(Issued February 16 th, 1929)

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## DOMINION BUREAU OF STATISIICS RRUISED INDRXES OF WHOLESAIE PRICES

The official Canadian Irdex Number of Wholesale Prices computed by the Dominion Bureau of Statistics has now been revised and calculated with the year 1926 as Dase. The number of price series included has been increased from 236 to 502 , some of the latter being composite prices as, for example, milk, which consists of the weighted verage of 15 prices collected at representative centres all over the Dominion. Now statistical maturiels have made possiblo refincments and cxtensions of the weighting systom proviously used which adds to the accuracy of tho index numbers, particularly those of groups and sub-groups. A detailed explanation of the methods now used in computing the index and the rasons for their adoption follow:

## Base Year

Since the nations of the world and along with them their ourrency systems Have arrived, or are in the procoss of arriving, at a condition which may be callod ct-war normalcy, comparisons with frowas years beccme less important and intcrosting i the neod arises of placing index numbers upon some postowar base which will serve a suitable background for future movements. This constitutes the first reason for anging the base of the index number. A second important reason lios in the necossity a periodical revision of index numbers so as to take account of current changes in 20 kind, quality and weighting of the comrodities used in its computation. Ton yoars :o the maker of index numbers did not lave to consider artificial silk but to-day this mmodity must be given an important place in the textile group. Again, such commodies as newsprint papor, copper, wheat, etc., must be given a greater weight in a anadian index based on curient concitions than in onc based on 1913 conditions. So any changes take place in the production, consumption and exchange of commodities in decade that a periodical rovision of index numbers based upon them is a necessity.

It is proferable that a base period should, if practicable, consist of an averago of several yoars but the abnormal conditions which provailed during and aftor the war fumish insurperable obstacles in the prescnt instance to a base of this character. Prior to 1925 the isparity betwoen farm prices and the prices of manufacturcd goods worc on abnormal factor in the prices situation. In Canada this was rectificd in 1925. That year, howover, owing largely to the markod riso in grain prices the inder for which rose from 143.9 in 1924 to 180.3 in 1925, developed a prico level which was unusually high for the period. It was finally docided to take as baso the year 1926, the price level for which was about halfway between that for 1925 and 1927. This is in effect practically equivalent to an average of the three years 1925.1926 an: 1927. The Bureau was aiso influenced in its choice of 1926 as base by the fact that the index numbers computed by the Unitied States Bureau of Labour Statistics are on the 1926 base and it was desirable, owing to the close interrelation of price movements in the two countries, to construct the index numbers on similar principles for comparative purposes.

## Number of Price Series included

The new index numburs for all commoditics show pretty much the same movement as the old series. It was, however, mainly fo: the purpose of improvements in groups and sub-groups that the number of price series included in the index was increased from 236 to 502. By tilis large increase in the number of items included it was possible to make many groups much more comprenensive and representative. Building and Construction materials, for example, are now represented by a larger range of comoditics as well as by a more geographically complete series of prices. The number of price serios in this group was increased from 32 to 90 . Similar improvements have been made in a great many other groups and subegroups. Chemicals and Allied Products now include 73 price series as compared ith 3 in the old index. Non-metallic Minerals and Their Products are represented by 73 price series in the new index and 16 in the old. These changes in the number of price sories have added greatily to the usefulness of the index numbers as regards groups and sub-groups which furnish what may be called subsidiary index numbers for special pumposes.

Actual calculations of the index number were made according to the same formula as before. This formula, wh.ch produces the aggregative index, is now used for the purpose of calculating many of the most important index numbers and for a compar: son of three or more periods on a fixed base has the support of many eminent index number makers. It is expressed as folloms: $\mathcal{P}$ Q0

