CANADA DEPARTMENT OF TRADE AND COMMERCE DOMINION BUREAU OF STATLSTICS CENSUS OF INDUSTRY

BARLEY,
its

PRODUCTION AND LSES
in

CANADA

Published by Authority of the Hon. H.H. Stevens. M.P.. Minister of Trade and Commerce

OTTAWA

1931

CEHSUS OF INDUSTRY
OTTAWA, CATADA

| Dominion Statistician: | R. H. Coats, B.A., F.S.S. (Hon.), F.R.S.C. |
| :--- | :--- |
| Chief, Census of Industry: | J. C. Macpherson. |

## BARLEY - ITS PRODUCTION AND USES IN CANADA

Barley is the hardiest of all cereals and can be grown through a greater range of climate than any other. Its production dates from the most ancient times, when it was used principally as an article of food, but as the years progressed its uses became varied, so that now its main consumption is in the production of beverages though it still retains its uses as a food for man and beast.

The production of barley ranks third among the cereal crops of the Dominion in acreage and total $y$ ield and second in average jield per acre.

## (1) Production

Table 1 sumarizes the statistics of the acreage, yield, yield per acre, weight per measured bushel, average price per bushel and total value of the crop for each year of the five year period 1926-1930, and an average for the full five year period.

Sarley Production, 1926-1930.

|  | Area | Yield <br> per <br> acre <br> Bushels | Total <br> Yield | Weight per measured bushel <br> Pounds | $\begin{aligned} & \text { : Average } \\ & : \text { price } \\ & \text { : per } \\ & \text { bushel } \\ & : \$-\quad \$ \end{aligned}$ | Total <br> Value |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Barley...... 1926 | $3.647,162$ | 27.4 | 99,987,100 | 47.10 | 0.52 | 52,059,000 |
| 1927 | 3,505,713 | 27.7 | 96,938,000 | 47.20 | 0.66 | $64,193,000$ |
| 1928 | 4,880,740 | 27.9 | 136,391,400 | 47.04 | 0.56 | 76,112,000 |
| 1929 | $5,925,542$ | 17.3 | 102,313,300 | 47.31 | 0.59 | 60,505,000 |
| 1930 | 5,558,700 | 24.3 | 135,160,200 | 47.22 | 0.20 | 27,254,000 |
| Averase 1925-1930 | $4,703,631$ | 24.3 | 114,158,000 | 47.17 | 0.49 | 56,024,600 |

Table 2 presents a condensed sumnary of the distribution of the yield of barley for the crop years 1928-9 and 1929-30. The balance of merchantable grain is represe ted by the quantities used, (1) for feed by farmers, (2) for sale or other consum tion in Canada, (3) the quantity exported, the remainder being the carry over to the next crop year.

Taole 2. - Barley Distribution, 1928-1929.

| 1 | 1928 | 1929 |
| :---: | :---: | :---: |
|  | Bushels | Bushels |
| 1. Stock carried over from 1927 | 3,459,693 | 11,020.857 |
| 2. Crop, 1928 | $136,391.400$ | 102,313,300 |
| 3. Imports | 8,253 | 16,902 |
| Motal Stock | $139,859,346$ | 113.351 .059 |
| 4. Exports | $40,147,702$ | 2.604 .612 |
| Consumotion by <br> 5. Flour and grist mills | 1,550,863 | 1,667,230 |
| 6. Malt mills | $4,116,217$ | $4,724,034$ |
| 7. Breweries, etc. | 165 | 139,277 |
| 8. Total Manufactures and Exports | $45,824,947$ | 9,135,153 |
| 9. Used for seed | 11,851,084 | 11,117,400 |
| 10. In store farmers' hands | 3,190,400 | 3,050,000 |
| 11. In elevators and in transit | 7,830,457 | 19,825,432 |
| 12. Loss.in cleaning | 750,152 | 378,559 |
| 13. Unmerchantable grain | 7,308,400 | 6,878,300 |
| Total 8 to 13 | 76,755,440 | $50,384,844$ |
| Balance mercinantable grain | $63,103,906$ | $62,966,215$ |

## (2) Uses

Barley in the industrial field is used principally as a primary material in the Milling and walting industries, the prodacts in the former including barley flour and meal, barley, pot and pearl, and chopped feed, and in the latter malt and its derlvatives, malt extract or symp, and malt flour or powder.

