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Annual Report

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THE CANADA STARCH COMPANY LIMITED



P R E S I D E N T ' S R E P O R T

Montreal, March 15th, 1948

TO THE SHAREHOLDERS:—

Your Directors are pleased to submit the Forty-second Annual Report of the Company, together with Consolidated Financial Statements for the year ended 31st December 1947, and the Report of your Auditors.

It is very gratifying to report that during the past year we were able to operate continuously at full capacity, whereas during the previous three years, that is since 1943, production was seriously affected due to shortage of corn. It will be remembered that in 1946 we ran at only 35% of capacity during the first seven months.

The operations for the year 1947 resulted in a net profit of \$279,327.85 as compared with a loss of \$96,100.51 for the year 1946. Your Directors therefore decided to pay the regular dividend on the Preferred Shares for the year.

Income tax to be paid for the year is estimated at \$222,000.00.

The amount written off for depreciation of Fixed Assets was \$302,316.49 which was \$141,904.54 more than in the previous year.

The Working Capital at the close of the year was \$2,097,553.55 which is an increase of \$148,672.82 as compared with the position at the close of 1946.

The plant was maintained in a good state of repair and about \$250,000.00 was spent on new construction.

The sum of \$69,968.06 was provided for the Pension Fund Society and charged to our current earnings. Towards the end of the year wages and salaries were increased. This, together with the fact that we operated continuously throughout the year, accounts for the amount being about \$23,000.00 more than in 1946, as the contribution is based on wages and salaries paid.

On September 15th, ceilings were removed from the prices of our products and from Canadian corn. At the same time, subsidy on imported corn was discontinued, which increased our cost of corn from about \$1.50 per bushel to about \$2.90 per bushel. This put a very heavy strain on our working capital, which explains the large overdraft and bank loan shown at the end of the year. The increased cost of raw material necessitated a corresponding advance in our prices. Later we were able to lower our prices moderately due to some reduction in our costs.

Our sales volume for 1947 was the highest on record, being about 65% greater than in 1939. The increased demand for products from corn can be satisfactorily met, as this industry was greatly expanded in Canada during the war, and the capacity of the existing plants is more than sufficient to fill present needs.

Relations existing between management and employees continue to be excellent, and your Directors desire to express their appreciation of the loyal service and co-operation rendered by the employees and staff throughout the organization.

During the Summer, the Company contributed to the construction of a new baseball diamond and improved swimming facilities at Cardinal. These have afforded a great deal of pleasure and benefit to the community.

Under the Geneva Trade Agreements which went into effect on January 1st, the duty on starch was reduced from 1½ cents per pound to 1 cent per pound. While any reduction in tariff which directly affects our finished products is a serious matter, this has partially been offset by a reduction in the duty on corn and bituminous coal and by the elimination of the duty on anthracite coal.

Although the difficulties of wartime and post-war operation have been acute, we have been mindful of the fact that a transition from a seller's to a buyer's market was inevitable and have sought to be prepared when that transition occurred.

Within the limits permitted by a reduced advertising budget, we have maintained our brand names before the consuming public. We have sought also to build a solid foundation of goodwill towards the Company by the trade, the public and our employees.

The outlook for the first six months of 1948 is fair, but the overall picture for the year is obscure owing to the uncertainty of the commodity markets and the impossibility of foretelling at the present time what the crop prospects are going to be.

By Order of the Board,

G. F. BENSON, JR.,
President.

DIRECTORS AND OFFICERS

THE CANADA STARCH COMPANY LIMITED

Directors

GEORGE F. BENSON	W. B. BLACKADER	R. E. STAVERT
G. F. BENSON, Jr.	NORMAN J. DAWES	F. A. WARREN
de GASPE BEAUBIEN	J. A. MOFFETT	H. G. WASCHER

Executive Offices

SUN LIFE BUILDING, MONTREAL

Officers

GEORGE F. BENSON	CHAIRMAN OF THE BOARD
G. F. BENSON, Jr.	PRESIDENT
de GASPE BEAUBIEN	VICE-PRESIDENT
J. M. KEDDIE	SECRETARY-TREASURER