PO QO

## Heighting

Weighting, of course, must conform to the formula used but many variations are possible within the system. Quantity exchanged is the basis of the Bureau's welght, that is to say, production and import figures are used to arrive at a weight, but as regards production, only quantities actually marketed are considered. In arriving at the weight for any commodity duplication is avoided by moking deductions, where possible, when the commodity is included again in another form, as for example, in the case of wheat and flour. An improvement in weighting has been made by working out a threefold system, viz., weigits for individual comodities, sub-groups and finally groups of commodities. In the first place the commodities in each sub-group are weighted in such a manner as to arrive at the most accurate index for that sub-group. Such weights, however, will not do for a main group which may inclide another sub-group contalning the same commodity in a different form. For this reason the sub-group index numbers are again weighted by sub- sroup weights (values morked into percentages). Another reason for the subwgroup weights is the fact that in each sub-group only representative commodities are fincludel. In order to give each sub-group sufficient weight in ar riving at a group index it must be weighted by a figure which represents as far as possible the total value of all commodities which might be included in the sub-group. Finally. group index numbers are weighted in arriving at the index number for all comodities so as to ensure that no group index will wield a disproportionate influence upon the final result. The group weights are the estimated total importance in exchange of all commodities which can be classified in that particular group. An example will make this clear:

Grains are a sub-group of the main goup Vegetables and Their Products. Its weights are as inllows:


Barley, good malting
Weight ior individual
commodity or price series
Sub-group Weleht
$\left.\begin{array}{cccc}\text { Barley } & \# 3 & \text { C. } 7 . \times 40 \\ 11 & \# 4 & \text { C. } 4 \times 30) \\ 11 & \text { Feed } \times 30\end{array}\right)$
Averge price $x$ $45,000,000$ bushels
$3,000,000$ bushels

Corn Am. Yellow \#2)
11
"


Oats No. 2 C.m. x 20\%)
"No. 3 " " x 25\%)
"No. I Feed(Mestern) x $30 \%$ )

Average price $x$ 50,000,000 bushels

10,000,000 bushels
2,000,000 bushels

Average price $x$
7.000,000 bushels

2,000,000 bushels
Average price $x$
$350,000,000$ bushels

Whe at No. 2 Ontario
20,000,000 bushels
$\$ 325,000,000$ or $35.38 \%$

The index nwber for the above sub-group is weighted by the aggregatevalue 4 Cl all grains marketed less the value of grains shown elsewhere in the form of other comodities such as flour, $c^{2}$ led oats, linseed oil, etc.. For this sub-group the weight is $\$ 325,000,000$ or $35.38 \%$ of the total value of the whole Vegetable Prodacts group.

Quantities and values used for weights are, in the main, for the year 1926, but where weights for that year were not deemed to be representative, conditions in other years were considered. Sometimes an average of several representative years was taken. There was no attempt made to rigidly adhere to one hard and fast rule of weighting. In many cases mcdifications were made with the object of adopting the weights likely to obtain the most satisfactory results. A perusal of the statement of weights will reveal the vasicus devices vsed in this connection. Final group weights are as follows:
Vegetables and Their Products ..... 30
Animals and Their Products ..... 16
Fibres, Textlies and Textile Products ..... 9
Wood, Wood Products and Paper ..... 15
Iron and Its Products ..... 12
Non-Ferrous Letals and Their Products ..... 6
Non-Metallic Kinerals and Their Products ..... 9
Chemicals and Allied Products ..... 3
100

## Classification of Commodities

These new index numbers will shortly be issued in the same three classifications as the old index, viz., Component Materials, Purpose and Origin. Only the component material classification is yet completed, consequently no index numbers according to the purpose and Origin classification will be published in the ourrent monthly bulletin.

## Price Series Included in the Nem and 01d Index Numbere of Tholesele Prices



## WHOLESALE PRICES JANJARY, 1929

The Dominion Bueau of Statistics revised index number of wholesale prices on the base $1926=100$ showed no change in Jamuary as compared with December, being 94.5 in both months. While there were important price changes in different groups, upward and downward movements tended to counterbalarce each other. Of the eight main-groups, three mere higher, two lower and three practically stationary. 99 price quotations were higher and 63 lower, the deciines being of greater extent. 340 quotations were unchanged.

