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## Supplement to Flax Facts

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# Supplement to Flax Facts



Issued by the Agricultural Extension Divisions  
of the

University of Minnesota, Montana State College, North Dakota Agricultural College, and South Dakota State College. In co-operation with the United States Department of Agriculture. Published and distributed in furtherance of the purposes of the co-operative Agricultural Extension work provided for in the Act of Congress, May 8, and June 30, 1914, by the Agricultural Extension Divisions of the University of Minnesota, Montana State College, North Dakota Agricultural College, and South Dakota State College. F. W. Peck, J. C. Taylor, C. F. Monroe, and A. E. Anderson, directors, respectively.

In February, 1930, "Flax Facts" was published jointly as North Dakota Extension Circular 90, Minnesota Extension Special Bulletin 128, South Dakota Extension Circular 293 and Montana Extension Bulletin 107. This publication is available at the Agricultural College in each of these states and copies may be obtained by writing for them.

### Reduced Demand for Flax Seed

During the year practically world-wide unfavorable economic changes have developed, the seriousness of which could not have been foreseen at the time "Flax Facts" was published. This supplement is issued to give the outlook for flax in 1931.

During the five-year period 1924-1928 inclusive the consumption of flaxseed in the United States averaged nearly 41 million bushels. For this period the domestic crop averaged only 53.5 per cent of the amount needed for crushing and the average annual importation was 19 million bushels (See Table 1.)

Table 1. Flaxseed Production and Consumption in the United States (a)

Year	Total Acreage	Average yield per acre	Total production	Seed needed(c) for sowing next crop	Net domestic supply	Total (b) consumption	Amounts (f) imported	Net domestic supply in per cent of total consumption
	1000 A.	Bu.	1000 Bu.	1000 Bu.	1000 Bu.	1000 Bu.	1000 Bu.	Per Cent
1902-03	3,487	8.1	28,293	1,718	26,575	25,916	.....	102.7
1904-08	2,570	10.1	25,822	1,583	24,239	22,354	.....	109.4
1909-13	2,490	7.9	19,505	1,501	18,004	26,950	8,946	65.9
1914-18	1,680	8.0	12,922	1,033	11,889	24,512	12,623	48.5
1919-23	1,499	7.2	10,773	1,183	9,590	31,864	22,274	30.0
1924-28	2,993	7.9	23,695	1,830	21,865	40,650	18,995	53.5
1929	2,990	5.6	16,838	2,750	14,080	41,896	27,912	33.3
1930	3,946c	6.0c	23,682c	2,500d	21,182	31,070e	9,888	68.2

a. From U. S. D. A. Yearbooks. b. For year ending Sept. 30, including net domestic supply for preceding year's crop and importations. c. Preliminary. d. Estimated. e. American Paint Journal, Nov. 17, 1930. f. Difference between net domestic supply and total consumption.

During the last part of the crop marketing year ending September 30, 1930, the demand for flaxseed fell off sharply, making the total consumption for the year only 31 million bushels, which is a decrease of 26.4 per cent as compared with that for 1929. During July, August and September of 1930, consumption of flaxseed was 36.3 per cent lower than for the same period in 1929. As a result of the sharp reduction in demand, prices were materially lowered. The December 1st, 1930, farm price of flax in the United States is \$1.40 a bushel, the lowest in 10 years. This is 31 per cent below the ten-year average price of \$2.03 per bushel. While all grain prices are much below the ten-year average, the flax price has declined relatively less than that of wheat, which is 47.8 per cent below the ten-year average of \$1.04. The causes of the drop in prices have been different for the two crops. The drop in wheat prices was due primarily to large oversupply while the cause of the drop in flax prices was a sharp decrease in demand. Flax prices may be expected to respond fairly rapidly to improvement in economic conditions but this is less likely for wheat prices.

### 1930 Crop Might Have Been Too Large

The relatively favorable outlook for flax in the spring of 1930 led to a seeding estimated at 4,400,000 acres, the highest annual acreage of flax ever sown in the United States. Had this acreage come through to harvest with a yield as high as the ten-year average of 7.6 bushels per acre, a yield of 33,400,000 bushels would have resulted. After deducting seed for the next crop there would have been available for crushing approximately 31 million bushels. Had economic conditions remained as they were during the period of 1924-28, this would have been about the right size of crop. However, with the demand much reduced, this amount might have rendered the tariff ineffective and resulted in prices considerably below those in effect for the present crop.

The extended drouth cut the acreage planted to flax, particularly in the drier sections, so that only 3,946,000 acres were harvested and the average yield was 6 bushels as compared with the ten-year average of 7.6 bushels per acre. After deducting seed for sowing the 1931 crop this leaves approximately 21 million bushels available for crushing. This is 10 million bushels below the amount

crushed last year and probably somewhat below the demands for crushing during the current marketing year ending September 30, 1931.

In determining the acreage of flax to sow in 1931, several circumstances need careful consideration. The present marked reduction in demand for flaxseed in the United States with consequent lowering of price and the fact that Argentina has just completed harvesting a record crop make probable a larger than usual world carry over into the 1931 crop year. The large acreage of flax sown but not harvested in 1930 and the low average yield per acre on the area finally harvested, although due to some extent to drouth, indicate that many acres of marginal land, and lands not otherwise well suited to profitable flax production, went to swell the acreage sown to this crop in the spring of 1930. All of these considerations make it more essential than ever to give careful attention to the principles of successful and profitable flax growing in 1931.