Sales Offices

SUN LIFE BUILDING, MONTREAL

E. C. McKEOWN	SALES MANAGER
J. E. MERRITT	ASSISTANT SALES MANAGER

Plant

CARDINAL, ONTARIO

A. S. FRASER	PLANT MANAGER
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THE CANADA STARCH COMPANY LIMITED AND

CONSOLIDATED BALANCE SHEET

ASSETS

CURRENT ASSETS:

Cash	\$	76,850.52	
Trade accounts receivable, less reserve for doubtful accounts		\$1,132,958.65	
Sundry accounts receivable		44,957.66	1,177,916.31
Inventories:—			
Determined by actual count, weight or measurement, priced at the lower of cost or market and certified by officials of the Companies			
Raw materials		\$1,493,863.92	
Goods in process		141,077.60	
Finished goods		1,034,794.84	
Manufacturing stores and supplies		452,297.93	
Mechanical supplies and replacement parts		284,310.51	3,406,344.80
Prepaid insurance			14,572.95
			\$4,675,684.58

INVESTMENT IN WHOLLY OWNED SUBSIDIARY COMPANY:

Investment in shares	\$200,000.00	
<i>Less:</i> Amount due to subsidiary company	145,459.98	54,540.02

FIXED ASSETS:

Land, buildings, machinery and equipment and water power rights—at cost, less amounts written off	\$4,847,411.73	
<i>Less:</i> Reserve for depreciation	3,033,318.85	1,814,092.88

GOODWILL, TRADEMARKS, RIGHTS AND BRANDS

1.00

APPROVED ON BEHALF OF THE BOARD:

G. F. BENSON, JR.
de GASPÉ BEAUBIEN } *Directors.*

\$6,544,318.48

Submitted with our

Montreal, 24th February, 1948

CANADA STARCH SALES COMPANY LIMITED

AS AT 31st DECEMBER 1947

LIABILITIES

CURRENT LIABILITIES:

Bank overdraft	\$1,035,089.46		
Bank loan—secured under section 86 of the Bank Act	930,000.00		
Bank loan—against employees' subscriptions to Dominion of Canada bonds	36,336.26	\$2,001,425.72	
Accounts payable and accrued liabilities		372,695.37	
Pension fund contribution		69,968.06	
Account payable—affiliated company		3,926.64	
Sales and other taxes payable		41,308.28	
Provision for income taxes	\$222,000.00		
<i>Less:</i> Paid on account	133,193.04	88,806.96	\$2,578,131.03

RESERVE FOR FUTURE DEPRECIATION IN INVENTORY VALUES

45,000.00

RESERVE FOR CONTINGENCIES, AND DEFERRED CREDITS

234,070.05

CAPITAL STOCK AND SURPLUS:

Capital Stock—

AUTHORIZED—

32,500 7% non-cumulative preferred shares of \$100.00 par value

\$3,250,000.00

62,500 common shares of \$5.00 par value

\$ 312,500.00

ISSUED AND FULLY PAID—

30,691 Preferred shares

\$3,069,100.00

59,325 Common shares

296,625.00

3,365,725.00

Capital Surplus—

Balance as at 31st December, 1946

8,001.00

Earned surplus—

As per statement

313,391.40

3,687,117.40

\$6,544,318.48

report of this date:

(Signed) McDONALD, CURRIE & Co.,
Chartered Accountants.

THE CANADA STARCH COMPANY LIMITED
and
CANADA STARCH SALES COMPANY LIMITED

CONSOLIDATED STATEMENT OF PROFIT AND LOSS

For the year ended 31st December 1947

OPERATING PROFIT	\$852,218.55	
Before charging the following expenses:		
Provision for depreciation of fixed assets	\$302,316.49	
Salaries and directors' fees of executive officers and director	64,090.00	
Fees of other directors	3,720.00	
Legal fees and expenses	5,302.91	375,429.40
		\$476,789.15
OTHER INCOME		
Profit on the sale of fixed assets	\$22,003.70	
Dividend from wholly owned subsidiary company	2,500.00	
Revenue from investments	35.00	24,538.70
		501,327.85
PROVISION FOR INCOME TAXES		222,000.00
NET PROFIT FOR THE YEAR— transferred to earned surplus		\$279,327.85