## The Milling Industry.

The quantity of barley used in the milling industry is difficult to ascertain as it is used separately and in combination with other grains in the production of chopped grain feeds. The ausntity and the value of that used separately reported by the milling industry for the calendar years 1926 to 1929 was as follows:-

Quantity

| $1,545,957$ | $1,122.731$ |
| :--- | :--- |
| $1,545,000$ | $1,134.254$ |
| $1,500,863$ | $1.17 C .351$ |
| $1,567.230$ | $\therefore .59 .106$ |

$1,567.230$

Value \$
,122.731
$1,134,254$
$\therefore .90 .96$

the head of mixed grains as follows:-

|  | Quantity <br> Bushels | Value <br> $\$$ |
| :--- | :--- | :---: |
| 1926 | $31,496,525$ | $18,934,524$ |
| 1927 | $35,065,625$ | $21,741,428$ |
| 1928 | $32,942,786$ | $20,242,163$ |
| 1929 | $31,744,628$ | $20,080,365$ |

What proportion of barley is comprised in the total of mixed grains, it is difficult to say, but it is estimated on relíable authority at 40 per cent.

## Production

The products into which barley enters as a material are represented by (1) chopped feed, (2) barley flour and meal, and (3) pot and pearl barley, the quantity and value oi each being given for the calendar years 1926-1929 in the sub-joined surmary, the figure for barley chopped for feed being estimated.

## Production Statistics

## 1926

|  | lb. | $4,261,061$ | 1371777 |  |
| :--- | :--- | ---: | ---: | ---: |
| Barley, pot and pearl | larley, flour and meal | lb. | 694,800 | 14,097 |
| Barley, chopped alone | bu. | $1,542,710$ | 970,857 |  |
| Barley, in mixed grain, chopped | bu. | $12,598,610$ | $7.573,810$ |  |

1927

| Barley, pot and pearl | lb. | $4,268,528$ | 145,654 |
| :--- | :--- | ---: | ---: |
| Barley, flour and meal | lb. | $1,344,800$ | 33,372 |
| Barley, chopped alone | bu. | $1,428,055$ | 954,868 |
| Barlej, in mixed grain, chopped | bu. | $14,026,250$ | $8,696,571$ |

1928

| Barley, pot and pearl | lb. | $3,713,692$ | 134,567 |
| :--- | ---: | ---: | ---: |
| Barley, flour and meal | lb. | 500,700 | 11,105 |
| Barley, chopped alone | bu. | $1,473,063$ | $1,024,679$ |
| Barley, in mixed grain, chopped | bu. | $13,177,114$ | $8,095,865$ |

1929

| Barley, pot and pearl | lb. | $4,009,186$ | 138,058 |
| :--- | :--- | ---: | ---: |
| Barley, flour and meal | lb. | 670,900 | 15,589 |
| 3a:ley, chopped alone | bu. | $1,569,730$ | $1,045,459$ |
| 3arley, in mixed grain, chopped | bu. | $12,697,851$ | $8,032.1+6$ |

## The Malting Industry

The quantity of barley used by malt mills reported to the Dominion Bureau of Statistics during the calendar years 1926-1929 is summarized below:-

|  | Quantity <br> Bushels | Value |
| :---: | :---: | :---: |
| 1926 | $2,963,091$ | $1,805,296$ |
| 1927 | $3,595,093$ | $2,962,683$ |
| 1928 | $4,116,217$ | $3,350,368$ |
| 1929 | $4,724,034$ | $3,640,341$ |

## Production

The malt produced from the barley used in malt mills during the above mentioned years was as follows:-

|  | Quantity <br> Bushels | Value |
| :---: | :---: | :---: |
| 1926 | $3,140,665$ | $\$$ |
| 1927 | $3,677,113$ | $3,199,751$ |
| 1928 | $4,541,492$ | $3,800,107$ |
| 1929 | $5,342,558$ | $4,593,088$ |
|  |  | $5,308,901$ |

## Imports

In addition to the malt manufactured there was a large importation, principally from the United States; and which for the calendar years 1926-1929 18 given in the Trade of Canada report by pounds, but are in the appended statement converted into bushels of 36 pounds.

|  | Quantity <br> Bushels | $\begin{gathered} \text { Value } \\ \$ \end{gathered}$ |
| :---: | :---: | :---: |
| 1926 - United Kingdom United States | $\begin{array}{r} 2,254 \\ 581,346 \end{array}$ | $\begin{array}{r} 3,986 \\ 543,585 \\ \hline \end{array}$ |
| Total | 583,600 | 547.671 |
| 1927 - United Kingdom United States | $\begin{array}{r} 2,905 \\ 793,885 \end{array}$ | $\begin{array}{r} 5,710 \\ 811,623 \\ \hline \end{array}$ |
| Total | 801,468 | 826,069 |
| 1928 - United Kingdom United States | $\begin{array}{r} 1,472 \\ 1,138,993 \end{array}$ | $\begin{array}{r} 3,421 \\ 1,319,454 \end{array}$ |
| Total | 1,147.778 | 1,337,275 |
| 1929 - United Kingdom United States | $\begin{array}{r} 722 \\ 771,847 \end{array}$ | $\begin{array}{r} 1,428 \\ 752,950 \end{array}$ |
| Total | 777,154 | 762,059 |

## Exports

The quantity of malt exported according to the Trade returns had its destination in South and Central American countries in the calendar years 1926-1929, with a small quantity to the United States in 1929.