### Higher Yielding Acres of Flax in 1931

While the economic situation has brought about a decided change in the outlook for flax in 1931 as compared with that given in "Flax Facts," the cultural directions given for each state hold as well now as for the 1930 crop. The most important of these are emphasized by restating them here. Following closely these directions should result in higher yielding acres of flax in 1931 and subsequent years.

#### North Dakota

1. The acreage harvested in 1931 was 1,931,000, or an increase of 32 per cent over that of the previous year. The crop was 10,041,000 bushels, or 42 per cent of the total amount produced in the United States.
2. Records of production costs on farms indicate that the flax averaging 6.9 bushels per acre costs approximately \$2 more than an acre of wheat averaging 11 bushels per acre. The net advantage of flax over wheat through a ten-year period was computed to be 71 cents per acre. Where average or higher yields of flax are probable, the advantage of flax over wheat will doubtless be greater in 1931 than 1930 because of the relatively low price of wheat.
3. This statement was included in "Flax Facts." **"Higher yields per acre are more important to the North Dakota farmer than increased bushelage through additional acres."** A larger yield per acre rather than increased acreage is even more important in 1931 than last year. Sow flax on well drained soil preferably underlaid with clay. Flax should have the advantage of a clean seedbed. Avoid old land filled with weed seeds unless the seeds are sprouted and the seedlings killed before sowing the flax. Long pastured sod land preferably where legumes have grown and weed seeds have had a chance to rot is recommended for flax. In a well managed rotation, clean corn land, clean fallow or hay or pasture land is generally good to precede flax.
4. Flax needs a firm seedbed. Clean corn lands which do not have to be plowed or fallow provide firmer seedbeds than spring or fall plowing. Cultivate and pack plowed land thoroughly to make a firm seedbed. Shallow planting on a firm seedbed gives best results.
5. Under average conditions flax may be sown soon after wheat. Highest yields have been obtained from April and early May seedings in the southern and slightly later in the northern part of the state. Early sown flax becomes well established before foxtail (pigeon grass) seed germinates but cannot compete with early starting weeds like wild oats, Russian thistle and lambs quarters. All early starting weeds when present must be eliminated before the flax is sown.
6. The recommended varieties are Bison, Buda and Linota, seed of which is available in quantity.

#### Minnesota

1. The acreage of flax harvested in 1930 was 732,000. This is only slightly higher than the average of 712,000 acres produced during the five preceding years. The average yield was 10 bushels per acre as compared with 9.6 for the last ten-year period.



2. The average cost of producing flax has been approximately \$1.13 per acre higher than for spring wheat and \$1.80 higher than for oats. In seven of the last nine years flax has been produced at a profit. The average net profit per acre for the nine years has been \$3.70. Spring wheat has returned a net profit only 2 years out of the nine. As an average for the last nine years, spring wheat has been short \$0.67 and oats \$2.84 of paying costs of production.
3. The outlook does not appear to warrant any increase in the flax acreage for 1931. Every acre should be planted in good rotation on land rich enough to produce yields of from 10 to 15 bushels per acre or higher. In trials at University Farm over a period of years, flax has averaged 15 bushels per acre following corn; 14.1 bushels following legumes; 9.6 bushels following grasses; and only 8.6 bushels following grains. This indicates that the best place for flax is in rotations following corn which has been kept clean. Minnesota produces annually over four million acres of corn. This makes available each year more than an ample acreage of clean land for the flax crop.
4. Advice on preparation of seed bed and time of planting as given in the North Dakota section holds for Minnesota.
5. Redwing and Bison are the varieties recommended for the southern and east central parts of the state. For the west central and northwestern parts, Bison and Buda merit first and second choice respectively.

### South Dakota

1. South Dakota harvested 670,000 acres of flax in 1930. This represents 19.3 per cent increase in acreage over 1929. Growers may find it advantageous to maintain about the same acreage in 1931.
2. The growing of flax has resulted in a more balanced production program.
3. Grow flax in a systematic rotation, preferably following corn. This usually provides firm, clean seedbeds. Planting flax following other grains results in reduction of yields by weeds.
4. Weed seeds in flax reduce the market grade and price.
5. Bison, Linota, North Dakota Resistant 114 and Redwing have produced yields above average.
6. Sow flax seasonably in 1931. Early sown flax nearly always was best last year.

### Montana

1. In 1930 Montana harvested 480,000 acres of flax as compared to 293,000 in 1929, or an increase of approximately 64 per cent. The flax acreage in the near future should not be increased.
2. The acre yield of flax has been half that of wheat but the gross return from the two crops has been about equal. If the price of flax is 2.5 to 3 times that of wheat, proper cultural methods make it possible to produce flax as profitably as spring wheat.
3. Plant some flax every year in regular rotation. Flax does not compete with weeds as well as do the cereal grains. The best flax crops are produced in Montana on clean summer fallow or on clean burned stubble.
4. Efficient summer fallow of unplowed land results from cultivating with duck foot, rod weeder or spring tooth harrow as soon as spring seeding is finished and three to four additional times during the summer to keep down weed growth. The following spring cultivate just prior to seeding the flax.
5. Early burning of stubble followed by disking and immediate seeding of the flax is an economical method of seedbed preparation for flax in Montana. Some prefer to cultivate twice before seeding.
6. Flax should be sown as early as possible after the seeding of spring wheat. The young plants are not readily injured by frosts.
7. On non-irrigated land, sow shallow, 1 to 1.5 inches deep, with a press drill at the rate of 15 to 25 pounds per acre. On irrigated land sow 35 to 45 pounds per acre.
8. The Bison variety is recommended for old land, while Newland and Reserve are satisfactory for new breaking.