

GRAL. P. ELIAS CALLES
MEXICO. D. F.

BOLETIN DE LA OFICINA DE ANZURES PARA EL SEÑOR GRAL. P. ELIAS CALLES:

1.- Hoy deposité \$20.130.77 abono de la Beneficencia por adeudo del mes de Julio.
Por el Hospital Militar \$ 4,275.00.
Por venta de un becerro \$ 200.00.
Por ventas en la Planta Avícola \$ 367.74.

2.- Por cable el Cónsul de Bordeaux contestando el nuestro nos dice que instrucciones sobre cuidado Chivas nos llegarán a fines del presente mes; mientras tanto aconseja separar los sexos, alimentarlas con zacate, alfalfa, salvado, harina, cebada, maíz, agua tibia y -- pastoreo.

Todo esto ya es del conocimiento del señor Valdés, quien me informa que los animales no han resentido absolutamente al cambio de clima y continúan perfectamente bien; los que han visto las chivas salen encantados de estos ejemplares.

3.- Chaverri está transmitiéndole el extracto de la prensa.

Le envío un paquete con revistas y magazines.

4.- El C. Gobernador de Yucatán comunica haberse vendido 220.000 pacas henequén a 4 centavos - 5 - 10 - y 6 bordo Progreso. Por unanimidad aprobaronse reformas propuestas escritura constitutiva henequeneros Yucatán. Envío original carta del señor Mascareñas sobre asunto henequén.

5.- Gobernador Chiapas inauguró Planta Luz Eléctrica para servicio público.

6.- Los señores Juan F. Brittingham y López Fortillo salieron el 11 en la noche para visitar El Mante y regresarán en unos diez días.

7.- Acompaño dos cartas de Tavito.

México, D. F., Agosto 13 de 1930.

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Recibí de Cholita los siguientes documentos:

Testimonio compra-venta que el señor Manuel Téllez Pizarro y su esposa la Sra. Adelaida Lara de Téllez Pizarro, por una parte y por la otra el Sr. Gral. Plutarco Elías Calles, en libros de la Notaría Pública No. 28, del Lic. José I. Bandera, que comprende un lote en precio de \$2,724.45, fracción de la Hacienda de Acozac, Municipio de Ixtapaluca, Distrito de Chalco, Estado de México, con superficie de 2 hectaras 72 aras 44 centiaras, total cuatro mil seiscientos sesenta y un metros cuadrados. - Acta número ocho mil ciento siete, Volumen 199, de fecha 27 de julio de 1931.

Testimonio compra-venta, Sr. Ing. Manuel Téllez Pizarro, con consentimiento de su esposa la Sra. Adelaida Lara de Téllez Pizarro, a favor del señor General Plutarco Elías Calles. Tomado nota en los libros de la Notaría Pública No. 28, Lic. José I. Bandera. Acta núm. 6,293, vol. 160, de fecha 5 de diciembre de 1931. - Antecedentes: una fracción de la Hacienda de Acozac, Municipalidad de Ixtapaluca, Distrito de Chalco, Estado de México. - Y que tiene una superficie de 759 hectáreas, 45 aras; El precio de esta compra-venta, convenido entre los contratantes, es la cantidad de \$28,900.00.

Testimonio de la escritura No. 9118, adjudicación por remate. El señor General don José Alvarez y Alvarez, a favor del señor General don Plutarco Elías Calles. Volumen 158, folio 60. Notaría No. 60, Lic. Eucario Alonso, adscripto al despacho del Lic. Genaro González, Isabel la Católica No. 25. Denominado "Rancho El Centinela" o "Granja Michoacán", ubicado en los kilómetros 26 al 29 de la carretera México-Puebla, Distrito de Chalco, Estado de México, con superficie de cuatrocientas veintiocho hectaras, 18 aras. Precio, \$39,858.80. Fecha: 24 de julio de 1930.

México, abril 22 de 1936.

Rodolfo Elías Calles
Rodolfo Elías Calles.

Samta Birkma

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Mexico D. F.

HACIENDA DE SANTA BARBARA.

LIQUIDACION.

MEMORANDUM.

I.- La terminación del negocio, desde el punto de vista industrial o comercial, solo afecta a los propietarios y por consiguiente no debe ser materia ni de estudio ni de consideración.

II.- La terminación de ese negocio en relación con los contratos de trabajo de las personas que le prestan servicios, debe ocupar toda la atención del presente Memorandum.

III.- Los contratos de trabajo pueden terminar con o sin responsabilidad.

IV.- Terminan con responsabilidad cuando la clausura del negocio se hace sin autorización del Tribunal del Trabajo o cuando esa clausura trae aparejado el despido de todos los trabajadores.

a).- No puede ser causa justificada de separación del trabajo la clausura del negocio, por ningún concepto.

b).- La clausura de un negocio cualquiera entraña un conflicto de orden económico, y por razones económicas nunca puede legalmente despedirse a un trabajador.

V.- Los contratos de trabajo terminan sin responsabilidad cuando hay causa justificada de separación o cuando hay una autorización expresa de la Junta de Conciliación para concluirlos.

VI.- En el presente caso, según entiendo, la clausura del negocio obedece a razones de orden económico. En consecuencia, la Empresa puede acudir a los beneficios de la liquidación judicial. Por razón de esa liquidación judicial la Empresa está obligada a pagar a los trabajadores un mes de salario; pero para que los contratos de trabajo terminen definitivamente, el Síndico deberá pedir autorización a la Junta de Conciliación planteando un conflicto de orden económico para cerrar definitivamente el negocio, aportando todas las pruebas de su incooperabilidad y de su bancarrota, a fin de que la Junta pueda autorizarlo o no a cerrar dicho negocio, sin responsabilidad alguna hacia los trabajadores.

VII.- Como se vé, el mes de indemnización que la Ley ---

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otorga a los trabajadores en caso de liquidación judicial, es solo una compensación por el cierre derivado de la liquidación judicial, pero no implica el monto total de la responsabilidad posible, toda vez que el Síndico debe pedir autorización ante la Junta para cerrar el negocio o cambiar las condiciones en que debe efectuarse el trabajo.

VIII.- Si la Junta de Conciliación, ante las pruebas que se aporten en el conflicto de orden económico, resuelve que aquel es incosteable y que por esa incosteabilidad manifestada debe cerrarse, los trabajadores saldrán del servicio sin mayor responsabilidad para el patrón que el mes de salario entregado al declararse la liquidación judicial. Si por el contrario, la Junta estima que no es de autorizarse el cierre del negocio, los trabajadores deberán continuar prestando sus servicios en las mismas condiciones en que lo han venido haciendo a menos que el Síndico y dichos trabajadores concierten los nuevos términos en que deba ejecutarse el trabajo. Si la Junta estima que el negocio debe clausurarse solo parcialmente, los trabajadores afectados podrán salir sin responsabilidad, quedándose el resto en las condiciones anteriores.

IX.- También puede clausurarse el negocio por medio de liquidación extrajudicial; pero en ese caso, la liquidación extrajudicial que traería como consecuencia el cierre del negocio, implicaría necesariamente el despido injustificado de todos los trabajadores.

X.- También pueden terminar los contratos de trabajo por medio del despido de los trabajadores; pero ese despido no podría ser más que injustificado, con todas las consecuencias legales inherentes a una calificación de tal naturaleza.

XI.- El despido injustificado de los trabajadores da derecho a éstos para demandar: en vía de rescisión, la indemnización de tres meses más los salarios caídos durante la tramitación del juicio; en vía de cumplimiento de contrato, la reposición en sus empleos, con más el pago de los salarios que dejaren de percibir durante su separación.

XII.- Si el despido se efectúa sin que el negocio se cierre o se liquide, la acción de los trabajadores será indiscutiblemente la de cumplimiento de sus respectivos contratos y el juicio les sería favorable, teniendo la obligación la Empresa de reinstalarlos y de pagarles los salarios caídos. Esta situación, por ende, debe descartarse.