The Vegetable Products group rose from 86.5 to 87.4 higher levels for grains, apples, potatoes, rubjer, glucose and naval stores more than offsetting lower levels for bread, mill feed, chocolate and hay. Andmals and Their Products fell from 108.6 to 106.4, declines in eggs, cured meats, cheese, lard, hides, leather, boots and shoes more than offsotting higher prices for livestock, fresh meats, fish, fowl and butter. Fibres, Textiles and Textile Products rose slightly, being 93.2 as compared with 93.1 in December. Jute, hamp and sisal advanceủ in price while raw silk and rayon yarns declined. Iron and Its Products advanced from 93.0 to 93.3 due chiefly to advances in wre and in some lines of hardware. Wood, Wood Products and Paper fell from 98.5 to 97.9 chiefly bedause of declines in pine lath, wood puip and in some lines of Maritime spruce and British Columbia

- cedar. Non-ferrous Metals rose from 92.3 to 93.6, higher prices for copper and lead pore than offsetting lower prices for silver, tin and spelter. Non-Metallic Minerals /were stationary at 94.4 , advences in lime, sand and gravel in some localities being offset by declines in western domestic coul. Chemicals and Allied Products were 94.4 as compared with 94.3 last month, the advarce being due mainly to higher levels for copper sulphate and some fertilizers.

RESUME OF IMPORTANT PRICE CHANGES.- Grain prices moved to higher levels during January, No. Manitoba Northurin cash wheat, Fort William and Port Arthur basis, averaged $\$ 1.2$ as compared with $\$ 1.17$ in December. The low price for the month was $\$ 1.135 / \%$ on the 5 th , after which a graduai strengthening to the month's high of $\$ 1.26$ on the 26 th occurrea. The vetter export movernert of canadian wheat, owing to heavy Huropean and Oriental Furshases zas the chief cause of the upturn but several factorssuch as the rapid disappearance of bread grains in Burope, the possibility of reduced yields next season in North America oming to insufficient snow covering, prospecta of a smaller acreage of rintor wheat in the Urited States and reports of adverse crop conditions in the Legentine and Australia--contributed to the growth of bullish sentiment.

Coarse grains followed the whant trend. The monthly average price of No. 3 C.W. barley at Winnireg rose from $65 \frac{1}{2} \phi$ to $724 / 5 \phi$ per bushel. No. 2 C. 7 . oats rose from 58 to 68 , No. $2 \mathrm{C} . \mathrm{T}$. rye from $\$ 1.01 \frac{1}{2}$ to $\$ 1.03$ and flax No. $1 \mathrm{~N} . \mathrm{T} . \mathrm{C}$. from $\$ 1.90_{4}^{3}$ to $\$ 1.92$. Corn was very strong due mainly to reports of marke deterioration in the Argentine crop owing to drought American yellow No. 2 corn at Toronto rose from $98 \frac{3}{4} \phi$ to $\$ 1.07$.

Flour movid in sympathy with wheat, No. 1 patent, Manitoba, at Toronto edvancing from $\$ 7.20$ to $\$ 7.23$ per $2-98$ 's jute bags. Oat products continued strong, inillers still finding it difficult to secure good milling oats. Oatmeal at Toronto, rose from $\$ 4.02$ to $\$ 4.13$ per bag and rolled oa s from $\$ 3.65$ to $\$ 3.95$. Bread was lowered one cent to $9 \phi$ pow ? ${ }^{\prime}+\mathrm{oz}$. loaf at Toronto due, it is stated, to keen competition.

The sugar market continued dull, buyers apparently awaiting Cuban developments. With the practical certaink that there will be no restriction, however, and as crop prospects are good, the tendency is towards easy markets. 960 centrifugal at New York decined from $\$ 2.18 \frac{3}{4}$ to $\$ 2.031 / 8 \mathrm{pem} \mathrm{cwt}^{2}$. The market for refined was quiet with prices unchangen.

Potatoes, in most localitios, shomed a tendency to strengthen slightly. Nova Scotia potatoes at Halif ax rose from $85 \%$ to $90 \%$ per 90 lh . bag, Canada A potatous at St.John from $84 \phi$ to $85 \phi$ per cwt. and Nanitoba potatoes at Winnipeg from $\$ 1.09$ to $\$ 1.28$ per $\mathrm{c} \pi$ t.