CONSOLIDATED STATEMENT OF EARNED SURPLUS

For the year ended 31st December 1947

BALANCE as at 31st December, 1946	\$195,191.30
Preferred dividend paid in respect of prior period	53,709.25
	141,482.05
Net profit for the year	279,327.85
	420,809.90
Preferred dividend paid in respect of the first half of the year 1947	107,418.50
	\$313,391.40

McDonald, Currie & Co.
Chartered Accountants

MONTREAL

G. C. McDONALD	G. S. CURRIE
K. G. BLACKADER	L. N. BUZZELL
J. A. de LALANNE	H. C. HAYES
C. W. LEACH	F. L. WINDSOR
B. M. ADAIR	EUNICE C. BANCROFT
LUCIEN BOUTIN	T. P. BROWN
K. P. FARMER	J. R. HENDRY
C. H. T. HULME	L. M. NELSON
C. M. RUSSEL	C. E. C. STEWART

QUEBEC
R. H. KENNEDY

OTTAWA
N. WAINWRIGHT CLEARY

TORONTO
K. LEM. CARTER

SAINT JOHN
W. J. B. GENTLEMAN

TELEPHONE MARQUETTE 8311
CABLE ADDRESS "CURMAC"

507 PLACE D'ARMES

MONTREAL 1

24th February, 1948.

AUDITORS' REPORT TO THE SHAREHOLDERS

We have examined the books and accounts of The Canada Starch Company Limited and of Canada Starch Sales Company Limited, a wholly owned subsidiary company, for the year ended 31st December 1947, and we have obtained all the information and explanations which we have required. In connection with our examination we reviewed the system of internal control and accounting procedures of the companies and examined or tested their accounting records and other supporting evidence by methods and to the extent we deemed appropriate; the audit of the detailed transactions was confined to limited tests thereof.

The Department of Transport of the Dominion of Canada has made claims in respect of top wharfage and wintering charges against The Canada Starch Company Limited and Lakes and St. Lawrence Navigation Company Limited, another wholly owned subsidiary company. The Exchequer Court has rendered judgment against the companies but on advice of counsel this judgment is being appealed. Pending the decision of the Supreme Court of Canada, it is considered that the existing reserves of the companies are sufficient in the aggregate to cover all such amounts for which the companies may be found liable.

The Department of National Revenue of the Dominion of Canada has reviewed the income tax returns of the companies only up to and including the year ended 31st December 1939. Final settlement of subsidy agreements for the years 1943 to 1947 cannot be obtained until the income tax returns have been reviewed and assessments received.

The profits for the year of Lakes and St. Lawrence Navigation Company Limited, a wholly owned subsidiary company, have been taken into account in the attached financial statements only to the extent of the dividend received, the balance of profits being added to the surplus account of the subsidiary company.

We report that, in our opinion, according to the best of our information and the explanations given to us and as shown by the books of the companies, the attached consolidated balance sheet and the accompanying consolidated statements of earned surplus and profit and loss are properly drawn up in conformity with accepted accounting principles applied on a basis consistent with that of the preceding year so as to exhibit a true and correct view of the state of the affairs of the companies as at 31st December 1947, and the results of their operations for the year ended on that date.

(Signed) McDONALD, CURRIE & CO.,
CHARTERED ACCOUNTANTS.

HOW CORN IS PROCESSED FOR

A MULTITUDE OF USES



Corn is the most useful grain known to man. From it scores of products are extracted and processed, and its use in the manufacture of other products is practically unlimited. Because products from corn are used in varied forms by every one of us every day, it might be of interest to examine the process of manufacturing these products.

By water, by rail and by road corn is brought to the Company Elevator at Cardinal, Ont., where it is stored and protected until needed. Thousands upon thousands of bushels, carried by modern freight cars, by trucks and by the Company ship, Casco, and by other boats, find their way to this elevator.

As it is needed the corn is taken from storage—and now it is about to begin a lengthy, exciting journey. The first step after cleaning is to achieve separation of the corn into its various parts: the embryo or germ, the hull and the endosperm. This process is begun in the *Steep Tanks* where



specially prepared warm water soaks the corn and loosens the hulls. This soaking also serves to dissolve and remove from the corn certain mineral salts and soluble matter.

From there the softened kernels pass through disintegrating mills known as *Degerminators*. Here the grain is given a rough milling to free the germ from the hull and endosperm.