XIII.- El despido debe ser consecuencia del cierre del negocio y en tal virtud, la Empresa debe estar dispuesta a pagar las siguientes prestaciones: tres meses de salario a cada uno de los trabajadores, veinte días por año a cada uno de

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ellos y los salarios que dejen de percibir desde la fecha en que dejen de trabajar hasta la fecha en que firmen el convenio respectivo.

XIV.- Cuando los trabajadores son despedidos por cierre del negocio y cuando el patrón está dispuesto a pagarles las prestaciones arriba apuntadas, el trabajador acepta por la imposibilidad que tiene de que se cumpla su contrato de trabajo, de tal manera que la opción que la Ley les concede a los trabajadores para escoger entre el cumplimiento o la rescisión de sus contratos, deja de subsistir automáticamente, quedando solo en pie la acción rescisoria, con el pago de la indemnización de tres meses más las responsabilidades del conflicto, -- equivalentes a veinte días por cada año de servicios y a los días de salarios ya mencionados.

Con tales antecedentes, que se apoyan en texto expreso de la Ley y en ejecutorias de la Suprema Corte de Justicia de la Nación, el suscrito opina:

Que debe clausurarse el negocio inopinadamente, comunicándose al Sindicato en representación de los obreros, la disposición de la Empresa de pagar los tres meses más los veinte días por año a cada uno de ellos. Si las relaciones entre la Empresa y el Sindicato son cordiales, antes de dar el paso arriba indicado, procedería tratarlo con la representación legal de la agrupación, pero se corre riesgo de que en caso de no estar conformes, el Sindicato se apresurase a interponer un embargo precautorio como garantía de las indemnizaciones que pudieran corresponder a los trabajadores.

El cierre de un negocio de la naturaleza del que nos ocupa me parece difícil de operar momentáneamente, porque habiendo o no trabajadores, siempre quedarán los animales, que necesitan ser atendidos, y esos animales siempre serán garantía de pago para los trabajadores afectados.

El cierre de la Empresa podría considerarse solo desde el punto de vista de su calidad productora de leche y sus derivados, pero habría que descriminarla de su carácter de finca agrícola.

Ahora bien, si se trata de que el negocio termine en ambos aspectos, los mismos procedimientos que se sigan en un lado deben seguirse en el otro.

El memorandum que me fué presentado menciona tan solo a trabajadores de la planta pasteurizadora y no de la finca --

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agrícola. Por tanto, no puede hacerse ningún cálculo sobre el monto de las responsabilidades económicas.

No puede hacerse tampoco un cálculo en lo que concierne a la planta pasteurizadora porque no se indica la antigüedad de cada trabajador, que debería servir como base para el cómputo de los veinte días por año.

De cualquier manera, debe tomarse muy en cuenta que — siendo propietario de esta negociación el señor General Plutarco Elías Calles, dada su posición actual y la importancia de su posición política en el pasado, debe proceder con estricto apego a la Ley, sin interponer ningún recurso en perjuicio de las clases laborantes.

Atentamente.

México D. F., 13 de septiembre de 1937.



AÑO DE.....

1^{ra}. Parto.
Campeona 1935
Edad - 3. 9 meses.
Hija - Del Machaco.



Por. Parto

Campeona 1936

Edad - 3 1/2 años

Hija del Maricao.



Probable ingreso al venderse la totalidad del Ganado

50	" " "	<u>700.00</u>	
100	Vacas escojidas a	\$650.00	\$ 65,000.00
75	" restantes calculando 30 ani-		
	males entre viejos y defectuosos	250.00	18,750.00
15	terneras cargadas a	400.00	6,000.00
28	" por cargarse a	250.00	7,000.00
21	becerras de 6 a 8 meses a	175.00	2,675.00
41	" " 1 a 4 " "	60.00	2,460.00
7	toros promerio de	1,200.00	8,400.00
12	torotes de 1 a 4 meses a	150.00	1,800.00
4	torotes de 9 a 10 meses a	400.00	<u>1,600.00</u>
			\$ 113,685.00

Menos 25% de reduccion en caso no pudiera ven-
derse a estos precios

28,421.25
85,263.75

Hda. Santa Bárbara, México, enero 25 de 1,938.

La reduccion calculada al final seria en
un caso extremo. El precio que se fija a las
75 vacas, está algo bajo y naturalmente pediremos
mas. El resto está bien.

REC (2)

Febrero 9 de 1939.

Sr. Plutarco Elías Calles

1212 Upas Street,

San Diego, Cal.,

E. U. de A.

Querido papa:

Adjunto a la presente encontrarás corte de caja de la Hacienda hasta el día 31 de Enero del presente año y partiendo de la existencia que aparece en el informe que te entregue en mi última visita a esa. Como pedras en la línea de egresos hay una salida por concepto de fuerza de la bomba y luz de la casa principal de la Hacienda, gaste que no había sido primido por estar esperando rentarla, pero ante la imposibilidad de lograrlo, ese servicio quedará cancelado el mes entrante.

Deseo informarte que ya tengo en mi poder las letras por el saldo de la cantidad que habíamos recomendado recoger a Carlos y dentro de esta misma semana sabré si podré descentrarlas en algún banco; lo que me parece muy difícil, pues como te digo en mi anterior, tienen mucho miedo de hacer operaciones de future por la serie de problemas y amenazas que tiene el negocio. Si logro negociárselas te situare íntegramente su equivalencia en moneda americana.

En la región del Mante existe una situación en extremo difícil. Ya se inició una nueva afectación y hasta ayer a los Saenz y Chabrand prácticamente les redujeron su propiedad a 100 hectaras. Todo indica que se aplicará el mismo criterio a las demás fincas a pesar de que no tienen suficientes solicitantes para repartir el resto de los terrenos. Por otro lado se ha iniciado entre los obreros y campesinos de la región y del Estado un fuerte movimiento pidiendo la expropiación del ingenio, agitación seguramente sugerida y dirigida por elementos oficiales. En general a la industria azucarera la tienen nuevamente en agitación, pues no solamente se le está pidiendo un aumento en los salarios; sino el control por parte de los sindicatos de un buen número de los puestos de confianza. Tienen ya notificada la huelga para el día 15 de este mes, a pesar de que el Presidente había prorrogado por un año más la vigencia del contrato-ley. Todo indica que en esta ocasión están decididos los industriales a sostener sus puntos de vista y que el movimiento de huelga por lo tanto será inevitable. Otros creen que el Presidente por principio de autoridad y hasta por amor propio hará que se respete su decisión extender la aplicación del mencionado contrato.

Después de muchas consultas, he resuelto aplicarme los rayos X en ésta con el Dr. Madraza, teniendo seguridades de todos que lo hará con cuidado y absoluta eficiencia. Al fin convinieron en que debería hacerse a base de una dosis fuerte y completa; tal como opinaron los americanos. Tan pronto como termine con este tratamiento, pienso ir nuevamente a Sonora para seguir estudiando algunas posibilidades de poder radicarme por allá en forma definitiva.

Manuelito viene muy poco por Anzures, pero sigue en su resolución de llevar su vida independiente. Continúa viviendo en la casa de amiguito y entiendo que lo tienen trabajando en un camión. Hace unos días le mando a Castellanos un informe que hice con la intervención de Alfonso.

De los demás asuntos como te informé en mi anterior hasta hoy siguen --

igual, sin resolverse, pero con indicaciones de que se piensa tomar una resolución de un momento a otro.