Rubber prices moved upward due to continued good demand and partly to speculative trading. Cejlon, ribbed smoked sheets, Ner York advanced from $17.9 \phi$ to $20.2 \phi$ per lb . and upriver fine Para from $19 \frac{1}{2} \phi$ to 2 j .

Cattle markots lecked stability, being very sensitive in relation to volume. Good steers at Toronto declined from $\$ 10.03$ to $\$ 9.93$, demand being insufficient to absorb the heavy supplics. At Winnipeg suopli3s were lighter and good steers averaged $\$ 8.73$ as compared with $\$ 8.25$ in December. Calves were firm Jecause of small supplies coupled with keen United States demand. Good veal calves at Toronto rose from $\$ 14.90$ to $\$ 16.10$ and at Winnipeg from $\$ 12.55$ to $\$ 13,08$. The log market was firmer under lighter supplies and the influence of the United States market. Mhick smooth w.o.c. hogs at Toronto rose from $\$ 9.7$ to $\$ 10.31$ and at Tinnipeg from $\$ 8.80$ to $\$ 9.24$. Lambs were also firmer on good demand. Good handy weights at moronto advanced from $\$ 12.00$ to $\$ 14.21$ and at Minninee from \$11.86 to \$12.27.

Fresh meats were stationary or slichtly higher. Good steer beef at Toronto rose from $17 \phi$ to $18 \phi$ and at Minnipeg -rom $16 \frac{1}{2} \phi$ to $18 \phi$. Choice lamb at Toronto averoged $22 \frac{1}{2} \phi$ as compared $\nabla i$ ith $21 \frac{1}{2} \phi$ last munth. Pcrt, dressed carcass at Toronto rose from $15 \frac{1}{2} \phi$ to $17 \phi$ and at Winnipeg from $16 \phi$ to $17 \phi$. Smoked meats continued quict. Smoked, standard, light bacon at Moronto fell from $26 \phi$ to $24 \phi$ and at Montreal from $32 \phi$ to $30 \phi$. Smoked standari lighi ham at fions o declined from $25 \phi$ to $25 \phi$ and at Montreal from $29 \phi$ to $27 \phi$.

Hide prices fell sharply, partly due to a belated response to seasonal insfluences which usually cause a greater decline in December than occurred this year but affected also by the weak undertone of leather markets. Beef hides, country cured, flat 1 and 2 fell from $14 \frac{1}{2} \psi-13 \phi$, Foronto arid packer hides, native
steers from $21-22 \frac{1}{2} \phi$ to $17-19 \frac{1}{2} \phi$. Calf skins also weakened rapidly, city cured 1 and 2 averaging $20 \phi-21 \phi$ as compared with $23 \phi-24 \phi$ in December. Harness loather at Toronto fell from $55 \phi$ to $53 \phi$ and gan-metal calf from $47 \phi$ to $45 \phi$.

Sockeye salmon was firmer, the scarcity owing to last season's small pack gradually causing higher prices. The price per case at Montreal advanced from $\$ 19.00-$ $\$ 19.80$ to $\$ 19.00$ to $\$ 20.00$. Salt spring mackerel f.osb Maritime points rose from $\$ 13.00$ to $\$ 14.00$ per barrel.

Milk prices were for the most part stationary but small declines were recorded in a few cities. At Toronto, the price to producers declined from $\$ 2.30$ to $\$ 2.20$ per 8 gal . can and at Regina from $28 \frac{1}{2} \phi$ to $27 \frac{3}{4} \phi$ per gallon. Butter and cheese markets were quiet. Canadian old large cheese at Montreal fell from $30 \phi$ to $28 \phi$ and large coloured new cheese at Toronto from $24 \phi$ to $23 \phi$.

