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Current Information Letter

For the Information of County Extension Agents and Extension Workers Only

AGRICULTURAL EXTENSION DIVISION—PAUL E. MILLER, DIRECTOR

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FILE UNDER: FARM CROPS - Flax

Flax Straw for Tow and Cigaret Paper Vs. Fiber Flax for Spinning By Paul E.

Miller, Director.

The State Extension Office has reports that a person representing the so-called Flax and Fibre Institute of America, Chicago, has appeared in at least one locality of the State attempting to interest farmers in undertaking the production of fiber flax for spinning. We understand the statement has been made that fiber flax for spinning can be produced from varieties now grown for seed production through some alleged method of seed treatment.

We are in receipt of a letter from the Flax Institute of the United States disclaiming any connection whatever with the so-called Flax and Fibre Institute of America. This makes it important that county agents be posted on the real facts about fiber flax and that they clearly differentiate between this proposition and the selling of good, clean flax straw at modest prices for use in cigaret paper and tow.

To sum up briefly, W. W. Brookins, our extension agronomist, suggests that we advise our farmers interested in flax to concentrate on producing good clean flax of the standard seed types as free as possible from weeds and dockage with the expectation that they may derive some additional income from the sale of flax straw for use in cigaret paper and tow manufacture. A limited market at modest prices does exist for such straw provided it contains little weeds or other foreign material, and is in good condition. Farmers should beware of proposals for producing fiber flax for spinning purposes because our climate is not well adapted to production of spinning type flax and because such flax must be harvested by laborious and costly hand methods. It is suggested that agents write the state office for additional information if there is any activity of this kind going on in their counties.

INFORMATION ABOUT FIBER FLAX

Detailed information on fiber flax may be had from U. S. Farmers' Bulletin 1728, "Flax-Fiber Production," which says that flax-fiber of quality suitable for spinning can be had only from varieties of flax bred for fiber production. These varieties feature a tall plant with few side branches, and a seed yield much lower than that of seed varieties. Agronomists say it is impossible to change a seed flax plant into a fiber flax plant by simple seed treatment. Any promotion scheme based on such an assumption is misleading.

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While it may be possible to grow good fiber flax in some parts of Minnesota, climatic conditions here are likely to offer handicaps. Cool weather during a fairly long growing season, with an abundance of rainfall well spread out, are important requirements. For that reason, the most intensive fiber flax operations on the continent are now being carried out in Oregon, and Ontario, Canada.

In the past, nearly all of the fiber flax used in this country has been imported from the low countries of Europe and from the Soviet Union. The production of fiber flax in the United States has been slow in starting largely because of the great amount of laborious handwork needed to harvest the fiber and process it for market. Importation difficulties as a result of the war have increased the price to the point where domestic production will increase, but the change is likely to be slow, and there should be no expectation of fabulous profits.

USE OF FLAX STRAW IN TOW MANUFACTURING

(Material prepared by W. W. Brookins, agricultural extension agronomist)

Flax Straw Supply

Flax acreage in 1940 in Minnesota, according to the report of the Bureau of Agricultural Economics, was 1,590,000 acres. The average yield of straw is estimated at $\frac{1}{2}$ to $\frac{3}{4}$ ton per acre. The available straw in 1941, calculated on the basis of an equal acreage harvested, may be estimated at 795,000 to 1,192,500 tons. The national crop of straw is estimated at $1\frac{1}{2}$ to 2 million tons. The industry which utilizes the straw estimates that about 10% or 100,000 to 200,000 tons are of sufficient quality to make satisfactory tow and cigaret paper.

Volume Utilized by Industry

The industry manufacturing cigaret paper reports using 147,000 tons of straw in 1940. Other industries which use flax straw manufacture fiber rugs and use the tow for upholstering and insulating materials.

During 1940, Canadian companies sought to purchase flax tow in Minnesota. Figures are not available on the extent to which these latter outlets draw upon the available supply.

Factors Affecting Supply and Quality

1. Drouth conditions in flax-producing areas periodically affect the supply.
2. Trade requires long straw and fiber, which limits the usefulness of straw from low rainfall areas.
3. Oat straw in flax straw renders the straw valueless for tow manufacture. Wild and tame oat infestations in flax are widespread according to observations in the State.
4. Heavy infestations of other weeds reduce the yield of fiber per ton to a point which renders the straw uneconomical to process. Good quality straw yields 20% tow; the remainder, chives, is worthless.
5. Heat damage, similar to mow burning in hay, excess molds, etc., due to baling straw damp, destroys tensile strength of fiber.
6. Chaffy straw contains a high proportion of chives and is unsatisfactory.
7. Inspections of car shipments of flaxseed on the market indicate that 25% of flax marketed is produced with a dockage content of less than 10%, which represents straw of reasonably low weed content.
8. The volume of low weed content straw in any given area appears to be limited.

Present Trends

Processors are apparently interested in building up a stock of flax tow to protect their annual requirements contingent upon a possible crop failure or serious reduction in acreage. Present stocks on hand are sufficient to maintain manufacturing for a period of only six months, according to their advice. Until an adequate supply has been built up, it appears that an active demand for straw will continue. As soon as a 12-months' supply has been secured in advance, it is very probable that the demand will drop and only the best quality will be purchased. The available evidence indicates that the peak of the tow supply may be reached in 1942, provided present acreages are maintained, and that the volume of quality straw increases by as much as 10 or 15%.

State Companies Purchasing Flax Straw

Chemco Company (Archer-Daniels-Midland) - Winona, Minnesota
Minnesota Fiber Company - LeRoy, Minnesota
Excelsior Company - 3200 E. Hennepin Ave., Minneapolis, Minnesota
American Klearflax Linen Looms - Duluth, Minnesota
Smith Paper Company - Red Lake Falls, Minnesota (mill reported burned March 1941)
(Sleepy Eye Fiber Company) - Recently opened at Sleepy Eye to manufacture airplane cloth. Name of organization not known.
Minnesota Fiber Mfg. Corporation - Crookston, Minnesota

Prices Paid and Purchase Arrangements

Prices paid for flax straw in Minnesota varied this year from 50 cents to \$2.00 a ton. As yet it is difficult to reach a standard because buying practices differ widely. Some of the straw is bought in the pile by an independent buyer who undertakes baling and shipping for resale to the mills. In some cases companies have sent out their own buyers to contract for flax straw delivered. Furthermore, there is a great difference in the quality of straw and the tow it can yield.

In regard to the market situation a few facts stand out:

1. There is a strong demand for straw from seed flax, and the demand is likely to continue for some time.
2. The sale value of flax straw will depend on quality of the product and distance to a processing mill.
3. Manufacturers are going to pay premiums for the cleaner, longer straw, and it will pay for farmers to improve their crop with this market in view.
4. Sale of flax straw will not get anyone rich quick, but it should be regarded as a welcome addition to the principal income which is from flaxseed.

Handling Straw for Sale

As pointed out, flax straw for sale should be a by-product of the production of high-quality flaxseed free of weeds and dockage. This will result in a good straw containing little foreign material. A few precautions in harvesting and handling the straw will insure better returns. When cutting flax from which the straw is to be sold, the cutter bar should be set as low as possible to get all the straw. Excess weathering of straw must be avoided which means that when flax is harvested with a combine, the straw should not be left out too long. Stacking should be carefully done to keep out water. Straw should not be baled until dry; otherwise it is likely to mold.