Ya estarás enterado por la prensa de la forma como se está resolviendo la política dentro del ambiente oficial. Todo indica que el Candidato de Cardenas sera Avila Camacho. El sector militar esta muy inclinado a esta candidatura y sin escrúpulos de ningun genero hablan de que ira a la Presidencia con o sin Cardenas. Lo curioso es ver que en las filas obreras; mejor dicho en los sindicatos no ha despertado ningun interes la Personalidad de Mujica, a pesar de sus antecedentes de radical. Todos consideran que el Gobierno se vera obligado a resolver la sucesion presidencial con una personalidad moderada; pues el movimiento en contra del comunismo y de continuacion de la politica actual es visiblemente arrollador; situacion que creen ya esta siendo pulsada por el propio Cardenas. Corre el rumor insistente de que Almazan entrara tambien a la lucha politica como factor, pero yo le dudo pues este señor siempre ha sido especialista habil en las cargadas. Los grupos independientes sin excepcion en mi concepto nada serio han hecho y se concretan unicamente a la chismografía capitalina.

Ayer entregue \$330.00 para los gastos de la cocinera que debe haber salido en el avion de ayer miercoles. Ojala que les salga buena y se aclimate mejor que las otras.

Recuerdos a todos. Tu hijo que mucho te quiere.

Rafel

Existencia el 22 de Dic. de 1938 según informe en
poder del Sr. Gral. P. E. Calles.

\$3.136.97

Ingresos

Ventas

4 Tramos de tubo de 6" con 23 metros de largo
a \$3.15 metro.

\$72.45

Madera vieja

15.00 \$87.45

Rentas

Huerta, renta Nov. de 1938

500.00

Establos, renta Enero 1939

400.00

Terrenos A. Fernandez, renta Enero 1939

246.00

Terrenos A. Macin, rentas Sep., Oct. y Nov. 1938

288.00

Terrenos S. Romano, renta Enero 1939

325.50

Planta Avicola renta Enero 1939

150.00 1.909.50

Productos Diversos

6½ Hs. de barbecho a \$17.50

113.75

2.110.70

\$5.247.67

Egresos

Rayas Cuernavaca

215.75

Sueldos y Rayas Santa Barbara

307.50

Gasolina

7.20

Pasajes

7.00

Gastos de escritorio

14.25

Varios

5.45

Atención sepulcros Sras. Calles

15.00

Contribución Cuernavaca 1er. bimestre 1939

348.50

Registro Comercio 1939 Santa Barbara

120.00

Reparación edificio

30.00

Fuerza bomba de agua casa Gral. Calles, Santa Barbara

56.00

Timbres recibo y factura

8.35

Contribución casa Parras, 1er. bimestre 1939

29.75

1.164.75

\$4.082.92

Entrega personal del Sr. Rodolfo Elías Calles al Sr.
Gral. P. Elías Calles de Dlls. 700.00 al tipo de --
\$5.00

3.500.00

Existencia el día 31 de Enero de 1939

\$582.92

México D. F., Febrero 10. de 1939.

Vo. Bo.

P. Elías Calles

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Corte de Caja de la HACIENDA DE SANTA BARBARA del 22
de Diciembre de 1938 al 31 de Enero de 1939.

Existencia el 22 de Dic. de 1938 según informe en
poder del Sr. Gral. P. E. Calles.

\$3.136.97

Ingresos

Ventas

4 Tramos de tubo de 6" con 23 metros de largo
a \$3.15 metro.

\$72.45

Madera vieja

15.00

\$87.45

Rentas

Huerta, renta Nov. de 1938

500.00

Establos, renta Enero 1939

400.00

Terrenos A. Fernandez, renta Enero 1939

246.00

Terrenos A. Macín, rentas Sep., Oct. y Nov. 1938

288.00

Terrenos S. Romano, renta Enero 1939

325.50

Planta Avícola renta Enero 1939

150.00

1.909.50

Productos Diversos

6½ Hs. de barbecho a \$17.50

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215.75

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15.00

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Fuerza bomba de agua casa Gral. Calles, Santa Bárbara

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\$5.00

3.500.00

Existencia el día 31 de Enero de 1939

\$582.92

México D. F., Febrero 10. de 1939.

Vo. Bo.

P. Elías Calles

Rayas Cuernavaca

Isaac Luna, encargado	\$10.50	semanarios	
Pilar Rojas, velador	14.00	"	
Ambrásio Pedraza, epón	9.00	"	
Enríque Miranda, peonn	9.00	"	
Situacion rayas	.65	"	\$43.15

Rayas Cuarnavaca de 5 semanas.....\$215.75

Rayas Santa Bárbara

Jorge Rodríguez		\$225.00
16 al 31 Dic. 1938	\$75.00	
10. " 31 Ene. 1939	150.00	

Braulio Estrada, 5 semanas
Semanariamente \$14.00

70.00 (*Velador encargado Edificios*)

Mateo Mireles		12.50	
Semanariamente	2.50		\$307.50

México D. F., Febrero 10. de 1939.

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Rayas Cuernavaca

Isaac Luna, encargado	\$10.50	semanarios	
Pilar Rojas, velador,	14.00	"	
Ambrásio Pedraza, epón	9.00	"	
Enrique Miranda, peonn	9.00	"	
Situacion rayas	.65	"	\$43.15

Rayas Cuarnavaca de 5 semanas.....\$215.75

Rayas Santa Bárbara

Jorge Rodríguez		\$225.00
16 al 31 Dic. 1938	\$75.00	
lo. " 31 Ene. 1939	<u>150.00</u>	

Braulio Estrada, 5 semanas	70.00
Semanariamente \$14.00	

Mateo Mireles	12.50	
Semanariamente 2.50	<u>12.50</u>	\$307.50

México D. F., Febrero 10. de 1939.

INTRODUCTION

Flax has been grown experimentally at the Imperial Valley Experiment Station since 1922. During the earlier years of the investigation, northern varieties of flax were mostly used, which in the main proved to be only moderately well adapted to the Valley. In 1927, a number of Indian and other southern varieties were obtained from A. C. Dillman of the U. S. Department of Agriculture. These proved to be superior for Valley conditions to the northern varieties, and three i.e. Punjab C.I.20, Abyssinian C.I.36, and Giza C.I.378 were selected for further experimentation. Recently, four wilt-resistant varieties of Indian flax were secured from Mr. Dillman, which are now under trial.

During the first eight years, the experiments consisted primarily of variety trials and date-of-planting tests. In 1931, a number of plantings were made by the writer, using different rates of seeding. From these tests, new high yield records have been obtained three years in succession.

The first extensive field plantings were made in the fall of 1932, when more than 300 acres were put in on various farms in the Valley. From some of these fields, yields of more than 30 bushels per acre were harvested the following spring, which established the fact that with proper handling, flax would prove to be a very profitable crop.

Flax lends itself well to the irrigated sections of Imperial Valley. It is a crop that is planted in October and November and is harvested in May, which gives the farmer an opportunity to take a vacation during the hot months of the summer.

This crop shows promise of paying well enough, so that the grower can well afford to spend two or three months during the warmest part of the year elsewhere, if he so desires. For eight or nine months the Imperial Valley is a very desirable place in which to live. Any stable crop which pays well and at the same time will be less burdensome to the farmer, should meet with welcome acceptance. Flax is such a crop for Imperial Valley. The fact that from 40 to 50 per cent of flaxseed is being imported into the United States each year, with only a remote possibility that we shall have at any time an overproduction, makes flax a stable crop. The grower is also protected by a tariff on imported flaxseed, which amounts to 65 cents a bushel.

Many substitutes have been made to replace linseed oil in paint, such as fish oil, soybean oil, perilla oil, etc. but none of them have been entirely successful. Some of these substitutes work fairly well on exterior painting, but they are seldom being used on inside work. Substitutes or blended oils practically all employ linseed oil for a base. A substitute for linseed oil is as objectionable to a good painter as oleomargarine is to be good dairyman.