Bggs prices showed drastic declines. Stocks accumulated rapidly owing to heavy production induced by the mild weather while consumption, although stimulated by the low prices prevailing, did not increase sufficiently to absoib the increased. receipts. Ontario egg production is reported as 30 to $50 \%$ heavier than last year, while that of the prairies is stated to constitute a record for winter production. As a result prices fell almost to spring levels. Fresh extras at Montreal declined from $65 \frac{3}{9} \phi$ to $47 \frac{1}{3} \phi$ per dozen, at Toronto from $66 \frac{1}{4} \phi$ to $46 \frac{3}{4} \phi$, at Winnipeg from $561 / 8 \phi$ to $44 \frac{1}{3} \phi$, at Calgary from $52 \frac{1}{2} \phi$ to $40 \phi$ and at Vancouver from $457 / 8 \phi$ to 3 3 $\bar{k} \phi$. OWing to the low prices for fresh, it was increasingly difficult to move storage supplies even at cut prices. Storage firsts at Montreal fell from $403 / 8 \phi$ to $32 \phi$, at Toronto from $38 \phi$ to $28 \phi$ and at Winnipeg from $405 / 8 \phi$ to $31 \phi$.

Textile price changes were few. Cotton fluctuated within narrow limits showing the usual January quietness with mills waiting for developments in the consuming capacity of the country. The Census Bureau's repurt on ginnings, figures of which were above expectations had a depressing influence also the continued absence of aggressive speculative trading. Continued firm export demand prevented further declines. Upland middling spot cotton at New York averaged $20 \frac{1}{4} \phi$ as compared with $20 \frac{1}{2} \phi$ last month.

Raw jute on good actual and prospective demand was firm, the price of lst marks advancing from $\$ 8.95$ to $\$ 9.05$. Manila hemp "I" $12 \frac{1}{2} \%$ fair current New York rose from $11 \frac{1}{3} \phi$ to 13 ser 1 b .

Buyers' resistance to existing lovels brought a slight lowering of silk prices. Raw silk, grand double extra, New York basis declined from $\$ 5.55$ to $\$ 5.40$ per lb, and "extrall from $\$ 5.05$ to $\$ 5.00$. Rayon yern 150 deníers "A" quality in skina was reduced from $\$ 1.35$ to $\$ 1.10$ per $1 b$.

Non-ferrous metals were,for the most part, firm. The copper price movement overshadowed all others, electrolytic domestic copper f.o.b. Montreel advancing from $\$ 17.6 \frac{1}{4} \phi$ to $\$ 18.42 \frac{1}{3} \phi$, this being the highest level since 1923. Coppor products roflectod this firmness, copper shoct, base, f.o.b. Montreal rising from $29 \phi$ to $30 \phi$ per 1 b . , solid bare copper wire from $20 \frac{3}{4} \phi$ to $21 \frac{1}{2} \phi$ and brass sheets at Totonto from 22 I/8 $\phi$ to $227 / 8 \phi$. Lead was also fimmer following the steady market situation in Lond on and New York. Domestic lead f.0.b. Nontreal advanced from $\$ 6.27 \frac{3}{4} \phi$ to $\$ 6.43$ per 100 lbs. Tin was inregular, on the whole. declining slightly. Tin ingots straits at Toronto were $51 \frac{3}{4} \phi$ as compared with $52 \phi$ in December. Zinc (spelter) failed to hold all of its last month's gain woing to a recession in demand. Prices declined from $\$ 7.30$ to $\$ 7.29$ per 160 ló lbs. foob. Montreal. Silver averaged $57 \phi$ per oz. at New York as compared with $57 \mathrm{I} / 3 \phi$ in December.

Iron and steel markets continued firm but with few price changes. Some limes of hardware and wire advanced.

Chemical wood-pulp prices were slightly easier although the quiet condition of the market is believed to be more or less tempcrary. Pulp sulphite, unbleached news grade $f .0 .6$. mill ranged from $\$ 48.00$ - $\$ 53.00$ as compared with $\$ 50.00-$ $\$ 53.00$ last month.

