.

If you desire more detailed information on flax cropping, ask the Director of the Montana Experiment Station, Bozeman, to send you circulars 20 and 41.