Footnote: The earlier investigations on flax were conducted by Mr. L. G. Goar, in charge of the work at the Imperial Valley Station from 1920 to 1929.

Approximately 70% of the linseed oil is used for paints, 25% for linoleums, and 5% for lithographic ink, cosmetics, drugs, etc.

Reasons Why Flax Makes High Yields in Imperial Valley

1. Flax can be sown in the fall in Imperial Valley, which gives the crop a long, mild growing season.
2. There are thousands of acres of very productive soil in Imperial Valley, well suited to flax production.
3. Moisture is controlled by irrigation; so the farmer in Imperial Valley is not dependent on rainfall (directly) to produce his crop.
4. Due to the long, mild winter growing season, the farmer in Imperial Valley can and should use only Indian varieties of flax which tiller or branch out and set a much heavier crop of seed.
5. With Indian varieties or strains of flax and with the long growing season, the seed has a higher percentage of oil, and the oil also has a higher iodine number. Both of these factors are very desirable. Oil with a high iodine number is a quick-drying oil, which naturally makes a quick-drying paint when used for that purpose.

Until last year, practically all of the flax plantings were more or less failures in the Valley. The reason for these failures can be covered in four points: (1) poor selection of lands, (2) wrong variety of flax, (3) wrong date of planting, and (4) wrong rate of seeding.

If the following instructions are followed, and if the grower exercises the same degree of intelligence in working his land as the good grain farmer in the Imperial Valley does, flax can be made a very profitable crop.

Selection of the Land

The land should be practically free of weeds and alkali. All land in the Valley has some alkali, but there are thousands of acres that are free of salt from a practical standpoint.

After watching the growth of flax on some 12,000 acres of all types of soil this year, we are convinced that flax will grow on a wide range of soils. Any of the soils of a medium to moderately heavy texture will produce good crops. In all probability, the medium or fairly heavy soils will remain productive longer than the sandy soils. Flax planted on blow sand, it has not looked too promising. Heavy, tight, Imperial clay loams should be avoided, because it is too difficult to secure a stand on such soil.

Weeds are the most serious pests that the flax grower will have to content with. Some of the most serious weeds are: sour clover, Bur clover, mustard, mallow, knot grass, lamb's quarter, milkweed, prickly lettuces (sometimes called China lettuce), cheat, Darnell, Arizona wire grass, and wild oats.

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If the land is badly foul with one or more of these weed pests, it should not be used for flax.

If there is only a small amount of weeds on the land to be used for flax, these can be destroyed in the preparation of the seed bed.

Crops which Flax will Follow in Imperial Valley

Alfalfa, alfalfa and Bermuda grass, vegetables, wheat, barley, cotton, and milo.

Flax will follow any of the above crops with certain reservations:-

1. If the alfalfa land is badly infested with sour clover, Bur clover, or other noxious weeds, it is not desirable for flax.
2. The same holds true of the alfalfa and Bermuda grass sod for alfalfa.
3. Vegetable land that is foul with weeds is undesirable for flax.
4. Wheat land that is foul with weeds, or if it is likely to have a lot of volunteer wheat, is not suitable for flax planting.
5. The same holds true for barley land as for wheat.
6. Cotton land must lie fallow one year, due to the lateness of the harvest of the cotton crop before it can be seeded to flax.
7. Flax will follow milo, provided that the land is practically free of weeds, and has not been cropped to milo for more than two years in succession. Like cotton land, however, milo land must lie fallow for one year before it is suitable for flax. Also, for best results, a cover crop should precede the flax crop. If the land is to be used for flax the following years, the grower should continue to use the cover crop each summer.

The best summer cover crops in Imperial Valley are Sesbania and Guar. There are other cover crops which do well, but they must be cultivated in order to keep the weeds out of them during their first six weeks of growth. Sesbania is about the easiest cover crop to grow, and the only one of which seed is readily available.

Preparation of the Seed Bed.

Since all land is not of the same texture or topography, and will not have the same preceding crop, it is somewhat difficult to state specifically how the land should be handled in each individual case. However, the recommendations here made will hold true in the majority of cases.

Alfalfa and Bermuda Land

Alfalfa land should be plowed from 7 to 8 inches deep, floated, and bordered. If the land is not too dry or too wet when it is plowed, the soil will crumble enough, so that a heavy float will leave the surface in good shape. Alfalfa land should be plowed at least two months before planting flax, so that the nitrogen will have time to be converted into available forms. If on the other hand, there is a fairly heavy sod of Bermuda grass, it will be necessary to plow the land in the late summer or early fall, in order to kill the Bermuda grass, as well as the alfalfa. It should be allowed to lie fallow as long as possible. The alfalfa or Bermuda, however, do not cause much trouble as a rule, because they are dormant during the growing period of the flax, but the grower should make it a practice to try always to eradicate any growth that is foreign to the crop planted. When the grower is ready to work up the plowed land in the fall, if there is Bermuda sod, the first operation will require a heavy discing. One discing, followed by a float, may be sufficient, but in some cases two discings will be needed. There are a number of good heavy discs in use in the Valley, or on the market, which will do good work.

After the land has been put in shape, it is ready to be bordered.

Grain Land

In the case of grain land, plowing may or may not be necessary. Generally speaking, grain land should be plowed at least every other year. If plowing is necessary, it does not have to be done until shortly before planting time. The plowing depth should be about the same as for alfalfa land, 7 or 8 inches deep. It is probably always advantageous to plow as soon after a grain or flax crop is taken off as may be possible, if a cover crop is not to be used, because plowing will kill all weed growth, and will give the soil a chance to rest and air out. Plowing should always be done when there is sufficient moisture in the soil, so that it will crumble readily. On the other hand, the soil should not be worked when it is too wet, because then there is a tendency of the soil to puddle and bake into hard lumps. With the proper amount of moisture in the soil, and with a good, heavy, well-balanced plow, tailing can be avoided, and a good job of plowing can be done. On grain land, after the plowing has been finished, one operation with a disc harrow or float will generally put the land in good shape for bordering.

Cotton or Milo Land

If cotton or milo land is to be used for flax, the stalks should either be pastured off or cut down with a stalk-cutter after the crop is harvested. If the cotton or milo crop is taken off in October, November or December, the land should lie fallow until the following spring, either as pastured land or unused. In the spring or early summer, (May), the land should either be planted to a cover crop or else plowed and left fallow until time to work the land up for flax.

Vegetable Land

Vegetable land that is to be used for flax should be either cover-cropped, or the beds should be knocked down, and the land disced thoroughly and left fallow until planting time. Melon, squash, or tomato beds are knocked down either with a float, by crossing the beds diagonally, or by using a reversible bedding disc, or border disc, and splitting the beds lengthwise. Lettuce, carrots, and pea beds are knocked down by discing with a heavy disc, either diagonally or crosswise of the beds.

At planting time this land is ready to border up.

Bordering

Bordering can be done with the regular implements, such as a bordering disc or crowder. The grower should avoid having borders that are too large, and if possible should avoid having a plow or water-furrow on each side of the border. A border 6 or 7 inches high and about 4 feet wide should be of sufficient height and strength to hold the water during the four or five irrigations necessary to mature the flax crop. The borders should be rounded over the top, and well sloped on the sides, which will lessen the breakage, and increase the efficiency of the harvesting equipment.

The borders should be about the same distance apart as those used for grain. This varies according to the amount of side fall the land has. Ordinarily, the space between the borders is 50 to 60 feet wide. The length of the lands varies from one-eighth to one-half mile. Lands longer than one-half mile should not be used. If the borders are not too large, they will be sub-irrigated when the land is irrigated preparatory to planting. Then when the land is planted, the borders should be planted also. By doing this, all the land will be utilized in producing a crop.