This mixture runs into open-top oblong tanks called *Germ Separators*. These separators contain process gluten and starch in suspension maintained at a definite gravity at which the oil-containing embryos float. The heavier parts of the corn consisting of hulls and unground endosperm sink to the bottom.



The floating embryos or germs are mechanically skimmed off the separators. They are washed and dried preliminary to the oil extraction process.

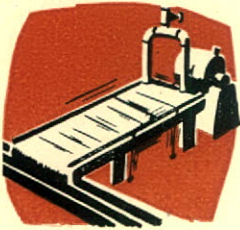
It may be of interest to note in passing that each 56 lb. bushel of corn yields one and one-half pounds of crude oil.

Let us go back one step and return to the endosperms and hulls. You will remember that when we removed the embryos (the corn germs) to press the oil from them, the endosperms and hulls



Mill for very fine grinding.

The resulting mixture is then screened and sifted on *Shakers*—this allows the starch and protein, or gluten, to be separated from the ground hulls of the corn.



This finely ground mixture is then pumped into the *Reels*—cylinders covered with nylon bolting cloth screens. Here it is screened and sifted. The starch and gluten pass through the cloth, leaving behind the fibrous and gritty starch portion.



In the *Centrifugal Separator* the starch is separated from the gluten on much the same principle as cream is separated from milk by the action of a cream separator.



Another method used is to flow the mixture of starch and gluten onto long inclined *Starch Tables*. Here, because the

starch is heavier than the gluten, it sinks to the bottom of the table and the gluten is removed at the lower end.

It now enters the *Vacuum Filters* where it is washed to remove solubles. The removal of solubles is essential not only to produce good starches but also good glucose products.



The process of operation now branches off in order to arrive at different end products. The two main classifications are 'Glucose Products' and 'Starch Products.'

GLUCOSE PRODUCTS

Glucose

The food value of glucose and corn syrup is well known in every home. The first step in the preparation of this new series of products is to heat the pure corn starch while it is suspended in water (to which a minute amount of hydrochloric acid is added) which is contained in large closed bronze kettles called *Converters*. In this Converter the same process takes place as that which goes on in the stomach after a meal rich in starch is eaten—in this manner the starch is converted to sugar. When the conversion has reached the right



stage, the crude syrup (a mixture of dextrose, maltose and dextrine) is now drawn off. To neutralize the hydrochloric acid some sodium carbonate is now added, forming a small quantity of sodium chloride (ordinary table salt).

In the *Bone Filters* this crude syrup is now filtered and purified by a process similar to that used by the sugar industry.



After that it is concentrated by evaporation in vacuum pans until it ends in a thick heavy pure syrup. This is done in what is known as *Evaporators*.



This resulting Glucose is now ready for packing in Tank Cars and Drums. It is shipped to the Candy, Confectionery and Jam Trades.

Corn Syrups

In order to manufacture the Corn Syrups—Crown Brand, Lily White, Karo—the glucose is taken on a further step of processing where it is mixed in *Syrup Mixing Tanks*.



From here it is packed and made ready for shipment.

Oil

As the Corn Germ is separated it is sent through a series of washing Reels and later through *Oil Expellers* which press the oil from the germ by intense pressure. This oil is then deodorized, refined and packed as Mazola.



The residue of this oil is used to yield a soap stock.

Gluten Feed

Some of the Steep Water is evaporated and used in the manufacture of Gluten Feed. This water is combined with the oil cake from the Oil Expellers and again with the fine and the coarse particles of

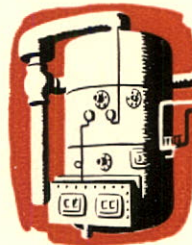


the hulls and with the Gluten, all of which have been extracted during the early stages of process. This mixture is

now put into the *Feed Dryers* and packed and sold as a high protein cattle feed.

Steep Water for Penicillin

One of the newer uses for Steep Water is that after special treatment in the *Evaporator* it is sold to the manufacturers



of penicillin. This Steep Water allows the mould to grow rapidly and to yield a high proportion of penicillin.

Dextrose

After experiencing a somewhat similar process of conversion, filtration and evaporation as was given to Glucose, the Corn Sugar solution is put into *Crystallizers* where Corn Sugar crystals are formed.