Advancing copper prices were reflected in a rise in copper sulphate, crystals, C.I.F. ocean port from $\$ 5.85$ to $\$ 6.20$ per 100 Ibs. The fertilizer market, with spring demand developing, showed strength. Sulphate of Ammonia, ontario $20 \%$ W.S.N. advanced from $\$ 50.00$ to $\$ 65.00$ per ton and nitrate of soda ontario $15.5 \% \mathrm{~W} . \mathrm{S} . \mathrm{N}$. from $\$ 57.00$ to $\$ 65.00$. Other price changos were relatively unimportant.


(Classified Accoriing to Chief Component Material)
$1926=100$

x Subject to revision.


## INDEX NOMBERS OF CANADIAN RETAIL PRICES AND COST OF IIVING

(Based on a family expenditure of about $\$ 2500$ per annum)
The index numbers of Retail Prices Rents and Costs of Services hitherto calculated on the 1913 base have been revised and recalculated on the basis 1926 $=100$. This is in accordance with the general policy of the bureau in revising the basis of index number calculations. These index numbers are so constructed as to show the trend of the cost of living for an average middle class family, with an expenditure of about $\$ 2500$ per annum. In revising the data sixteen items were added to the clothing group. Rental data was changed to include apartments and flats as woll as houses, and higher grades of dwellings than formerly were included. Owing to the increasing use of coke, it was added to the fuel and lighting group. Miscellaneous items were increased from 71 to 130, the additions including dishes, furniture, hardware, insurance, books and education, dentists' services, cost of motor operation and supplies. In all, the index includes 245 separate items or groups of itensas compared with 161 in the old index. Prior to 1926 only flgures on the old ist of items are evailable but these have been recalculated to the 1926 base.

It will be seen from the accompanying table that the general tndex shows a silght rise in 1928 as compared with 1927, being 98.5 in 1927 and 99.1 in 1928. Foods and Rents were higher, Clothing and Miscellanoous items practically unchanged on the average, and Prel and Lighting lower.

INDEX NUMBERS OF RETAIL PRICHS, RENTS AND COSTS OF SHRVICES IN CANADA. JANUARY, 1929

The weighted index number or retail prices rents and costs of services (1926 100) was 99.6 in January as compared with 99.7 in December.

The index for foods fell from 100.5 to 100.2 chiefly because of seasonal deciner in egg prices. Fresh eggs fell from $64 \phi$ to $60 \phi$ per dozen, while the cooking and storage variety were $50 \frac{3}{4} \phi$ and $48 \frac{1}{3} \phi$, respectively, for December and January.

Index numbers for other groups were unchanged.
OLD INDEX NUMBERS OF CANADIAN RETAIL PRICES - $1913=100$
CHANGBD TO NEW BASE 1926=100

| Year | Total <br> Index | Food <br> Index | Fuel <br> Index | Rent <br> Index | Clothing Sundries <br> Index |
| :---: | ---: | :---: | :---: | :---: | :---: | :---: |
| Index |  |  |  |  |  |



| January | 99.6 | 101. 1 | 97.9 | 98.8 | 99.2 | 99.7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| February | 99.3 | 100.0 | 97.9 | 98.8 | 99.3 | 99.7 |
| March | 98.8 | 98.6 | 97.9 | 98.8 | 99.? | 99.7 |
| April | 98.0 | 96.5 | 97.1 | 98.8 | 98.3 | 99.6 |
| May | 97.9 | 96.6 | 37, | 98.8 | 97.0 | 99.6 |
| June | 98,4 | 97.5 | 97.1 | 98.8 | 96.5 | 99.6 |
| July | 98.4 | 98.0 | 97.5 | 98.8 | 96.7 | 99.5 |
| August | 98,3 | 07.7 | 97.5 | 98.8 | 96.7 . | 99.5 |
| Sept ember | 98.0 | 96.8 | 97.5 | 98.8 | 97.0 | 99.5 |
| October | 98.4 | 97.7 | 97.5 | 98.8 | 97.7 | 99.5 |
| Nov ember | 98.6 | 98.5 | 97.4 | 98.8 | 97.8 | 99.5 |
| December | 99.0 | 99.9 | 97.4 | 98.8 | 97.8 | 99.5 |
| $1927=$ | 98.5 | 98.1 | 97.5 | 98.8 | 97.8 | 99.6 |