Irrigations Preparatory to Planting

The time, or date, of the first irrigation depends upon whether or not the grower's land is free of weeds or volunteer grain. If there is some doubt about it, the land should be irrigated twice before planting. The first irrigation should be given about the 20th of September. Then in about 12 or 14 days, the land should be given a thorough discing to kill all vegetation. If the land is irrigated much earlier than the 20th of September, the weather will still be too warm for the winter weeds and volunteer grain to germinate. In that case, the first irrigation would not serve the purpose for which it was intended.

The second irrigation should follow within a few days after discing. Then as soon as the land is dry enough, it should be disced lightly, and the flax planted with a drill.

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If the grower's land is practically free of weeds, this double irrigation is unnecessary. One irrigation will be sufficient. Where only one irrigation is to be applied before planting, the watering need not be done before the 10th of October.

Date of Planting

In order to assure a good crop, flax should be planted between October 15 and November 15, the optimum period being from October 20 to November 5. Plantings made earlier than the 15th of October may result in a poor stand, or the flax may be forced into bloom early in February while there is still danger of a heavy frost.

Plantings made much later than the 15th of November may also result in a poor stand. In addition, shorter growth, lower yields, and lower oil content are certain. For each 30 days later in planting after October 15, the Indian varieties make about 4 inches less growth. In other words, if Punjab flax is planted on October 15 and normally attains a height of 26 inches, then it would make only 14 inches of growth if planted January 15. For each 30 days the planting is delayed after October 15, the yield decreases about four or five bushels per acre, and the oil content drops from 1 to 4 per cent.

Rate of Seeding Varies with Different Varieties

Punjab flax	requires 40 pounds per acre if drilled.
" "	" 50 " " " " broadcast
Abyssinian flax	" 30 " " " " drilled
" "	" 35 " " " " broadcast
Giza flax	" 50 " " " " drilled
" "	" 60 " " " " broadcast

Mulching and Planting.

After the land has been irrigated, just prior to planting, it should be disc-harrowed as soon as possible, with a smoothing-harrow pulled behind the disc. Ordinarily the soil will be ready to work in from 8 to 12 days after irrigating. When discing, do not try to cut too deeply, as the disc may ball up with mud. For this operation, a disc with 6 or 7 inch spools between the discs is better than one with 9 inch spacers. A disc with a 6 or 7 inch spacing between blades does not have to be set to go as deep in order to cut and cover all the soil between the blades, and yet a good light mulch will be formed without detriment to the soil, and without difficulty in performing the operation.

On the light and medium soils, the disc and smoothing-harrow worked very well, but did not go so well on the heavier types of soil.

The best mulching tool used in the Valley for all kinds of soil the past season was a spring tooth harrow, followed by three sets of smoothing-harrows, one behind the other. Each set of smoothing-harrows was the same width as the spring tooth harrow.

When land is irrigated, a crust is formed on the surface from 1 to 3 inches in depth, depending on the texture of the soil. This crust must be pulverized into a mulch. This mulch should be fine enough, so that no clods are much larger than an egg. Coarse, cloddy mulches allow the moisture to escape too rapidly.

It should be the grower's aim to pulverize this top crust as finely as possible with one operation prior to planting. The heavier the soil is, the sooner it must be worked after irrigating. It is more difficult to get a good mulch on heavy soils with one operation than on the light soils; and if more than one operation is used, the surface moisture evaporates quite rapidly each time the soil is stirred.

This year, practically every grower was taught the value of a fine mulch, if he observed the headlands where the water deposited the silt. By the time a field has dried out sufficiently, so that practically all of the land can be mulched, the headlands appear to be perfectly dry. When the headlands are mulched, the surface for two or three inches is so dry that the dust comes up in a cloud. However, this dust is so fine that it makes a very good seal over the moisture below, and it can be retained several days longer than would be possible on the heavier soils. The heavier soils cannot be allowed to get so dry on the surface because they crack and check, thus allowing the moisture to escape. In addition, heavy soils that are permitted to become too dry are very difficult to pulverize.

Drilling should follow the mulching as soon as possible.

The seed should be planted from $2\frac{1}{2}$ to 3 inches deep, and in the moisture. The grower should not hesitate to plant an inch deeper, if it is necessary to get the seed in good moisture. Normally a flax seedling is a pretty delicate plant and needs to be planted very carefully.

The secret of getting a good stand lies in the farmer's ability to conserve a maximum amount of moisture close to the surface, so that the young seedling will not have to force its way through 3 or 4 inches of dry mulch, as well as through the $1\frac{1}{2}$ or 2 inches of moist soil in which the seed was planted.

The borders should be drilled in order to cut down on the amount of waste land, or land not in crop. On a square piece of land, such as 40 acres or 160 acres, with borders 50 feet apart and 5 feet wide, 10 per cent of the land is in borders. Ordinarily, 10 per cent interest on an investment is considered a pretty good return, so that this should be kept in mind. In some cases, it may be the most practical thing to drill crosswise of the borders, while in other instances, it may be better to drill lengthwise of the borders. This will depend upon how the land is laid out. If the borders are too high and have a furrow on each side, drilling across the border would be an advantage, because the drill would smooth the border down some and help to fill the furrows on either side, which are objectionable.

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On drills which do not have press wheels, some form of drag or packer should be used behind the drill. The rings that ordinarily come on a drill, to help cover seed behind the drill disc are not of much value for Imperial Valley conditions. These can be taken off and a light drag, plank, or a heavy chain can be used to serve the same purpose as the rings and to better advantage. A good heavy chain worked very satisfactorily in most cases last year (about a 7/8 inch chain). A spreader should be used to keep the chain open to the same width as the drill. Or if the farmer wishes, he may pull smoothing-harrows or a cultipacker behind his drill.

Drilling is preferred to broadcasting, because the seed is put into the moisture at a uniform depth. It also gives the flax a start ahead of any weeds which may come with later irrigations. Where the seed is all planted at a uniform depth, the plants have the same opportunity to make a uniform growth.

Calibrating a Drill

There is no reason for using guesswork in setting a drill to sow the right amount of seed per acre. The drill can be adjusted to sow the proper amount before it is taken to the field. There are 43,560 square feet in an acre. For convenience, the drill can be calibrated for one-tenth of an acre. One-tenth of an acre would be one-tenth of 43,560 square feet, or 4,356 square feet. If for example, a farmer has a ten foot drill:- Divide 4,356 by ten feet and you get 435.6 feet, the distance the drill must travel in order to sow one-tenth of an acre. Then with a tape, measure the circumference of the wheels. If for instance, your drill has a twelve foot wheel, divide 435.6 by 12, which gives you 36.3 turns the wheel must make in order to plant one-tenth of an acre.

If 40 pounds of flax is to be planted per acre, only 4 pounds would be needed for one-tenth of an acre. On most of the later model drills, the auger shift is divided in the center of the drill, so that each half of the drill is calibrated separately. In the example cited here, only 2 pounds of seed should be ~~xxxxxxxx~~ obtained from each side of the drill.

In making the test, seed is put in the box (any amount), a canvas is put under the grain spouts on the ground, the drill is placed in gear, the drill is set where you think it might be about right, and then one wheel is jacked up and turned the proper number of turns. The seed collected on the canvas is then weighed.

When the right amount of seed is secured on the canvas from a trial run, the drill is ready for use. Caution: It is always best to have the drill feed open a little too much when starting to calibrate, rather than not to have it open enough. Then gradually

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the opening is closed until the proper amount of seed is sown. If the drill feed is gradually opened as it is being calibrated, the drill generally plants a little under the amount desired when used in the field.

Calibrating can be expressed by the following formula:-

$$\frac{4,356 \text{ sq.ft. in } 1/10 \text{ acre}}{(\text{width of drill}) \times (\text{circumference of drill wheel})} = \frac{\text{number of turns wheels must make to plant } 1/10 \text{ acre}}{1/10 \text{ acre}}$$

Practically all of those who used this method of calibrating their drills this year found that it worked out very satisfactorily.