From here it undergoes a washing process in the *Sugar Centrifugals*.



Then it is dried and packed for use in baking and canning industries.

Chemically Pure Dextrose, in accordance with British and U.S. Pharmacopoeia specifications, is packaged as Dextrosol and is used on prescription by the medical profession.

'70' Sugar

Some of this Corn Sugar Solution is directed into *Crystallizing Pans* where it is solidified into cakes.



After chipping it is known as '70' Sugar.

This '70' Sugar is used by Tanners.

We now turn to examine the processes involved in manufacturing what is known as 'Starch Products'.

STARCH PRODUCTS

Modified Starch



The starch in suspension from the Vacuum Filters is treated with acid in *Converter Tanks*. This changes the fluidity of the starch until it becomes a penetrating starch.

Now it is neutralized, filter-pressed, then dried in *Tunnel Kilns*.



From here it is packed as Modified Starch, for use in power laundries and industries.

Hercules Starch



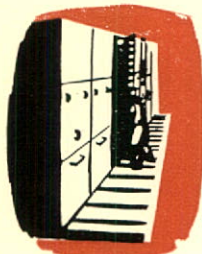
Starch from the Vacuum filters is treated in tanks, washed in filter presses, and then dried in a drum type *Dryer*.

In order to assure a uniform product it is now blended in a *Blender* and bagged. This product, Hercules Starch, is sold to the paper-making trade.



Silver Gloss Starch

Starch from the Vacuum Filters is de-watered, broken into lumps and dried slowly in *Tunnel Kilns*. It is then packed as Silver Gloss Laundry Starch.



A somewhat similar process is used to produce Linit Starch.

Pearl Starch

Starch from the Vacuum Filters is conveyed through a *Dryer* on a continuous mesh screen, and packed as Pearl Starch which is used in many industries.



Dextrine

Starch from the Vacuum Filters is conveyed through a *Dryer* on a continuous mesh screen.

Then it goes to the *Hammer Mills* where it is ground and then screened through bolting reels.

From here it is treated with acid and heated in *Dextrine Cookers* until the desired product is obtained.



After screening it is now ready to be bagged as Dextrines and British Gums.

Casco Ground Starch

Following the same procedure as Dextrine as far as the Hammer Mills the starch now goes through screens and direct to the Bagging equipment where it is bagged as Casco Ground Starch. This product is used in many industries.

Benson's Corn Starch Canada Corn Starch

To arrive at these products we follow the same procedure as Casco Ground Starch—the starch is screened through silk reels and packed in automatic *Weighing and Packing Machines*.



Amijel and Mogul

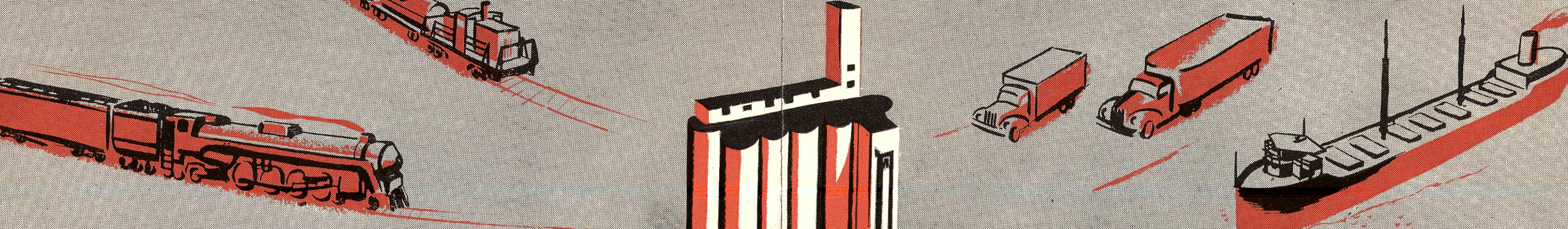
Starch from the Vacuum Filters is dried on *Heated Rolls*.

From there it is sent on to be ground in *Hammer Mills* and screened.

After Bagging it is sold as Amijel Starch, which is used in various industries, and Mogul Core Binder, used in foundries.



This, then, is a simple resumé of the way products are manufactured from Corn. From this resumé it can be seen that Corn is one of man's most useful and most valuable staples.



How Corn

is Processed