Total Exports of Malt

|  | $\frac{\text { Quantity }}{\text { Bushels }}$ | $\frac{\text { Value }}{\$}$ |
| :---: | :---: | :---: |
| 1926 | 138,527 | 189,750 |
| 1927 | 135,005 | 178,457 |
| 1928 | 42,439 | 59,457 |
| 1929 | 41,726 | 55,659 |

Table 3 shows the malt used in Canadian industries by quantity, value and percentages revised and corrected for the calendar years 1926-1929.

Table 3. - Malt used in Canadian Industries, 1926-1929.
(Revised and Corrected to date)

| Industry | Unit of Measure | Quantity | Value | Percentage |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Quantity | Value |
| 1926 |  |  | \$ | p.c. | D. c. |
| Brewing Industry - |  |  |  |  |  |
| Foreign, including duty | 1 bs | 17,470,453 | 1,072,577 | 13.32 | $13.57$ |
| Distillaries - |  |  |  |  |  |
| Domestic ${ }^{\text {Foreign, including duty }}$ | 1b. | $6,786,626$ 637,649 | 401,296 34,606 | 5.17 .49 | 5.09 .44 |
| Malt Mills - |  |  |  |  |  |
| Domestic | 16. | 8,428,640 | 213.207 | 6.43 | 2.70 |
| Foreign, including duty | 1 b . | 8, | 2.207 | - | - |
| Biscuit and confectionery industry | 1 b . | 22,499 | 2,720 | . 02 | .03 |
| Baking industry | 1 b . | 3,582,886 | 411,280 | 2.73 | 5.20 |
| Miscellaneous fook tntustries | 1 b . | 1,243,016 | 52,168 | .95 | . 66 |
| Chemical industries | 1 b . | 61,200 | 3.706 | . 04 | . 05 |
| Totals | 1 l. | 131,155,241 | 7,899,518 | 100.00 | 100.00 |

Table 3. - Malt used in Canadian Industries, 1926-1929-Cont'd. (Revised and Corrected to date)

| Industry | Unit of Measure | Quantity | Value | Percentage |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Quantity | Value |
|  |  |  | \$ | p.c. | pıc. |
| Brewing industry - |  |  |  |  |  |
| Domestic | 10. | 103,091,595 | 6,315,835 | 65.93 | $67.55$ |
| Forelgn, including duty | 1 b . | 22,072,127 | 1,379,259 | 14.12 | $14.75$ |
| Distilleries - <br> Domestic <br> Foreisn, including duty |  |  |  |  |  |
|  | 1 b . | 13,589,488 | 696,750 | 8.69 | 7.45 |
|  | 1 b. | 3,267,460 | 200, 854 | 2.09 | 2.15 |
| Malt mills - <br> Domstic <br> Foreisn, including duty | 13. | 7,598,200 | 209,933 | 4.86 |  |
|  | 13. | 1,700,856 | 60,077 | 1.09 | . .64 |
| $3 i$ scuit and confectionery industry | 1 b . | 23,254 | 4,106 | . 01 | . 04 |
| Baking industry | 1 b . | 3,726,253 | 427,033 | 2.38 | 4.57 |
| Miscellaneous food industries | 13. | 1,243,016 | 52,158 | . 80 | . 56 |
| Chemical industries | 13. | 54,000 | 3.498 | . 03 | . 04 |
| Totals | 13. | 150,366,249 | 9,349,513 | 100.00 | 100.00 |
| 1928 |  |  |  |  |  |
| Brewins tadustry - |  |  |  |  |  |
| Domesilc | 1 b. | 115,894, 501 | 7,409,992 | 59.44 | 60.45 |
| Foreign, including duty | 1 b . | 30,134,034 | 1,961,820 | 15.46 | 16,00 |
| Distilleries - |  |  |  |  |  |
| Domestic Foreign, including duty | 13. | 29,021,350 | 1,779,213 | 14.89 | 14.52 |
| Foreign, including duty Malt mills - | 1 b . | 2,912,049 | 220,081 | 1.49 | 1.80 |
| Domestic | 13. | 7,490,400 | 242,752 | 3.84 | 1.98 |
| Foreign, including duty | 1 b . | 4,260,128 | 132,758 | 2.19 | 1.08 |
| Biscuit and confectionery industry | 13. | 41,964 | 5,255 | . 02 | . 04 |
| Bakine industry | 13. | 3,892,161 | 442,356 | 2.00 | 3.61 |
| Miscellaneous food industries | 1 b . | 1,249,728 | 59,517 | . 64 | . 49 |
| Chemical industries | 13. | 61,200 | 3,840 | . 03 | . 03 |
| Totals | 1 b . | 194,957,515 | 12,257,584 | 100.00 | 100.00 | 1929

Brewing industry -
Domestic
Foreign, including duty
Distilleries -
Dorestic
Malt mills -
Domestic
Foreign, including duty
Bi cuit and confectionery industry
Bakirg industry
Miscellaneous food industries
Cheaical ind stries

| lb. | $122,975,279$ | $7,534,306$ | 61.41 | 60.84 |
| ---: | ---: | ---: | ---: | ---: |
| lb. | $25,158,676$ | $1,696,517$ | 12.57 | 13.70 |
| lb. | $33,356,042$ | $2,019,140$ | 16.65 | 16.30 |
| lb. | $5,857,378$ | 379,034 | 2.94 | 3.06 |
| lb. | $5,452,000$ | 189,153 | 3.22 | 1.52 |
| lb. | - | - | - | - |
| lb. | 48,000 | 5,640 | .025 | .05 |
| lb. | $4,325,901$ | 472,363 | 2.16 | 3.81 |
| lb. | $2,002,671$ | 85,466 | 1.00 | .70 |
| lb. | 43,200 | 2,817 | .025 | .02 |
| lb. | $200,249,147$ | $12,384,446$ | 100.00 | 100.00 |

Salt symap on Extraci
The production of malt symap or axtuect for the calendar years 1926 to 1930 inclusive was en reported bslor:-

|  | Guantity | Value |
| :---: | :---: | :---: |
| 1926 | 7.379 .045 | $\$$ |
| 1927 | 7.555 .053 | 608,711 |
| 1028 | $7.595,804$ | 636,944 |
| 1929 | $5.000,606$ | 665,345 |
| 1930 | $10.194,175$ | 710,915 |
|  |  | 741,004 |

The imports of malt extract, inclikins erein molasses, for the same years by principal countries were:

|  | Weantity <br> Pounds | Value \$ |
| :---: | :---: | :---: |
| 1926 - From United From United | $\begin{array}{r} 207,236 \\ 3,586,868 \end{array}$ | $\begin{array}{r} 16,747 \\ 276,043 \end{array}$ |
|  | 3,79,, 874 | 292,876 |
| 1927 - From United From United | $\begin{array}{r} 331,582 \\ 3.753 .846 \\ \hline \end{array}$ | $\begin{array}{r} 25,902 \\ 289,555 \\ \hline \end{array}$ |
|  | $4.085 .84 ?$ | 315,505 |
| $\begin{array}{r} 1928 \text { - From United } \\ \text { From Tmited } \end{array}$ | $\begin{array}{r} 407.873 \\ 3.481,368 \\ \hline \end{array}$ | $\begin{array}{r} 26,638 \\ 279,051 \end{array}$ |
|  | $3.589,0140$ | 305,708 |
| 1929 ~From United From United | $\begin{array}{r} 582.763 \\ 322089 \\ \hline \end{array}$ | $\begin{array}{r} 52.339 \\ 299.171 \\ \hline \end{array}$ |
|  | 1.404 .798 | 351:520 |
| 1930 - From United Kingdom From United States | $\begin{array}{r} 819.765 \\ 3.303 .375 \\ \hline \end{array}$ | $\begin{array}{r} 60,707 \\ 2.63,030 \end{array}$ |
| Total | $\because 354.856$ | 323,854 |

From the above statement of mports it will be noted thet during the five year period there has been a graduel increase in both cuantity and value of imports of malt extract from the United Kinçom fivo 20 ? $2 \rightarrow 5$ pounds valued at $\$ 16,747$ in 1926 to 649,766 pounds valued at $\$ 60.707$ in 1937 or an incrense of over 300 per cent, whilst the imports from the United States show considerabie filuctuation, the figures for 1930 being the lowest of the five year period.

## Mal: Jxtiact Powder

Up to 1929 there was no production of Wa?t Extract Powder or lialt Syrup Powder reported in Canada, thousi it is underston that suevel firms hare such a step in contemplation, whilst the imports are included in the Tracie returns under Malt Extract of Malt $\mathrm{S}_{-}$rup.

Rates of Custom Duties on Barley, Malt and Malt Froducts