Types of Drills to Use

A drill with a flute feed works more satisfactorily for flax than a double run. The flute feed works equally as well for alfalfa, barley, oats, wheat, and milo. On a double run, often the feeding disc wears a little, a small crack appears between the feeding disc and the casting in which it runs, thus allowing flaxseed to slide through.

Types of grain furrow-opener to use: There are a number of types of furrow opener, such as a single disc, double disc, or shoe. On soft soil, it makes little difference which type is used. On the heavier soils, the shoe worked the most satisfactorily and is equally as good on the light soils. In drilling across the border, there are always quite a lot of clods on top of the ridges which lodge between the discs on both a single or a double disc drill. In the case of a shoe drill, the shoe is below the surface of the ground, leaving little exposed for the clods to lodge between. This is especially true when the shoes are staggered, as they should be. Drills equipped with tall individual press wheels worked very satisfactorily. On this type of drill, the weight of the drill was carried on the press wheels and on two small dolly wheels in front.

Broadcasting

Flax can be broadcast, but it is not as desirable as drilling, for the following reasons: (1) Unless the weather is very calm, the grower will not get a uniform distribution of his seed; (2) A broadcaster is more difficult to set so that the proper amount of seed is sown at all times; (3) Broadcast seed cannot be all be covered at a uniform depth; (4) Broadcast seed must be irrigated up -- and if there is any weed seed on the land, it will come up with the flax; (5) If flax is broadcast, the land must be corrugated; (6) Corrugated land is more difficult to harvest.

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Flax will not stand flooding in order to bring the seed up. For this reason, if flax is broadcast, the land must be corrugated after the seed is sown. The corrugations should be from 30 to 36 inches apart and about 3 or 4 inches deep. Then when the flax is irrigated the first time to bring up the seed, a small stream of water is run down each furrow. The water is run long enough and slowly enough in the furrow, so that the area between them is all sub-irrigated. By irrigation of the land in this manner, the soil will not crust or bake on the surface before the flax comes up.

During the fall planting of 1933-1934, some broadcasting was done, and some flax was drilled in dry soil and irrigated up. Due to the long continued, warm fall weather, growers were able to secure good stands regardless of how they planted. Until this year at the Experiment Station, we have always had some difficulty in securing a stand by broadcasting.

Irrigations

After the flax is up, it will ordinarily require from four to five irrigations, equally distributed during the growing season, to mature the crop. The first irrigation should be applied about six weeks after planting, and then one about every thirty days thereafter, depending on the soil type, weather conditions, etc.

To obtain the highest yields the grower should see that the flax has abundance of moisture when the crop reaches its maximum blooming stage. To make sure of this, an irrigation at this time is generally essential. The next essential irrigation is about three or four weeks after the maximum bloom period, when the bolls of the flax are filling. At these two periods, the grower must watch his moisture for best results. Up until blooming starts, enough moisture should be maintained to keep the flax growing well. No water should be applied after the flax starts to ripen or gets a straw color. Late irrigation after the crop starts to mature decreases the oil content of the flax seed.

Lodging

This spring is the first time in four years that we have ever experienced lodging in any of the Punjab variety of flax. It was due, apparently, to two causes: (1) The open winter and very favorable growing weather, the flax therefore growing 10 to 12 inches higher than usual; (2) That the crops were heavier than at any previous time.

Lodging takes place after the flax has finished blooming, and the bolls are green and heavy. Then, if the crop is irrigated and a wind comes up, it is likely to go down, if the flax has made more than 26 or 28 inches of growth. After the flax begins to ripen, it is less likely to lodge, because the straw is then very stiff and fibrous.

Harvesting -- 1933

Flax harvesting in 1933 was not entirely successful, but it was good enough, so that one grower was able to get a yield of 33 bushels per acre on one field. This yield is about 4 times the average of the flax-producing states. From 15 to 20 per cent of the crop was lost in threshing this year, on all fields.

Harvesting is purely a mechanical problem which, with the assistance of the harvesting companies, can undoubtedly be accomplished satisfactorily.

Imperial Valley has a very favorable harvesting period for its flax. The weather is warm and dry at that time of the year. The flax varieties ordinarily grown here do not lodge and are also very resistant to shattering. These are all favorable factors.

The unfavorable factors are: (1) The Punjab variety of flax has a rather hard pod or boll; (2) The yield runs so high here, that the capacity of the ordinary combine is taxed to the limit.

Some of the problems encountered this year were as follows:- Too many pods going over into the straw unthreshed, too much cracked seed; too much free seed passing over the shoe with the chaff; the return elevators overloading; and too much chaff going into the sack with the grain.

Two changes are needed on the grain combines in order to get good results. The screen capacity should be increased. The cylinder action should be more thorough without cracking so much seed.

The cylinder trouble could probably be eliminated by using two cylinders instead of one; or by the use of one cylinder and a set of rollers; or by using a device similar to an alfalfa or clover huller.

The screen capacity could be increased by lengthening or widening the machine, or by doing both.

Flax harvesters have been designed which are apparently working successfully in the flax-producing states. It should be only a matter of time until the farmers in Imperial Valley will have such equipment.

Yields on Punjab Flax -- 1933

The grower should be able to secure 20 to 30 bushels of flax per acre without any difficulty if he farms at all intelligently and does a fair job of harvesting. During the harvest period of this year, 24 one-thousandth acre yields were cut from commercial fields, and 22 were cut from plots at the Imperial Valley Experiment Station. These were cut and flailed out by hand on canvas, so there was no loss in the harvesting process. The average of those cut at the Experiment

Station was 51 bushels per acre. The highest yield cut at the Experiment Station was 62.5 bushels per acre, and the lowest was 44 bushels. The highest yield threshed out on the station with a threshing machine was 39.3 bushels per acre, and the lowest was 27.5 bushels per acre.

On the commercial acreages, the highest hand-threshed yields were 58 bushels per acre. On one piece, three yields were taken diagonally across the piece, and the average of the three hand-threshed yields was 55.55 bushels per acre. This piece when harvested made 32.95 bushels per acre. The hand-threshed yields on this piece were cut early in May, but the field was not harvested until about the first of June. During the month of May several 40 and 45 mile-per-hour winds and one 61 mile-per-hour wind occurred. This field of flax stood through all these winds, stood a 15 to 20 per cent loss in threshing, and still made 32.95 bushels per acre, which may be a new high yield record.

None of the yields cut from commercial acreages ran less than 25 bushels per acre. The average yield of the first 210 acres threshed was 26 bushels per acre, after the seed was recleaned. Forty-two and five-tenths acres made 31 bushels per acre, 52 acres made 24 bushels per acre, 90 acres made 24 bushels per acre, and 4.11 acres made 32.95 bushels per acre.

The flax in Imperial Valley in 1933 did very well, but one can readily see where there is still plenty of room for improvement.

Cost of Producing Flax Crop

<u>Operations</u>	<u>Cost per acre</u>
Plowing (once over)	\$ 3.00
Floating	1.00
Bordering	.25
Cleaning ditches and building up border-ends	.50
First irrigation after plowing	.50
Mulching or seedbed preparation	.75
Seed - 40 lbs. per acre, 5¢ per pound	2.00
Drilling	.35
4 additional irrigations to mature crop, 25¢ each	1.00
Harvesting	5.00
Sacks	1.50
Twine	.10
Hauling flax to railroad terminal	.40

Total cost of production per acre** - \$16.25

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These are contract prices, so that depreciation does not enter in as far as the grower is concerned.

Nothing was allowed for taxes, because most of the grain land is leased on a one-fourth crop rent basis.

These costs represent cash out of pocket and make no allowance for wages to the grower for his supervision.

General Information*

1. The best stand will usually be obtained if planting is done when the maximum temperature runs between 75 and 95 degrees Fahrenheit, and the minimum temperature between 40 and 50 degrees.

2. One bushel of flaxseed weighs 56 pounds.

3. One bushel of flaxseed yields approximately $2\frac{1}{2}$ gallons of linseed oil, and $37\frac{1}{2}$ pounds of linseed meal, depending on the percentage of oil in the seed.

4. One gallon of linseed oil weighs $7\frac{1}{2}$ pounds.

5. Import duty on flaxseed is 65 cents per bushel.

6. Import duty on linseed oil is 4.5 cents per pound.

7. The average price paid for flaxseed at Minneapolis over a 33-year period is \$2.00 per bushel(1899-1932).

8. The average price of linseed oil per gallon, in New York, over a period of 20 years is 91.57 cents.(1910-1931). This makes the average price of linseed oil per pound at 12.2 cents.

9. The average wholesale price per ton on linseed meal at Minneapolis over a period of 22 years(1909-1931) is \$46.24, or 2.31 cents per pound.

* All statistical facts taken from U. S. Department of Agriculture Yearbooks for 1909-1923-1930-1932-1933.

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Table 93

Flaxseed: ----World Production, 1920-21 to 1932---33.

Year	World produc- tion Includ- ing Russia	Northern Hemis- phere produc- tion in- cluding Russia	Euro- pean produc- tion in- cluding Russia	Argen- tina	Russia	United States	India	Canada	Poland	Lithu- ania	Uruguay
	1000 bu.	1000 bu.	1000 bu.	1000 bu.	1000 bu.	1000 bu.	1000 bu.	1000 bu.	1000 bu.	1000 bu.	1000 bu.
1920-21	110,811	49,638	14,894	60,006	9,204	18,029	16,760	7,998	637	1,011	966
1921-22	77,467	40,773	14,424	36,046	9,752	10,375	10,800	4,112	856	909	519
1922-23	105,430	56,921	16,813	47,577	11,043	17,060	17,440	5,006	1,816	1,108	719
1923-24	136,284	76,983	19,664	58,005	13,379	28,246	21,320	7,140	2,129	1,056	1,178
1924-25	131,221	84,460	23,982	45,084	16,960	31,547	18,520	9,695	1,872	1,332	1,542
1925-26	159,128	81,876	32,391	75,113	23,391	22,424	20,040	6,237	2,250	1,571	2,030
1926-27	153,945	71,080	28,861	80,783	20,877	19,335	16,080	5,995	2,472	1,574	1,970
1927-28	158,194	76,715	29,146	82,672	21,814	25,847	16,240	4,885	2,790	1,405	1,954
1928-29	149,063	68,607	30,530	73,377	23,690	19,928	13,920	3,614	2,413	1,000	2,030
1929-30	122,056	68,685	37,776	50,004	26,060	15,910	12,880	2,060	3,092	1,718	3,228
1930-31	155,435	79,972	37,805	70,264	29,957	21,240	15,200	5,069	2,335	1,532	5,056
1931-32	157,500	63,135	32,631	62,672	27,000	11,018	15,120	2,565	1,968	1,107	5,723
1932-33	-----	-----	-----	53,147	-----	11,841	16,440	2,446	-----	563	-----

1923 -- 1932 YEARBOOKS OF AGRICULTURE

Table 164 & 100 Flaxseed: Average closing price per bushel, Minneapolis, 1899--1933

Year begin- ning Sept.1	Sept. Dolls.	Oct. Dolls.	Nov. Dolls.	Dec. Dolls.	Jan. Dolls.	Febr. Dolls.	March Dolls.	April Dolls.	May Dolls.	June Dolls.	July Dolls.	Aug. Dolls.	Average Dolls.
1899-1900	----	----	----	----	1.45	1.55	1.59	1.68	1.75	1.75	1.63	1.35	----
1900-1901	1.49	1.70	1.71	1.62	1.65	1.60	1.54	1.68	1.75	1.75	1.85	1.60	1.66
1901-1902	1.50	1.45	1.42	1.47	1.65	1.70	1.72	1.75	1.75	1.74	1.52	1.42	1.59
1902-1903	1.31	1.20	1.18	1.19	1.19	1.15	1.12	1.10	1.14	1.07	.97	.97	1.13
1903-1904	1.00	.98	.94	.97	1.06	1.15	1.14	1.12	1.05	1.07	1.19	1.24	1.08
1904-1905	1.22	1.14	1.16	1.23	1.23	1.27	1.39	1.39	1.42	1.47	1.47	1.42	1.32
1905-1906	1.04	.97	.98	1.04	1.16	1.14	1.13	1.15	1.14	1.11	1.10	1.11	1.09
1906-1907	1.10	1.11	1.17	1.19	1.20	1.22	1.19	1.16	1.23	1.25	1.18	1.14	1.18
1907-1908	1.22	1.27	1.13	1.12	1.17	1.16	1.16	1.17	1.23	1.23	1.21	1.29	1.20
1908-1909	1.23	1.22	1.38	1.45	1.56	1.64	1.64	1.65	1.72	1.77	1.59	1.42	1.52
1909-1910	1.41	1.57	1.75	1.93	2.18	2.18	2.25	2.38	2.22	2.04	2.34	2.47	2.06
1910-1911	2.66	2.62	2.61	2.42	2.60	2.68	2.60	2.36	2.47	2.24	2.10	2.34	2.49
1911-1912	2.47	2.35	2.04	2.06	2.15	2.06	2.06	2.15	2.23	2.25	1.97	1.86	2.14
1912-1913	1.76	1.60	1.35	1.25	1.29	1.34	1.26	1.29	1.30	1.31	1.38	1.47	1.38
1913-1914	1.45	1.38	1.35	1.44	1.49	1.53	1.58	1.54	1.56	1.59	1.68	1.64	1.52
1914-1915	1.51	1.33	1.45	1.54	1.83	1.86	1.91	1.93	1.95	1.76	1.67	1.67	1.70
1915-1916	1.70	1.86	1.99	2.07	2.31	2.32	2.27	2.13	1.96	1.80	1.96	2.15	2.04
1916-1917	2.11	2.54	2.78	2.84	2.89	2.81	2.90	3.18	3.33	3.11	3.01	3.46	2.91
1917-1918	3.38	3.16	3.29	3.40	3.60	3.74	4.08	4.09	3.93	3.86	4.40	4.39	3.78
1918-1919	4.09	3.59	3.77	3.54	3.41	3.45	3.75	3.88	4.12	4.86	5.94	5.87	4.19
1919-1920	4.92	4.32	4.83	4.99	5.12	5.09	5.02	4.68	4.53	3.92	3.48	3.28	4.52
1920-1921	3.23	2.83	2.27	2.06	1.96	1.82	1.78	1.58	1.84	1.86	1.89	2.01	2.09
1921-1922	2.03	1.81	1.81	1.89	2.13	2.46	2.57	2.70	2.80	2.50	2.59	2.29	2.19
1922-1923	2.28	2.38	2.48	2.52	2.80	3.04	3.07	3.40	2.94	2.80	2.70	2.34	2.58
1923-1924	2.38	2.48	2.42	2.46	2.50	2.58	2.49	2.47	2.46	2.44	2.47	2.44	2.44
1924-1925	2.26	2.40	2.58	2.84	3.15	3.12	2.97	2.79	2.80	2.63	2.49	2.54	2.63
1925-1926	2.59	2.58	2.56	2.61	2.50	2.43	2.32	2.34	2.30	2.33	2.44	2.38	2.52
1926-1927	2.33	2.21	2.22	2.24	2.23	2.25	2.22	2.24	2.34	2.25	2.23	2.22	2.24
1927-1928	2.21	2.13	2.13	2.15	2.24	2.27	2.33	2.36	2.46	2.38	2.21	2.05	2.20
1928-1929	2.09	2.28	2.35	2.39	2.45	2.55	2.49	2.45	2.45	2.48	2.76	2.79	2.33
1929-1930	3.23	3.32	3.24	3.22	3.08	3.05	2.92	2.92	2.68	2.71	2.32	2.00	2.92
1930-1931	1.90	1.80	1.65	1.61	1.57	1.56	1.58	1.57	1.55	1.43	1.64	1.41	1.65
1931-1932	1.37	1.32	1.46	1.43	1.41	1.40	1.40	1.35	1.21	1.05	.98	1.01	1.27
1932-1933	1.13	1.13	1.06	1.09	----	----	----	----	----	----	----	----	----
Av. Price	2.04	2.00	2.01	2.04	2.12	2.15	2.16	2.17	2.17	2.11	2.13	2.09	

Total average price per bushel over 33 years - \$2.09

1930 and 1932-33 YEARBOOKS OF AGRICULTURE

Table 104 Linseed Meal: Average wholesale price per ton, Minneapolis, 1909--1933

Year Begin- ning Sept.	Sept. Dolls.	Oct. Dolls.	Nov. Dolls.	Dec. Dolls.	Jan. Dolls.	Febr. Dolls.	March Dolls.	April Dolls.	May Dolls.	June Dolls.	July Dolls.	Aug. Dolls.	Average Dolls.
1909	32.00	31.20	32.60	33.38	35.14	35.50	35.06	34.50	34.50	30.17	31.38	33.04	33.21
1910	33.50	33.04	32.15	32.77	33.90	34.45	32.48	31.13	32.00	32.00	32.00	35.24	32.89
1911	36.64	37.00	35.84	36.69	38.00	37.80	36.67	34.83	34.00	33.08	33.00	33.00	35.55
1912	33.00	31.89	31.22	29.26	28.73	28.36	27.04	26.15	25.50	25.50	25.98	30.75	28.62
1913	32.00	31.26	29.25	29.00	29.96	30.25	28.73	29.00	29.42	30.73	31.50	31.50	30.22
1914	31.02	23.22	32.70	34.00	37.52	38.07	35.08	32.22	31.50	32.50	34.50	35.08	33.62
1915	37.50	37.50	36.86	37.56	37.38	37.00	34.31	32.12	29.27	30.18	32.25	34.50	34.70
1916	37.50	39.02	43.96	46.40	45.12	44.45	43.50	45.46	47.81	45.92	49.71	54.62	45.29
1917	56.67	57.50	56.22	59.98	57.69	57.75	59.17	60.00	59.46	57.28	57.62	59.00	58.20
1918	59.00	59.96	60.00	62.40	76.56	67.71	65.12	68.00	69.36	70.25	80.83	93.23	69.37
1919	85.29	76.21	79.22	84.40	84.58	82.59	79.00	72.48	70.58	68.24	68.00	67.04	76.47
1920	67.00	64.69	55.25	46.00	42.42	40.64	44.77	39.69	33.38	33.65	40.50	43.59	45.96
1921	42.84	39.08	41.38	47.00	48.00	50.86	55.81	54.38	53.23	61.00	48.28	46.44	48.19
1922	43.32	50.46	53.65	54.88	57.62	55.23	49.19	47.00	42.81	41.88	43.84	49.28	49.35
1923	52.21	52.78	50.92	49.76	49.31	45.74	45.10	43.20	42.58	44.44	47.16	48.73	47.66
1924	47.50	48.40	46.25	46.00	45.12	41.50	40.50	39.25	37.70	41.38	41.62	25.40	48.18
1925	43.62	45.38	44.30	46.38	47.00	44.50	39.88	38.75	41.30	43.00	43.31	44.00	50.09
1926	42.86	42.30	42.88	44.50	46.40	47.62	45.50	43.25	49.00	46.38	46.60	43.80	48.59
1927	43.12	43.70	43.88	44.00	45.60	47.35	47.75	48.10	47.25	45.90	45.50	44.81	51.58
1928	45.95	45.30	46.40	47.45	48.00	49.00	50.80	51.40	53.00	51.10	49.10	46.25	58.20
1929	47.55	53.85	54.90	57.00	56.90	59.00	56.60	52.10	51.90	51.20	53.05	45.75	54.72
1930	56.40	55.70	55.10	55.00	54.10	51.75	50.30	54.75	48.70	44.75	42.75	53.10	36.66
1931	42.10	40.25	38.90	37.90	36.40	34.65	31.60	30.75	27.70	24.95	25.60	42.20	34.41
1932	25.75	25.70	31.40	32.10	30.15	28.75	28.00	27.30	24.25	21.40	20.40	26.20	26.72
1933	22.40	21.50	19.80	19.15	----	----	----	----	----	----	----	----	----

1932 YEARBOOK OF AGRICULTURE

Table 92. Flaxseed: Yield per acre, average 1919--1928, and annual 1926--1931, and estimated price per bushel December 1, average 1925--1929, and annual 1926--1931, by States.

	Yield per Acre								Estimated price per Bushel--Dec.1						
	Av. 1919- 1928	1926	1927	1928	1929	1930	1931	1932	Av. 1925- 1929	1926	1927	1928	1929	1930	1931
	<u>Bus.</u>	<u>Bus.</u>	<u>Bus.</u>	<u>Bus.</u>	<u>Bus.</u>	<u>Bus.</u>	<u>Bus.</u>	<u>Bus.</u>	<u>Bus.</u>	<u>Bus.</u>	<u>Bus.</u>	<u>Bus.</u>	<u>Bus.</u>	<u>Bus.</u>	<u>Bus.</u>
Wisconsin	12.3	12.0	13.2	13.5	11.0	11.0	9.5	12.0	217	200	190	199	270	156	123
Minnesota	9.6	9.4	9.7	8.0	9.0	10.0	7.0	9.2	222	197	192	205	287	145	123
Iowa	10.4	11.6	12.0	10.4	9.0	11.5	8.0	9.0	217	195	195	196	275	155	120
Missouri	7.8	8.0	6.5	8.0	5.0	7.0	5.0	5.5	206	195	188	190	265	150	100
North Dakota	6.9	5.5	6.2	7.3	4.5	4.7	3.5	4.0	218	193	184	201	287	139	117
South Dakota	7.9	5.8	10.0	6.5	4.7	4.7	2.5	4.7	216	190	185	201	280	133	117
Nebraska	8.4	8.7	10.0	8.0	7.0	5.5	3.5	6.0	212	185	175	190	280	125	95
Kansas	6.6	6.9	5.5	6.9	5.5	6.5	5.5	6.5	201	200	185	185	234	156	120
Montana	6.0	4.2	10.2	8.5	3.3	3.7	2.3	3.5	210	185	175	192	280	131	110
Wyoming	6.9	---	---	7.0	5.5	4.0	2.0	3.5	---	---	---	195	275	129	115
United States	7.6	6.7	9.1	7.4	5.2	5.7	4.9	5.7	218.4	194	186	201.2	284.3	139.8	120.2

35

No.

Centro distribuidor de:

el que suscribe:

Nombre

Dirección

Ciudad Estado

para enviar por Express a la consignación de

Estación de

"La Carpeta".—101903

[illegible]

SUMA \$.....

cantidad que con esta fecha remito en a favor del Señor Tesorero de los Ferrocarriles Nacionales de México.

Fecha:

Firma:

36

Centro distribuidor de:

QUE HACE A LOS FERROCARRILES NACIONALES DE MEXICO

el que suscribe:

Nombre

Dirección

Ciudad Estado

para enviar por Express a la consignación de

Estación de

"La Carpeta".—101903

[illegible]

SUMA \$

cantidad que con esta fecha remito en..... a favor del Señor Tesorero de los Ferrocarriles Nacionales de México.

Fecha:

Firma: