WHEAT STUDIES

OF THE

FOOD RESEARCH INSTITUTE

BRITISH PARCELS PRICES

A WORLD WHEAT PRICE SERIES

THE "world price of wheat" is often discussed, usually with reference to prices in the United Kingdom; but actual price series that may reasonably be regarded as representing British or world prices are not often encountered. There are at least two important purposes which no well-known series seems fitted to serve: as a central representative series for short-time comparisons with cash wheat prices in the great wheat-producing and wheat-consuming countries of the world; and for comparisons of cash wheat prices on the world market undertaken to ascertain what particular types and grades are normally premium or discount wheats, and how relationships shift from year to year.

Weekly averages of daily quoted prices of all sales of wheat parcels in the United Kingdom appear to serve these purposes better than any other world price series now available. This series is presented here for the first time, covering the last six crop years. Comparisons with other series illustrate its adequacy. Sales of cargoes are too few to provide a continuous series. Liverpool wheat futures prices are not continuous, and cannot be employed without splicing one future to another in such a manner that the price movement is obscured. Monthly average prices of all wheat imported into the United Kingdom do not reflect short-time fluctuations satisfactorily. The prices of straight-run flour at London are at times affected by special developments in the milling industry. The prices of single grades of wheat are usually not continuous. The parcels price seems best to fulfil the requirements of a world wheat price useful for short-time analyses. It is continuous, representative of the range of prices in the United Kingdom, available without undue lapse of time, and reasonably easy to obtain on a weekly or even a daily basis.

WHEAT STUDIES

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The central feature of the series is a periodic analysis of the world wheat situation, with special reference to the outlook for supplies, requirements, trade, and prices. Each volume includes a comprehensive review of the preceding crop year, and three surveys of current developments at intervals of about four months. These issues contain a careful selection of relevant statistical material, presented in detail in appendix tables for reference purposes, and in summary form in text tables and charts.

Each volume also includes six special studies bearing on the interpretation of the wheat situation and outlook or upon important problems of national policy. Subjects of issues already published are listed inside the back cover.

The series is designed to serve the needs of all serious students of the wheat market, in business, government, and academic circles, by summarizing and interpreting basic facts and presenting current developments in due perspective. The special studies are written not merely for students of the wheat market, but as well for various groups of readers who are especially concerned with the fields discussed.

Volumes I–III are now available, bound in red buckram, at $10.00 each. The ten issues of Volume IV will be published monthly from November 1927 to September 1928, except in April 1928. Ordinarily each issue will reach subscribers in North America early in the month designated. The subscription price for the volume, including a temporary binder, is $10.00. Individual issues may also be purchased separately. Orders, subscriptions, and other communications should be addressed to FOOD RESEARCH INSTITUTE, STANFORD UNIVERSITY, CALIFORNIA, or, for Great Britain, to P. S. King & Son, Ltd., Orchard House, 14, Great Smith Street, Westminster, S.W. 1, London.

BRITISH PARCELS PRICES

A WORLD WHEAT PRICE SERIES

The "world price of wheat" is a concept fraught with difficulties of formulation and interpretation. At any given time, even when allowance is made for different currencies and units of measure, the commodity called wheat is sold at very different prices on the thousands of markets scattered over the world. Price differentials arise because wheat is not a homogeneous commodity; because wheat of a given type and quality may be put to diverse uses; because of costs of transportation between surplus and deficiency areas; and because, in spite of a high development of means of communication and transport, local gluts or shortages cause prices in affected local markets to move out of line with those in central markets. One does not expect wheat containing a high proportion of moisture to sell on a given market at the same price as wheat dryer but otherwise the same. Prices of a given grade of hard red winter wheat are not likely to be identical in Dodge City and Kansas City, or in Galveston and Liverpool. If between two seasons prices of comparable wheats rise ten cents in Liverpool but fall fifty cents in an isolated local market in interior China, the fact is not surprising. Durum wheat, which is used in the manufacture of alimentary pastes, cannot be expected to command the same prices as a given grade of bread wheat. Throughout the world there is at any given time a considerable variety and range of wheat prices, surprisingly wide to those outside the trade who are accustomed to think of wheat as simply wheat; and from year to year particular wheats occupy different positions within the range.

If price statistics were available for all of the thousands of markets in which wheat is sold, one might construct a large number of wheat price series that could be regarded, with stated qualifications, as world wheat price series. One might choose prices received by producers everywhere for all wheat sold by them, or prices in all markets through which specified quantities of all sorts of wheat are sold by middlemen; or one might choose to average the prices only of bread wheats in markets recognized as important; and so on. It would obviously be difficult to demonstrate that any series was clearly the one which best represented the world price of wheat for all purposes.

Some simplification of the problem is essential; and most students have preferred, partly in the absence of price statistics on many markets and partly from considerations of logic and convenience, to regard prices registered in the United Kingdom, especially Liverpool, as the most significant world wheat prices, because they are of dominant importance at least to the world wheat trade.[1] The United Kingdom imports more wheat than any other country, and has a large trade in reselling wheat to continental Europe; the wheat traded in is mostly millable bread wheat; tariff restrictions have not disturbed trade and prices in the United Kingdom for many years; the wheat shipping business in all its aspects has long tended to concentrate in the hands of the English, rendering the United Kingdom the world's great entrepôt; wheats from all sources compete more freely and in larger volumes in the United Kingdom than elsewhere; and Liverpool is the most important wheat trading center of the United Kingdom. The wheat price on such a great world market as the United Kingdom or Liverpool, sensitive to world conditions of supply and demand but not dominated by local conditions in any given country, is undeniably among the most significant of several possible world wheat prices.

But in the United Kingdom, as in other markets, there exists at any time a variety

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[1] Similarly the world wheat crop is often discussed, even though deficient statistical data necessitate omission of the large crops of China and Asia Minor and smaller crops of other countries in all years, and of the huge Russian crop in some years.

of wheat prices, not a single price. For one reason or another, no price series in current use seems to be representative of the range; at least no series currently presented is capable of showing with sufficient exactness the general movement of import wheat prices from week to week. The primary object of this study is to present a computed price series of British import wheats, based upon daily quotations of parcels prices.

In order to obtain a reasonably clear view of the world wheat situation over short periods of time, one requires a wheat price series not only representative of the range of import prices in the United Kingdom, but also susceptible of presentation on a weekly basis. With such a series, one may make significant comparisons with representative wheat prices in the important exporting and importing countries of the world. Furthermore, the price series representative of the range of United King-

dom prices is desirable for comparisons displaying the usual price relationships of particular types and grades of wheat to the average, and such deviations from the usual relationships as occur over short periods of time.

For these purposes at least, the British parcels price series in the form of weekly averages, here presented for the first time, appears more satisfactory than any series available. It fulfils certain important requirements. It is continuous in time, without gaps and free from "splicing"; it is adequately representative of the range of import wheat prices in the outstanding international market; it permits short-time fluctuations to be followed; it is available without undue lapse of time; and it is reasonably easy and inexpensive to compute. The better to reveal its nature and significance, this series is compared with a number of other series of wheat prices in the British markets.

CONSTRUCTION OF THE SERIES

The wheat arriving in the United Kingdom from exporting countries comes partly in cargo lots in tramp vessels, partly in "parcels" in cargo liners, cargo and passenger liners, or tramps. These "parcels" may represent anything from a few thousand bushels up to more than a hundred thousand.[1] The wheat is unloaded chiefly at London and Liverpool, but in part also at Manchester, Hull, Bristol, and Glasgow. The *Corn Trade News* and the *London Grain, Seed and Oil Reporter* publish daily the price (in shillings and pence per quarter) at which each cargo or parcel is sold. Some parcels and cargoes are sold "spot," some "due," some "sailing" or "shipped" on a particular date, some "to arrive" at a particular time. Sales probably represent predominantly transactions between the importing merchant who owns the wheat and the miller who intends to use it. Not all of the wheat imported into the United Kingdom is included in the parcels and cargo sales, chiefly because some wheat is shipped directly from exporters to millers, and transactions between them are not recorded on any market. One may assume,

however, that prices of such wheat would ordinarily conform fairly closely to prices registered in the open market.

A series of average daily prices which included all "spot" sales both of cargoes and of parcels at all ports, weighted if possible by quantities sold, would seem most likely to represent import wheat prices in the United Kingdom in their most generalized form. The same for Liverpool or London rather than all ports would perhaps serve equally well; theoretically better, indeed, if precise price comparisons are sought, because there may normally be slight differentials between prices in different markets of the United Kingdom. In practice, however, we have found it necessary to be content with something less than this.

Our series of British parcels prices is an unweighted simple average of prices reported for each day's sales of parcels. From the *London Grain, Seed and Oil Reporter* a summation is made of the prices of all sales of parcels to all ports reported as of a given day, whether or not the sales are spot or to arrive. The sum is divided by the number of sales reported, to reach a daily average; weighting is impossible because the size of each parcel is not reported. The

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[1] In exporting and shipping circles the standard parcel is commonly regarded as 40 thousand bushels.

resulting figures, in shillings and pence per quarter of 480 pounds, are converted into dollars per bushel of 60 pounds. Conversions from English to United States currency are made at par of exchange since June 1, 1925, when England was again on the gold basis, and previously at noon cable transfer rates of exchange.

It will be observed that we have disregarded the fact that parcels are sold both "spot" and "to arrive." One seeks, of course, a price for wheat actually laid down in the United Kingdom, not for wheat about to

parisons of prices are sought, it would of course be desirable to obtain an average either for London or Liverpool; but extreme precision for some purposes seems less desirable than more representative averages calculated from considerable numbers of price quotations daily.

The exclusion of prices of cargoes deserves fuller explanation. Sales of cargoes do not occur every day when the markets are open. This is shown by Chart 1, which gives a comparison of daily average parcels prices with daily weighted average cargo

CHART 1.—BRITISH PARCELS AND CARGO PRICES, DAILY, 1925–26*

(U.S. dollars per bushel)
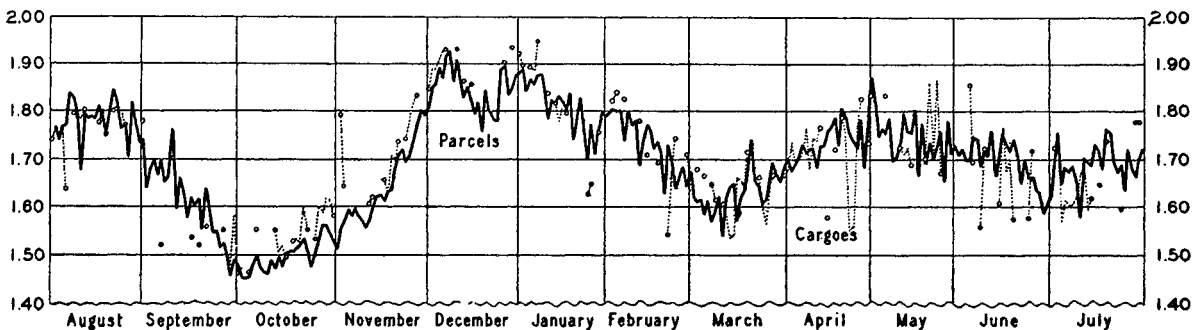
* Derived from data in *London Grain, Seed and Oil Reporter.*

be laid down in the course of some weeks. But most of the sales are in fact either "spot" or "to arrive" within a few days; the exceptions seem not to be numerous, though the proportion of these to all sales varies at different times. The labor of separating spot sales from sales to arrive— and especially the near from the distant to arrive sales—is considerable, and appears to have too small an effect on the curve of prices to be worth the additional labor.

We have also taken no account of the particular port of the United Kingdom to which parcels sales are made. There are relatively few sales of wheat shipped to Manchester, Hull, Bristol, Glasgow, and other ports; the great bulk of the wheat goes to Liverpool and London. The differences between London and Liverpool parcels prices for the same grade of wheat on the same days are slight; and the inclusion of sales to all ports gives a number of sales resulting in a more representative average than could be secured from the sales to any single port. If exceedingly precise com-

prices in 1925–26.[1] The solid line connects the daily average parcels prices. The light dotted line connects average weighted cargo prices for periods when sales were recorded on two or more successive business days. The hollow circles represent either isolated days when sales of cargoes were reported (days when there was no sale on the preceding or following day or days), or days at the beginning and end of a brief period during which sales were reported on successive business days. In the course of the year 1925–26 out of 301 business days there were 136 on which no cargo sales were reported. The chart shows that prices of parcels and of cargoes move in the same general direction, as would be expected; but in certain rather numerous instances cargo prices are far above the average parcels price for the day, while in other instances they are far below it. The explanation lies in the fact that on a par-

[1] The size of each cargo sold is reported; consequently cargo prices can be and have been weighted by volume.

ticular day the only cargo sold may consist of a premium or discount wheat, while sales of parcels may be numerous and may consist of premium and discount wheats about equally. If cargoes were sold on every business day, and if on each business day a sufficient number of cargoes of diverse sorts of wheat were sold to permit averages comparable from day to day to be drawn, then the weighted cargo price would be as good as or better than any. But since these conditions do not hold, little

parcels price, because sales of cargoes are relatively few in number. To omit the cargo prices altogether is therefore justifiable merely to render computation easier.

The relation of the daily average parcels price to the range of daily parcels prices from which it is calculated is illustrated in Chart 2, which shows the data for the year August–July 1925–26. The range is seldom less than 10 cents per bushel, and then only when the number of parcels sold is very small. It usually approximates 20 cents per

CHART 2.—DAILY RANGE AND AVERAGE OF BRITISH PARCELS PRICES, 1925–26*

(U.S. dollars per bushel)
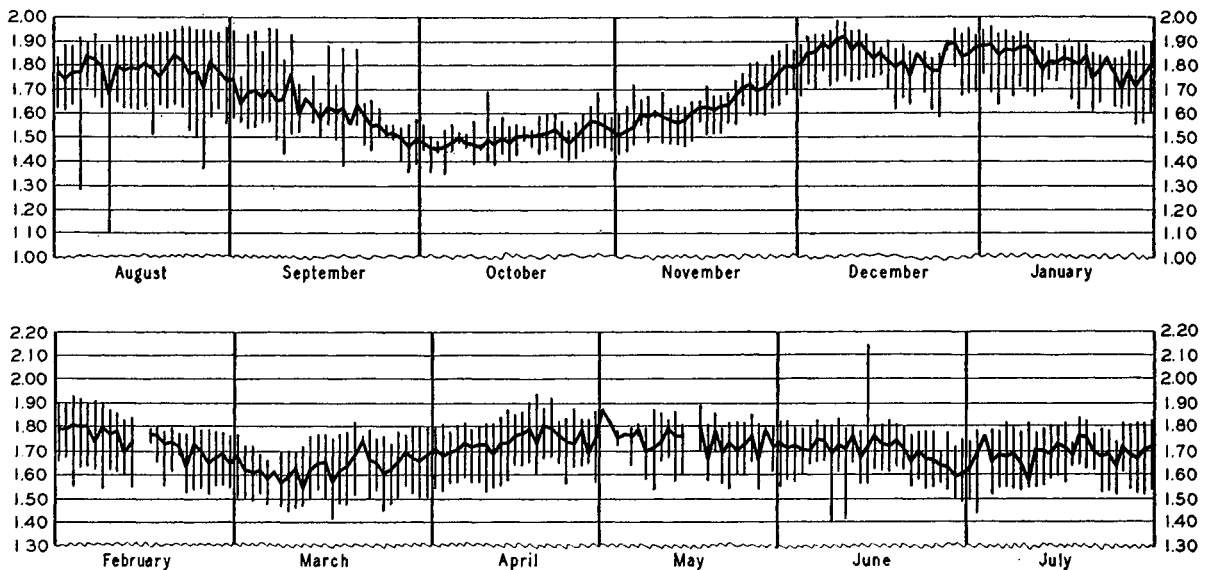
* Derived from data in *London Grain, Seed and Oil Reporter*.

is to be gained by taking account of cargo sales in any way.

It is impossible to weight the parcels prices by volume because volume is not reported; hence one cannot construct a weighted price of cargo and parcels sales combined. There is furthermore no way of ascertaining how great are the relative volumes of cargo and parcels sales; hence one cannot combine the weighted average daily cargo price with the unweighted average daily parcels price by ascribing a given weight to each. The alternative is to include sales of cargoes in an unweighted combined cargo and parcels price, disregarding differences in size between cargoes and parcels. Judging from tests that we have made, this procedure would yield series differing almost imperceptibly from the unweighted

bushel, and on some days exceeds 50 cents. A range as wide as 50 cents, however, is distinctly exceptional, and is usually due to the sale of a single parcel of discount wheat at a price far below the modal price of the day. On August 7, 1925, for example, the range of parcels prices was from $1.28 to $1.92 per bushel; but there were 33 parcels sold on that day, and 32 of them were sold at prices ranging from $1.56 to $1.92 per bushel. Since the daily range of parcels prices ordinarily falls between 20 and 30 cents per bushel, it is clear that the use of a price series for a single grade of wheat as a British import price may prove misleading, especially if the grade chosen does not consistently maintain its relative price position with respect to other grades.

The simple arithmetic average of daily

parcels prices seems to be as satisfactory as any less simple average; it is at once the most familiar and the easiest to compute. The number of sales of parcels is ordinarily sufficient to permit the calculation of representative averages. In 1925–26 the number of parcels sold per business day averaged 15. Between 10 and 30 parcels were sold daily on 193 business days out of 301 in the year; between 31 and 62 parcels were sold on 22 days; and between 1 and 9 parcels were sold on 84 days. Less than 5 parcels daily were sold on only 28 days out of 301; there were only 7 days in the year when but one parcel was sold, and two days when no parcel was sold. There were very few days in which parcels of only one grade of wheat were sold.

In view of these characteristics of the original data, it seems clear that arithmetic averages of parcels prices result in a series of daily prices which may be regarded as reasonably representative of the prices of all wheat entering the United Kingdom. The series is practically continuous, it can be made to yield daily figures, and it is easy to compute. Moreover, it can be computed without great lapse of time, since the original data ordinarily reach even the distant sections of the United States not more than two weeks after the date of issue.

In subsequent pages we have chosen to present weekly averages of parcels prices. These are simpler for use in the study of price relationships extending over periods of several years; moreover, the computation of weekly averages serves to obviate the unrepresentative quality of daily prices on occasional days when only a few or no parcels were sold. Weekly average parcels prices are computed on the basis of weeks ending on Saturday; summations of all sales throughout each week, in terms of English currency, are divided by the number of sales made in each week. The resulting figures have been converted to United States currency at par after June 1, 1925, and at weekly average noon cable transfer rates of exchange before that date. Subsequent charts show parcels prices over six years, from August 1922 to June 1928; data are from daily issues of the *London Grain, Seed and Oil Reporter* except for 1922–23, when weekly issues of Broomhall's *Corn Trade News* were used.[1] The weekly data, showing high, low, and average parcels prices in terms of both English and United States currency, are given in Appendix Table I. Weekly average parcels prices in terms of United States currency appear in Chart 3. Chart 4 shows monthly average parcels prices; and other charts show five-week moving averages of weekly average parcels prices.

COMPARISONS WITH OTHER SERIES

In searching for some British series of wheat prices worthy to be selected as a world price, one encounters several other possibilities. Cargo prices have already been considered, and have been found unsatisfactory. There remain the prices of Liverpool wheat futures, the prices of imported wheat as obtained from foreign trade statistics, the prices of straight-run flour converted into terms of wheat, and the prices of several grades or varieties of wheat. Futures prices are perhaps most commonly employed in discussions of the world wheat price, and the prices of particular grades are also commonly used. The customs prices are less familiar, and the prices of straight-run flour in terms of wheat have never before been computed so far as we are aware. In subsequent pages these series are compared with the series of British parcels prices, without attempting any de-

tailed analysis of the deviations but with a view to testing the relative merits of the parcels series.

Chart 3 (p. 294) shows British parcels prices weekly compared with weekly averages of Liverpool futures. The futures prices are arranged so as to show in any week the prices of the nearest future, and, during the last four weeks in which the nearest future is quoted, the prices of the next most distant future as well. Thus the March future is shown alone throughout January and February, but in contrast with the May future in the closing month of March.

The first objection to the use of Liverpool

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[1] The shift was made only because daily issues of the *London Grain, Seed and Oil Reporter* for 1922–23 are not in our files. There appears to be no significant difference between parcels sales reported by the two journals.

futures prices as representative of British import prices is the fact that transactions in wheat futures do not, except in a small degree, portray the prices at which wheat actually changes hands. Only those who

the number of bushels finally delivered on futures contracts.

In the second place, the futures price at a particular time may be said in some part to represent the collective opinion of

CHART 3.—BRITISH PARCELS PRICES AND LIVERPOOL WHEAT FUTURES PRICES, WEEKLY
FROM AUGUST 1922*

(U.S. dollars per bushel)
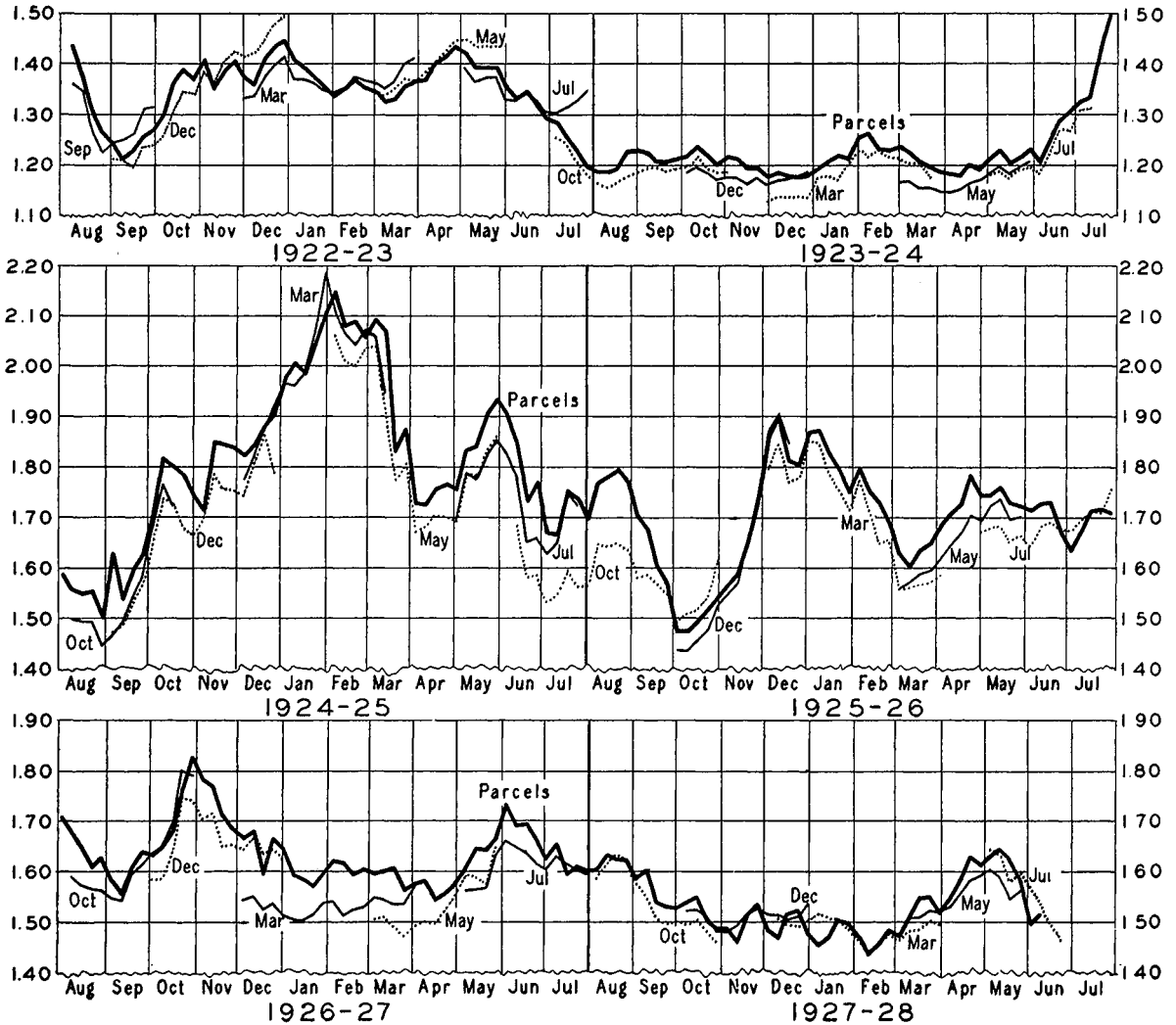
* Parcels prices as shown in Appendix Table I, computed from daily quotations in *London Grain, Seed and Oil Reporter* and *Corn Trade News;* futures prices from data in Russell's *Market News*, and from *Daily Trade Bulletin*.

buy a future and hold it in order to receive delivery in the closing month actually pay for wheat what they pay for a wheat future. The number of bushels of wheat bought and sold on the Liverpool futures market, as on other contract markets, much exceeds

traders respecting what the price of cash wheat will be in the delivery month, not their judgment as to the proper current price of cash wheat. Thus there may be periods when little cash wheat is available and its price is high, but when there is

reasonable expectation that plenty of wheat will be available in the course of the delivery month, and the futures price is relatively low. Moreover, within a given crop year, spreads between the prices of each future and the cash price tend to become smaller as carrying charges, normally heaviest in the early life of a given future, diminish also. A rough tendency for spreads between futures and cash prices to decrease, whether because of diminishing carrying charges or because of anticipations of increasingly easier cash wheat positions, is shown in Chart 3. The various futures ordinarily close much nearer to the parcels price than they run for several months preceding the date of closing.

On some occasions the future price is above the parcels price in closing months. This is a relationship not ordinarily to be expected. The Liverpool future is a "Graded Red Wheat" future; the wheats ordinarily deliverable and delivered on futures contracts are United States or Argentine wheats. These wheats are ordinarily lower in price than Canadian wheats, at least No. 1 and No. 2 Northern Manitoba, and also than Australian wheat. Consequently their prices ordinarily fall below the average of parcels prices, which is made up from all kinds of wheat. Hence the futures prices in closing months ought to fall close to and usually below the average parcels prices. But there are occasions when this does not occur, because the normally high-priced wheats do not maintain their normal premiums. Throughout 1922–23, for example, the successive futures closed at prices well above the parcels prices. This was broadly due to the fact that there was, on the one hand, an unusual amount of No. 1 Northern Manitoba available following a Canadian crop of which 66 per cent of the spring wheat inspected in the western division graded No. 1, a much higher proportion than in any other year from 1922–23 to 1927–28. Hence No. 1 Northen Manitoba weighted the parcels price heavily, and its price, instead of ranging as high above the parcels price as usual (see Chart 6, p. 299), moved close to the parcels price. On the other hand, United States wheat tended to run higher than No. 1 Northern in some periods of the year (see Chart 7, p. 300). The situation appears to have been one in which grades of wheat deliverable on futures contracts were premium rather than discount wheats. The precise facts, however, are not shown by the several charts; analysis of daily prices would be required for exact study of the relationships. Enough has been said to indicate that a third objection to the use of futures prices lies in the fact that they represent, other things being equal, the price movement of deliverable grades of wheat, and hence in different years may bear different relationships to the average price movement of all grades, just as the prices of single grades of wheat may do.

The final objection to the use of futures prices arises from the necessity of splicing or otherwise adjusting if one is to secure a continuous series. It is readily apparent from Chart 3 that there are occasions in closing months when the closing future ranges 10 or 20 cents above the succeeding future. Splices could be made, for example by averaging the price of the closing with the price of the active future for a day, a week, or a month. But such splicing would create artificial humps or dips in the price curve; and to obviate this difficulty would require more labor than the computation of a useful cash price series. Reasonably precise international price comparisons could not be made by using spliced futures prices, for in most years the spreads between active and succeeding futures are so wide in five out of twelve months that the price movement in those five months could not be expressed clearly.

Chart 4 (p. 296) shows average monthly parcels prices in contrast with weighted monthly average prices of all wheat imported into the United Kingdom. The monthly average parcels prices are obtained by adding all sales of parcels in the four or five weeks falling wholly or principally in a given month and dividing by the total number of sales. The other series, which for convenience may be termed weighted customs prices, is derived from official reports of quantities and c.i.f. values of wheat passing through the British customs monthly. For a picture of the price of British import wheat extending over long periods, this series is probably the best obtainable. It is continuous, weighted, covers all wheat imported, is easy to secure, and is in no

way ambiguous. But it does not lend itself well to use in short-time analysis and comparison; the data become available only after some delay, and cannot be computed on a weekly or a daily basis.

In their broad outlines, the movements of the two series shown in Chart 4 are distinctly similar. When the general movement is upward, however, weighted customs prices fall below parcels prices for identical

by about a month. If the weighted customs prices were plotted with the parcels prices for the preceding month, the two curves would be almost identical. The lag arises because British importers buy much of their wheat on contracts dated several weeks before the wheat is delivered; and a good deal of this wheat is presumably entered in the customs reports in large part at the prices at which it was purchased. On

CHART 4.—BRITISH PARCELS AND WEIGHTED CUSTOMS PRICES, MONTHLY FROM AUGUST 1922*

(U.S. dollars per bushel)
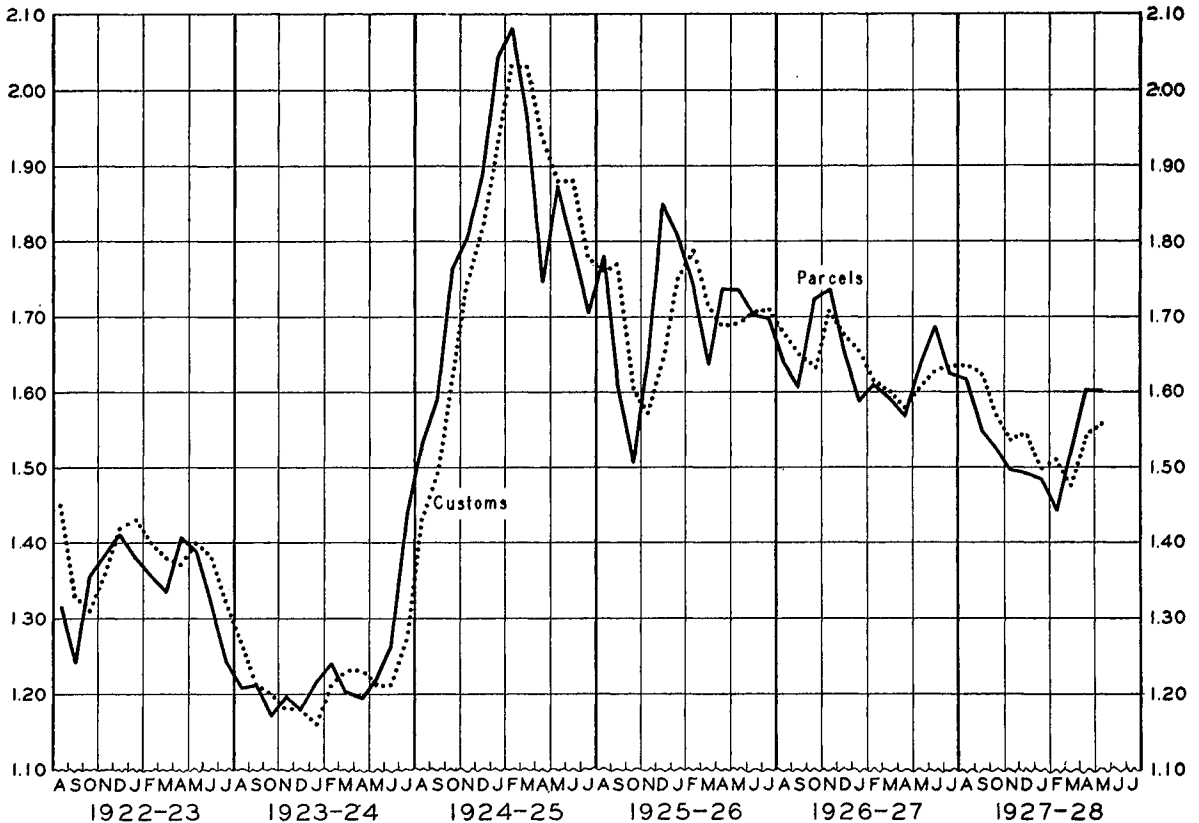
* Parcels prices are four-week or five-week averages; weighted customs prices derived from data in *Accounts Relating to Trade and Navigation of the United Kingdom.*

months, as is most clearly apparent from May 1924 to February 1925. When the general movement is downward, weighted customs prices remain above parcels prices. Hence the price shown by one series frequently differs considerably from that shown by the other series; the difference often exceeds 10 cents per bushel. But the discrepancy is more apparent than real, and is due merely to the fact that weighted customs prices lag behind parcels prices

the whole the lagging correspondence of these two price series tends to support the view that the parcels price represents satisfactorily the range of British import prices. Since the lag is readily explicable and there is a close correspondence of parcels and customs prices when allowance is made for lag, the parcels price appears almost equally satisfactory even for a monthly series.

The monthly parcels price is apparently

more sensitive than the weighted customs price; the fluctuations are somewhat wider. Thus the peak of parcels prices in February 1925 was 5 cents higher than the peak of weighted customs prices; and the low point of parcels prices in October 1925 was 7 cents lower than the low point of customs prices reached a month later. Certain fluctuations in parcels prices do not appear at all in customs prices. Thus parcels prices declined about 20 cents per bushel between

course more satisfactory for analysis and comparisons of short-time movements.

Chart 5 shows parcels prices compared with the prices of straight-run flour in London in terms of wheat equivalent, both expressed as five-week moving averages in order to eliminate erratic fluctuations and to render clear the general relationship. The flour prices are Monday prices from the *Corn Trade News,* quoted in terms of shillings per sack of 280 pounds, subse-

CHART 5.—BRITISH PARCELS PRICES AND LONDON STRAIGHT-RUN FLOUR PRICES IN TERMS OF WHEAT, WEEKLY FROM AUGUST 1922*

(U.S. dollars per bushel; 5-week moving average)
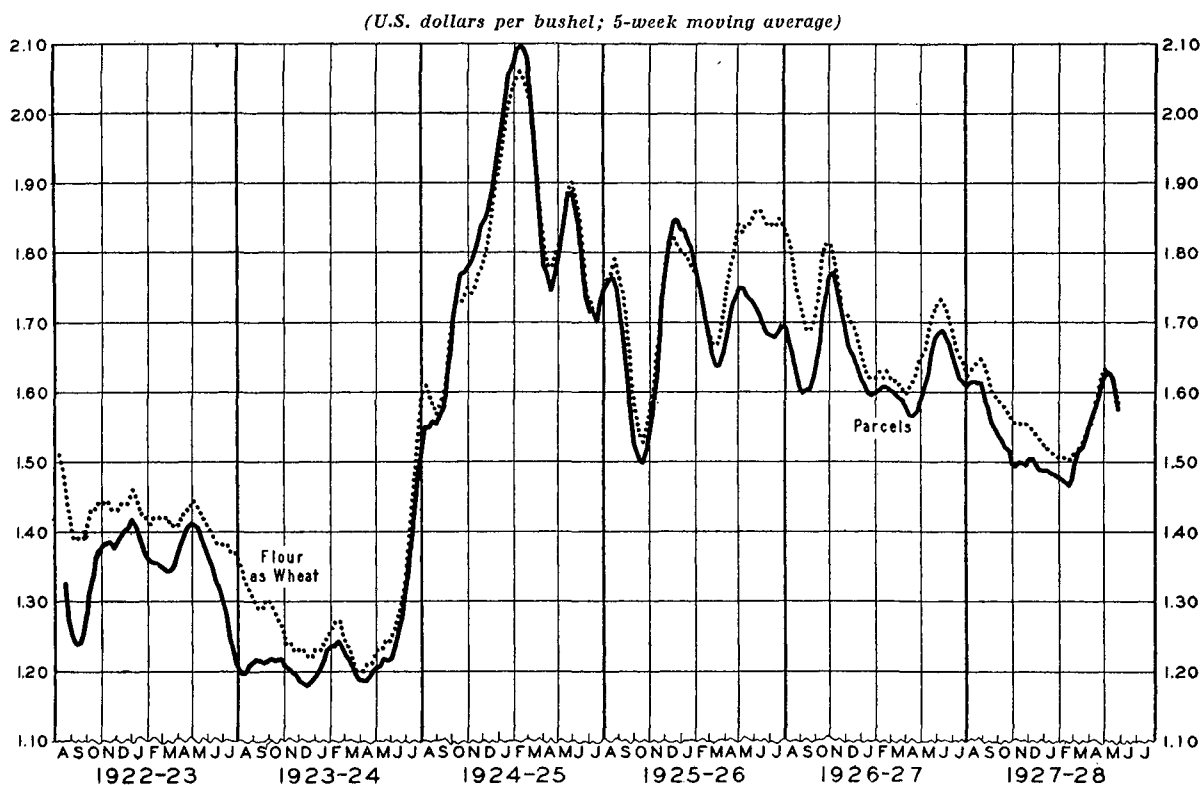
* Flour prices derived from weekly (Monday) quotations in *Corn Trade News.*

March and April 1925, while customs prices declined only 5 cents between April and May; and a rise of 12 cents in parcels prices between April and May was not reflected in customs prices between May and June. Other less striking examples may readily be observed on the chart. Since customs prices include a larger element of forward sales and presumably cover larger quantities of wheat than parcels prices, the smaller fluctuations of customs prices are not surprising. The more sensitive series is of

quently converted to dollars per barrel of 196 pounds, and finally expressed in dollars per bushel by assuming a 70 per cent extraction. Prices of straight-run flour in terms of wheat at first glance seem appropriate to represent the range of British wheat prices in much the same manner as the prices of steel represent the prices of pig iron. Straight-run flour is a homogeneous commodity, produced from the mixture of wheats which will yield uniformly the same commodity from week to

week and year to year at the lowest possible cost to the millers; and it is sold in large quantities. The flour price ordinarily follows the parcels price rather closely, usually somewhat above because costs of conversion are presumably included in the flour price; but it is slightly less sensitive, and at times gets rather far out of line. Such was the case in May–September 1926, when the British coal strike and attendant circumstances caused flour prices to remain farther than usual above wheat prices. In view of the difficulty and doubtful accuracy of our procedure in converting Monday flour prices to wheat prices by assuming a rate of extraction constant at 70 per cent, and in disregarding altogether such influences on flour prices as the prices of offals, we are not inclined to stress the usefulness of the flour price series. It serves, however, to illustrate how closely wheat and flour prices move together in the United Kingdom; and indirectly it suggests that the parcels price series is truly representative of wheat prices in the United Kingdom. The absence of lag between the two series suggests that the parcels price series, while sensitive, is not unduly so.

PRICES OF PARCELS AND OF PARTICULAR TYPES OF WHEAT

The British parcels price series is not homogeneous in the sense that it represents the same kind of wheat at all times. The stream of wheat whose price it represents varies in character as well as in volume. Always it is made of wheats of different types and qualities, from different exporting regions. At times American wheat predominates; at times Canadian; at times Argentine. It follows that shifts in the level of the parcels price reflect not merely changes in supply and demand, but changes in average quality as well.

Consequently, at first glance, it would seem desirable to secure homogeneous series of prices of particular types and grades of wheat that are important in the British market. In practice, no satisfactory continuous series of this sort can be obtained, for there are periods in which certain types or grades are entirely off the British market, or are present in very small quantities. Moreover, the milling qualities of particular types (and even of particular grades) are not constant. For this reason and others, consistent differentials between different types and grades do not prevail. Hence series of prices of particular wheats are not suitable expressions of British import or world wheat prices. It is, however, instructive to compare certain of these series with the series of British parcels prices.

Charts 6–9 (pp. 299–302) show five-week moving averages of weekly average parcels prices and of the prices of important types of wheat either on Tuesday or Friday of each week. In most instances the prices of particular grades are for spot wheat at Liverpool. These series have been chosen because they are more readily compiled than equivalent series which could be secured from parcels price quotations; because they include most of the important types and grades of wheat which enter the United Kingdom; and because they are the series most commonly referred to in trade journals and other discussions of wheat prices. There are some omissions, for example of No. 2 Northern Manitoba, of United States spring wheat, of South Russian wheat; but the four charts taken together give a general picture of the price relationships at least among the principal imported wheats. Five-week moving averages have been employed in order to smooth the curves,[1] and to emphasize the general relationships prevailing over a period of weeks or months which do not appear so clearly from weekly data.

One feature is common to all charts: there is only one type of wheat, Australian, for which continuous quotations over the six-year period can be obtained. This fact alone favors the use of the parcels price, because the parcels price series is continuous and records the fact that wheat of one kind or another, if not of any single type, is sold on the international market every business day. The parcels price series thus affords a sort of central or average price. It provides a datum line from which the deviations in price of particular types of

[1] The extent to which five-week moving averages of weekly parcels prices smooth the curve is apparent from a comparison of Chart 3 with Charts 5–9.

wheat can be perceived readily and measured, and it facilitates discussion of "normal" price relationships. Detailed analysis of the varying relationships of particular prices from parcels prices are not within the scope of this study. The variations

No. 3 Northern Manitoba in comparison with parcels prices. No. 1 Northern is never a discount wheat; but the extent to which it is a premium wheat varies from year to year. Following the exceptionally large proportion of No. 1 Northern in the good

CHART 6.—BRITISH PARCELS PRICES AND PRICES OF NO. 1 AND NO. 3 NORTHERN MANITOBA WHEAT AT LIVERPOOL, WEEKLY FROM AUGUST 1922*

(U.S. dollars per bushel; 5-week moving average)
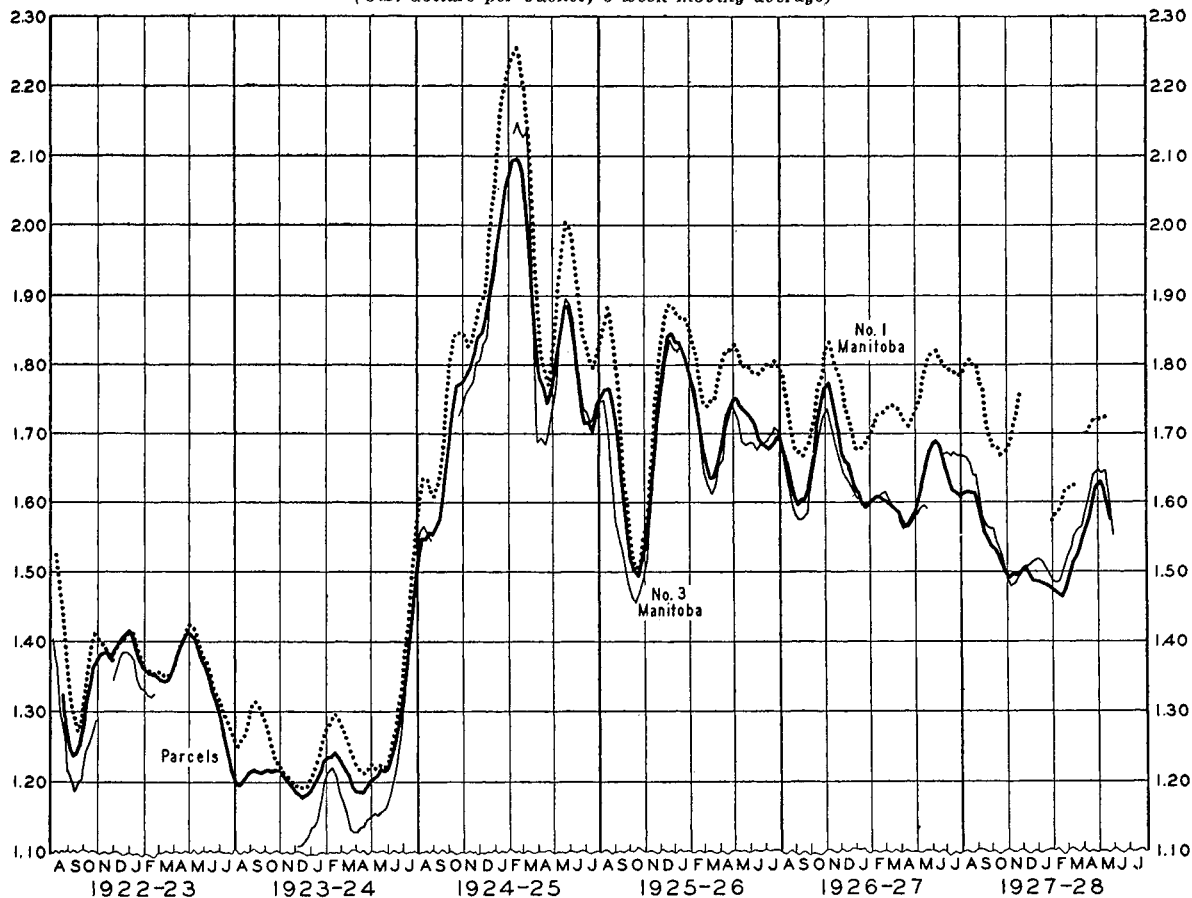
* No. 3 Manitoba prices derived from weekly (Tuesday) quotations in *Corn Trade News;* No. 1 Manitoba prices from weekly (Friday) quotations in *International Crop Report and Agricultural Statistics,* supplemented from January 31, 1928, by weekly (Tuesday) quotations in *Corn Trade News.*

themselves are numerous, and the reasons for them still more so. Enough may be said to illustrate the diversity of causes; but the charts are presented merely to emphasize the fact, not too commonly recognized, that wheat price relationships in the United Kingdom are far from stable, and that analysis of them is simplified by the use of a representative central price series.

Chart 6 shows the prices of No. 1 and

Canadian crop of 1922, it was at an exceptionally low premium in 1922-23. In that year No. 1 Northern constituted 66 per cent of the 229 thousand cars of Canadian spring wheat inspected in the western division. In 1926-27, No. 1 Northern constituted only 9 per cent of the inspections of 254 thousand cars, and commanded an exceptionally high premium after new-crop wheat reached the market in November 1926. In 1927-28 also No. 1 Northern sold

at an exceptional premium; the wheat crop of 1927 contained a still smaller percentage of No. 1 Northern, though complete data are not yet available. Toward the end of the crop year this grade was so scarce that it was not quoted at Liverpool. No. 3 Northern is usually sold at a slight discount, though in certain periods it commands a premium. During 1927–28 this

the United Kingdom in smaller volume. Moreover, the meaning of price quotations for Pacific White wheat is not always clear, for the wheat is not graded like the Canadian; in some years it may be of better milling quality than in others, and this may affect its relative price.[1] Pacific White is sometimes a premium, sometimes a discount wheat; but the factors affecting its

CHART 7.—BRITISH PARCELS PRICES AND PRICES OF No. 2 WINTER AND PACIFIC WHITE WHEAT AT LIVERPOOL, WEEKLY FROM AUGUST 1922*

(U.S. dollars per bushel; 5-week moving average)

* Prices of No. 2 Winter and Pacific White derived from weekly (Friday) quotations in *International Crop Report and Agricultural Statistics,* supplemented from February 7, 1928, by weekly (Tuesday) quotations in *Corn Trade News.*

grade brought exceptionally high prices, not so much because relatively little of it was harvested as because the amounts of No. 1 and No. 2 Northern available were relatively small.

Prices of two types of United States wheat, Pacific White and No. 2 Winter, are shown in contrast with parcels prices in Chart 7. Prices of these wheats move less closely with parcels prices than do Canadian wheats, largely because they pass to

position may vary from year to year. Thus it commanded a relatively high premium in 1922–23 not because the supply was abnormally small, but because Canadian wheats which weighted the parcels price heavily were abnormally cheap; whereas

[1] Canadian grades, however, may not mean precisely the same thing from year to year. During the past crop year there have been complaints that No. 1 Northern has proved progressively less satisfactory for milling in the past few years.

in the first half of 1927–28 a large crop of rather poor quality led to a discount. The smallest crop of Pacific White wheat in the past six years was harvested in 1924; nevertheless Pacific wheat sold at a large discount in the latter part of the crop year 1924–25, presumably because Australian wheat, with which it competes, was cheap following a huge crop.

The meaning of price quotations for No. 2 Winter wheat is also somewhat ambigu-

the railway shopmen's strike in the United States appears to have curtailed the export movement and created a temporary shortage of United States winter wheat in the United Kingdom, which in turn led to relatively high prices; and meanwhile Canadian wheat was abnormally cheap. Again in November–February 1926–27 No. 2 Winter commanded a premium, on this occasion largely on account of misinterpretation of the world supply situation accompanying

CHART 8.—BRITISH PARCELS PRICES AND PRICES OF AUSTRALIAN AND ARGENTINE (ROSAFÉ) WHEAT AT LIVERPOOL, WEEKLY FROM AUGUST 1922*

(U.S. dollars per bushel; 5-week moving average)
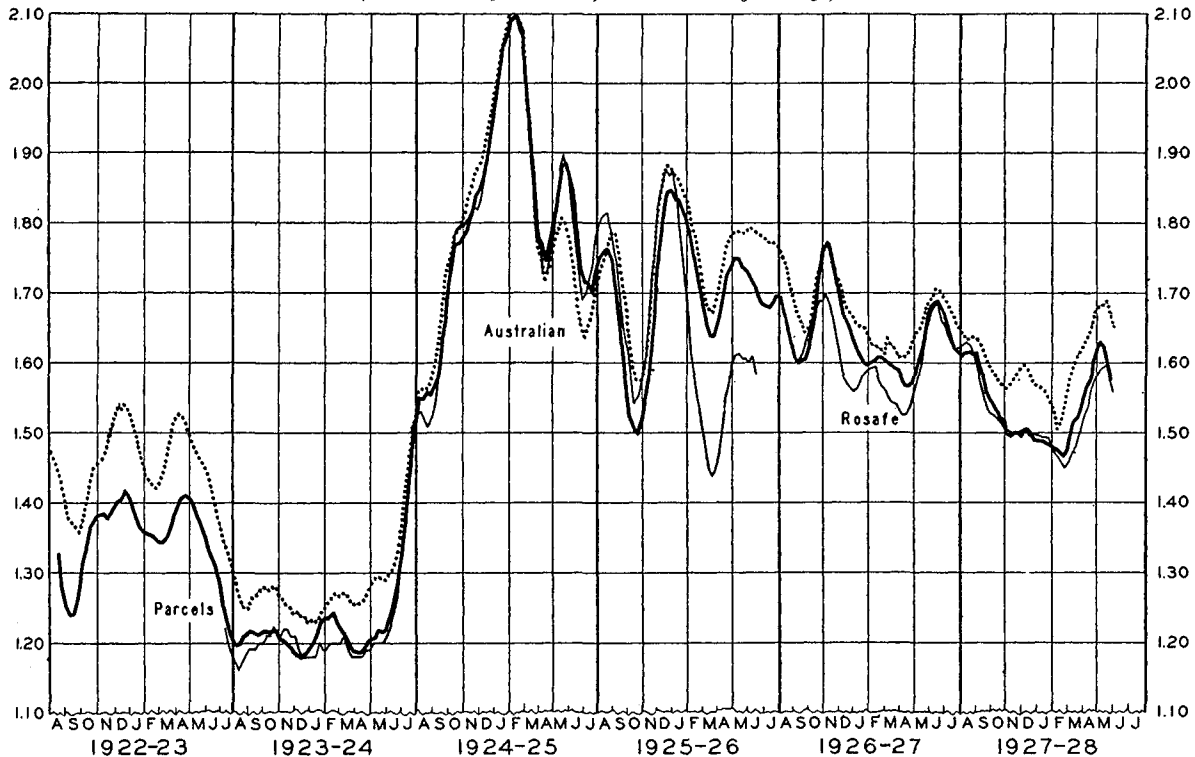
* Australian prices derived from weekly (Friday) quotations in *International Crop Report and Agricultural Statistics,* supplemented from February 7, 1928, by weekly (Tuesday) quotations in *Corn Trade News;* Rosafé from weekly (Tuesday) quotations in *Corn Trade News.*

ous. This wheat seems sometimes to be No. 2 Red Winter, sometimes No. 2 Hard Winter; and these grades are not ordinarily interchangeable for milling purpose since one is soft and the other hard. Quotations are not continuous; there was practically no export of either grade in most of 1925–26, when the United States crop of winter wheat was short. Usually No. 2 Winter appears to be a discount wheat, though it has sold at a premium in a few periods. In October–November 1922, for example,

disturbances of trade and prices caused by a sharp advance and decline in ocean freight rates. As the situation clarified, No. 2 Winter fell to an unusually heavy discount. After December 1927, with poor winter wheat prospects in the United States, No. 2 Winter again rose to a premium.

Australian and Argentine wheat prices compared with parcels prices appear in Chart 8. These two series, like the Pacific White price series, do not apply to a single grade of wheat uniform in quality from

year to year, though Australian does not vary much. Australian wheat usually commands a premium, highest following small crops, as in 1922–23, 1923–24, 1925–26, and 1927–28. It was a discount wheat only for some months after harvest of the huge crop of 1924. Argentine (Rosafé) wheat prices, except under special circumstances, follow the parcels prices rather closely,

1924–25, Karachi wheat tends to sell at a discount. In 1922–23, however, Karachi wheat sold at a premium in spite of a large Indian crop. This was due in part to the effect of a very short crop in India in 1921, in part to the relative abundance and cheapness of normally high-priced Canadian wheat. With moderate crops and small exports, as in the crop years 1925–26 to 1927–28, Karachi

CHART 9.—BRITISH PARCELS PRICES AND PRICES OF CHOICE WHITE KARACHI WHEAT AT LIVERPOOL AND OF BRITISH DOMESTIC WHEAT, WEEKLY FROM AUGUST 1922*

(U.S. dollars per bushel; 5-week moving average)
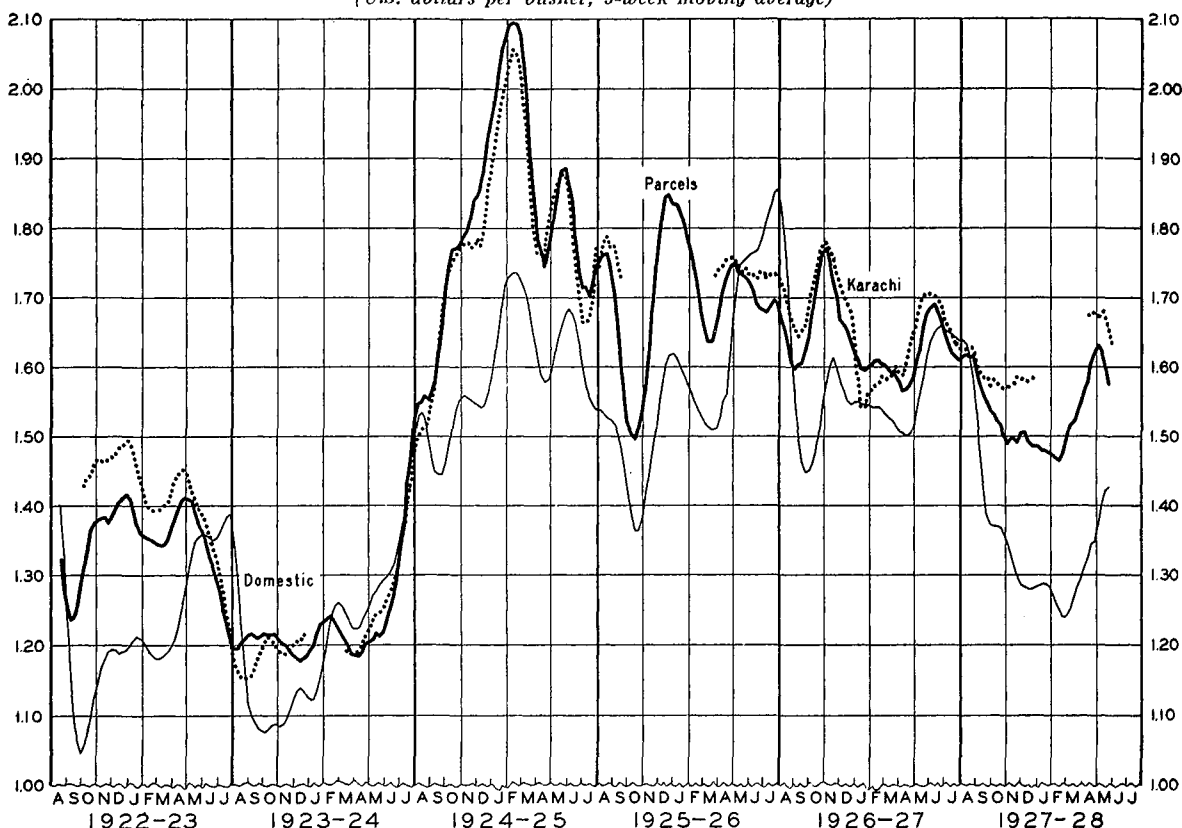
* Karachi prices derived from weekly (Friday) quotations in *International Crop Report and Agricultural Statistics,* supplemented from April 17, 1928, by weekly (Tuesday) quotations in *Corn Trade News;* British domestic prices are weekly average *Gazette* prices as given in the *Economist.*

usually at a discount, sometimes at a premium. The crop harvested in January–February 1926, however, was so poor in quality that a heavy discount appeared and was maintained for several months.

Finally, Chart 9 shows parcels prices in comparison with the prices of Indian (Choice White Karachi) wheat at Liverpool and British domestic wheat.

When the Indian crop and exports are large, as in the crop years 1922–23 to

wheat tends to sell at a premium. The general movement of parcels and Karachi wheat prices is similar, though there are naturally some deviations arising from the fact that Indian wheat reaches the United Kingdom only in small quantity in some periods.

British domestic wheat prices follow the movement of import wheat prices only roughly. There appears to be a marked seasonal upswing in domestic wheat prices

toward the end of the crop year as supplies near exhaustion. As a rule, domestic wheat commands substantially lower prices than import wheats. At times domestic wheat, though certainly not so good as the average import wheat in quality, may sell for higher prices; this is perhaps due at least in part to the fact that British wheat is preferred for poultry feed. Variations in the quality of the British crop apparently give rise to larger discounts in some years than in others. Thus the poor-quality crops of 1924 and 1927 gave rise to persistently heavy discounts. The large discount in 1922–23, on the other hand, was perhaps due chiefly to the large size of the domestic crop rather than to its quality.

The foregoing price comparisons are of course by no means exhaustive. They are intended to show that, once a usable series representative of the range of British import or world wheat prices is obtained, short-time comparisons of specific price series in some detail can be attempted with more precision and clarity than without such a representative series. The series of parcels prices seems to provide a workable medium not only for this purpose, but for comparisons of wheat price movements in different markets of the world over short periods of time. For these purposes, at least, it seems more serviceable than any other available series; and it is clearly a significant world wheat price series.

APPENDIX

Week ending	Shillings and pence per quarter			Equivalent dollars per bushel			Week ending	Shillings and pence per quarter			Equivalent dollars per bushel		
	High	Low	Average	High	Low	Average		High	Low	Average	High	Low	Average
1922							**1923**						
Aug. 5..	56 6	46 3	51 8⅞	1.57	1.28	1.44	Aug. 4..	44 6	37 3	41 6⅞	1.27	1.06	1.19
12..	55 9	45 6	49 6	1.55	1.27	1.38	11..	44 3	38 0	41 5⅝	1.26	1.08	1.18
19..	52 6	37 0	46 7¾	1.46	1.04	1.30	18..	44 9	36 4½	41 8⅜	1.28	1.04	1.19
26..	51 0	41 0	45 1¼	1.43	1.15	1.26	25..	46 10½	39 6	43 0	1.33	1.12	1.22
Sept. 2..	50 6	40 0	44 7	1.41	1.12	1.24	Sept. 1..	47 1½	37 3	43 1⅝	1.34	1.06	1.23
9..	50 6	37 4½	43 5⅝	1.41	1.04	1.21	8..	47 7½	36 9	43 3½	1.34	1.04	1.22
16..	50 0	39 0	44 2⅞	1.39	1.08	1.23	15..	47 4½	39 1½	42 6¼	1.35	1.11	1.21
23..	49 9	33 1½	45 4⅞	1.37	.92	1.26	22..	46 9	37 9	42 4⅞	1.33	1.07	1.20
30..	51 0	42 0	46 2	1.39	1.16	1.27	29..	47 0	37 3	42 6⅛	1.34	1.06	1.21
Oct. 7..	51 6	39 9	47 0	1.42	1.10	1.30	Oct. 6..	45 0	38 6	42 9½	1.28	1.09	1.22
14..	53 0	45 7½	49 1¼	1.47	1.26	1.36	13..	46 0	41 4½	43 5	1.31	1.18	1.24
21..	55 0	45 9	49 9⅞	1.54	1.27	1.39	20..	45 1½	40 7½	43 1⅜	1.28	1.15	1.22
28..	52 0	46 0	49 3⅜	1.45	1.28	1.37	27..	45 0	33 6	42 9½	1.27	.94	1.20
Nov. 4..	55 4½	44 6	50 5¼	1.54	1.24	1.40	Nov. 3..	45 10½	40 7½	43 5¼	1.28	1.13	1.22
11..	52 0	46 6	48 6⅝	1.45	1.30	1.35	10..	47 0	39 4½	43 10	1.31	1.09	1.21
18..	54 6	44 9	49 6¼	1.52	1.25	1.38	17..	46 9	39 10½	44 0⅞	1.26	1.08	1.20
25..	53 3	47 0	50 0¼	1.49	1.32	1.40	24..	45 7½	39 6	43 10⅞	1.23	1.08	1.19
Dec. 2..	53 0	34 6	48 7¾	1.50	.98	1.38	Dec. 1..	45 9	38 3	43 3⅜	1.26	1.04	1.18
9..	51 4½	45 9	47 9	1.47	1.31	1.36	8..	45 0	40 7½	43 3⅞	1.23	1.10	1.18
16..	51 0	46 0	48 5¼	1.47	1.33	1.40	15..	45 3	38 1½	43 1½	1.23	1.04	1.18
23..	53 0	46 9	49 4⅞	1.54	1.36	1.43	22..	46 0	38 7½	43 1¼	1.26	1.06	1.18
30..	53 3	46 6	49 9½	1.54	1.35	1.44	29..	44 6	40 9	43 5⅝	1.21	1.11	1.18
1923							**1924**						
Jan. 6..	53 0	44 7½	48 4	1.54	1.30	1.40	Jan. 5..	45 6	41 6	44 3¾	1.23	1.11	1.19
13..	52 9	44 4½	47 8⅝	1.54	1.29	1.39	12..	47 4½	36 6	44 11⅞	1.26	.98	1.20
20..	52 0	43 3	47 4¼	1.52	1.26	1.38	19..	48 0	37 0	45 11⅞	1.28	.98	1.22
27..	49 6	44 9	46 5¼	1.44	1.30	1.35	26..	48 3	37 3	45 11½	1.28	.98	1.21
Feb. 3..	47 6	43 0	46 0	1.39	1.24	1.34	Feb. 2..	49 0	44 0	46 9½	1.31	1.17	1.25
10..	49 9	43 6	46 2½	1.46	1.27	1.35	9..	50 0	43 0	46 8⅜	1.35	1.16	1.26
17..	49 6	43 9	46 9⅜	1.45	1.28	1.37	16..	50 6	41 6	45 9¾	1.36	1.12	1.23
24..	49 3	43 3	46 1½	1.45	1.27	1.36	23..	48 3	42 0	45 8¼	1.30	1.13	1.23
Mar. 3..	47 9	42 9	45 8⅞	1.40	1.26	1.34	Mar. 1..	49 6	42 0	45 11½	1.33	1.13	1.24
10..	47 9	42 0	45 1	1.40	1.23	1.32	8..	48 4½	41 6	45 8½	1.30	1.11	1.22
17..	48 1½	43 6	45 3⅜	1.42	1.28	1.33	15..	47 6	41 6	44 10⅞	1.28	1.11	1.20
24..	49 6	43 9	46 3¾	1.45	1.28	1.36	22..	47 3	41 10½	44 5⅞	1.26	1.13	1.19
31..	48 3	45 0	46 6½	1.41	1.32	1.36	29..	46 7½	40 9	44 1	1.25	1.10	1.18
Apr. 7..	51 0	44 3	46 10⅛	1.49	1.29	1.37	Apr. 5..	46 3	41 3	43 9¾	1.24	1.11	1.18
14..	52 3	45 0	48 1	1.52	1.31	1.40	12..	46 6	41 3	43 6½	1.26	1.12	1.18
21..	52 6	46 9	48 7⅞	1.53	1.36	1.42	19..	46 6	41 6	44 1	1.26	1.13	1.20
28..	52 6	47 6	49 5	1.52	1.38	1.43	26..	46 6	41 0	43 3¾	1.28	1.12	1.19
May 5..	52 3	47 10½	49 0¼	1.51	1.38	1.42	May 3..	47 3	41 3	44 2¾	1.30	1.13	1.21
12..	49 9	47 1½	48 3	1.44	1.36	1.39	10..	47 9	41 9	44 10⅝	1.31	1.14	1.23
19..	50 6	46 6	48 1⅛	1.46	1.34	1.39	17..	48 0	40 10½	44 0½	1.31	1.12	1.20
26..	50 0	46 0	48 1	1.45	1.33	1.39	24..	48 0	41 10½	44 8⅞	1.31	1.14	1.22
June 2..	51 6	44 9	46 10¼	1.49	1.29	1.36	31..	48 0	41 9	45 5½	1.30	1.13	1.23
9..	50 0	42 6	46 1⅜	1.44	1.23	1.33	June 7..	47 6	42 6	44 7⅞	1.28	1.15	1.20
16..	49 0	42 0	46 7½	1.41	1.21	1.34	14..	50 0	41 3	46 0½	1.35	1.11	1.24
23..	49 0	42 6	45 8¾	1.41	1.23	1.32	21..	50 3	44 9	47 5¾	1.36	1.21	1.28
30..	49 9	41 6	44 11⅛	1.43	1.19	1.29	28..	50 9	45 4½	48 2¾	1.37	1.23	1.30
July 7..	52 0	41 9	45 0½	1.48	1.19	1.28	July 5..	51 9	45 6	48 10½	1.40	1.23	1.32
14..	47 6	40 3	43 8½	1.35	1.16	1.25	12..	51 9	46 0	49 1	1.42	1.25	1.33
21..	46 10½	39 6	42 8¼	1.35	1.13	1.23	19..	56 0	48 6	52 1½	1.53	1.33	1.42
28..	46 0	37 0	41 8	1.32	1.06	1.20	26..	59 9	50 3	54 5	1.64	1.38	1.50

*Derived from daily data, for 1922–23 from Broomhall's *Corn Trade News*, for subsequent years from *London Grain, Seed and Oil Reporter*. See text (pp. 290–91, 293) for methods of calculating weekly averages and converting to U.S. currency. Ranges show the high and low sales of individual parcels in each week.

TABLE I.—WEEKLY AVERAGES AND RANGES OF BRITISH PARCELS PRICES FROM AUGUST 1922—*Continued*

Week ending	Shillings and pence per quarter			Equivalent dollars per bushel			Week ending	Shillings and pence per quarter			Equivalent dollars per bushel		
	High	Low	Average	High	Low	Average		High	Low	Average	High	Low	Average
1924							**1925**						
Aug. 2..	62 0	53 0	57 7¼	1.71	1.46	1.59	Aug. 1..	59 9	51 0	55 9⅜	1.82	1.55	1.70
9..	61 0	52 3	55 5⅞	1.70	1.48	1.56	8..	63 1½	42 0	58 0⅞	1.92	1.28	1.77
16..	58 9	51 3	54 5⅝	1.67	1.46	1.55	15..	63 6	36 3	58 5¼	1.93	1.10	1.78
23..	59 9	51 1½	55 1	1.69	1.44	1.55	22..	64 3	49 9	58 10¼	1.95	1.51	1.79
30..	57 6	46 3	53 6⅝	1.61	1.30	1.50	29..	64 6	45 0	58 2½	1.96	1.37	1.77
Sept. 6..	60 6	48 1½	58 4¼	1.69	1.35	1.63	Sept.5..	64 6	50 6	56 0½	1.96	1.54	1.70
13..	59 6	50 10½	55 3⅛	1.66	1.41	1.54	12..	64 3¾	47 0	55 1¼	1.96	1.43	1.68
20..	60 9	53 3	57 1⅛	1.69	1.48	1.59	19..	61 9	45 4½	52 8¾	1.88	1.38	1.60
27..	63 6	44 10½	58 1½	1.77	1.25	1.62	26..	61 3	47 6	51 4⅝	1.86	1.44	1.56
Oct. 4..	67 0	54 9	61 1¼	1.87	1.52	1.70	Oct. 3..	51 9	44 6	48 3⅞	1.57	1.35	1.47
11..	70 3	60 0	64 11⅞	1.97	1.67	1.82	10..	51 6	44 4½	48 4⅝	1.57	1.35	1.47
18..	69 6	58 6	64 1¼	1.95	1.64	1.80	17..	55 6	45 7½	48 11¾	1.69	1.39	1.49
25..	67 10½	53 0	63 5⅝	1.90	1.49	1.78	24..	52 6	46 3	49 8½	1.60	1.41	1.51
Nov. 1..	66 0	55 6	61 7½	1.86	1.57	1.74	31..	55 6	46 5¼	50 7½	1.69	1.41	1.54
8..	66 3½	55 6	59 11¼	1.90	1.58	1.71	Nov. 7..	56 6	47 0	51 3¾	1.72	1.43	1.56
15..	69 6	59 9	63 11⅝	2.01	1.72	1.85	14..	55 6	48 0	52 0⅞	1.69	1.46	1.58
22..	69 4½	57 9	63 8⅝	2.00	1.67	1.84	21..	58 0	49 9	54 1½	1.76	1.51	1.64
29..	68 4½	58 6	63 6⅝	1.98	1.70	1.84	28..	62 0	52 3	56 8½	1.89	1.59	1.72
Dec. 6..	67 6¾	57 9	62 6¼	1.96	1.68	1.82	Dec. 5..	64 0	55 0	60 8⅜	1.95	1.67	1.85
13..	68 4½	56 3	62 10¼	2.01	1.65	1.84	12..	65 4½	57 0	62 2⅜	1.99	1.73	1.89
20..	70 0	58 10½	64 1⅝	2.05	1.73	1.88	19..	62 6	53 0	59 6½	1.90	1.61	1.81
27..	71 0¾	60 3	64 7⅝	2.09	1.77	1.90	26..	62 6	52 0	59 2½	1.90	1.58	1.80
1925							**1926**						
Jan. 3..	73 3	60 9	66 8¼	2.18	1.80	1.98	Jan. 2..	64 3	55 0	61 2⅝	1.95	1.67	1.86
10..	72 7½	60 6	67 3⅞	2.16	1.80	2.01	9..	64 8¼	53 9¾	61 5⅝	1.97	1.64	1.87
17..	73 1½	60 9	66 5	2.18	1.81	1.98	16..	63 6	55 0	60 1¾	1.93	1.67	1.83
24..	75 5½	61 3	68 0⅛	2.26	1.83	2.04	23..	62 1½	52 9	59 0⅞	1.89	1.60	1.80
31..	79 9	63 6	70 2¼	2.39	1.90	2.10	30..	62 1½	51 0	57 6	1.89	1.55	1.75
Feb. 7..	78 0	63 9	71 10	2.33	1.90	2.15	Feb. 6..	63 4½	51 0	59 0⅞	1.93	1.55	1.80
14..	76 0	62 0	69 8⅞	2.27	1.85	2.08	13..	62 5¼	50 9	57 8⅛	1.90	1.54	1.75
21..	78 1½	63 1½	70 2¼	2.33	1.88	2.09	20..	59 1½	50 1½	56 8⅞	1.80	1.52	1.73
28..	76 6	61 4½	69 0½	2.28	1.82	2.05	27..	59 0	50 0	55 3⅛	1.80	1.52	1.68
Mar. 7..	77 0	59 10½	70 2⅞	2.29	1.78	2.09	Mar. 6..	58 0	48 6	53 6¾	1.76	1.48	1.63
14..	74 0	62 0	69 3¼	2.20	1.86	2.07	13..	58 0	47 6	52 7⅞	1.76	1.44	1.60
21..	66 3	51 6	61 3	1.98	1.54	1.83	20..	59 9	46 6	53 7½	1.82	1.41	1.63
28..	66 0	58 9	62 7¼	1.97	1.76	1.87	27..	58 9	47 7½	54 0½	1.79	1.45	1.64
Apr. 4..	64 1½	51 3	57 9⅝	1.92	1.53	1.73	Apr. 3..	59 3	49 6	55 2½	1.80	1.51	1.68
11..	60 4½	54 0	57 6⅞	1.81	1.62	1.72	10..	59 9	50 3	55 11½	1.82	1.53	1.70
18..	64 3	47 0	58 8¼	1.92	1.41	1.76	17..	61 6	50 3	56 7¼	1.87	1.53	1.72
25..	63 0	54 4½	58 8⅞	1.89	1.63	1.76	24..	63 6	52 6	58 5¼	1.93	1.60	1.78
May 2..	62 0	53 3	58 0⅜	1.88	1.61	1.76	May 1..	61 7½	51 3	57 3¼	1.87	1.56	1.74
9..	66 3	48 7½	60 5¼	2.01	1.47	1.83	8..	59 9	52 0	57 3	1.82	1.58	1.74
16..	65 0	46 9	60 8¼	1.97	1.42	1.84	15..	61 6	50 6	57 8⅞	1.87	1.54	1.76
23..	67 4½	55 7½	62 6⅝	2.05	1.69	1.90	22..	62 1½	50 7½	56 10¼	1.89	1.54	1.73
30..	68 3	56 4½	63 7½	2.07	1.71	1.93	29..	60 9	50 6	56 6¼	1.85	1.54	1.72
June 6..	66 3	55 10½	62 8⅞	2.02	1.70	1.91	June 5..	59 10½	51 0	56 3⅝	1.82	1.55	1.71
13..	66 3	44 1½	60 9¾	2.02	1.34	1.85	12..	60 1½	46 0	56 7½	1.83	1.40	1.72
20..	63 3	51 9	56 11	1.92	1.57	1.73	19..	70 6	51 4½	56 8¼	2.14	1.56	1.72
27..	62 10½	52 7½	57 11⅝	1.91	1.60	1.76	26..	59 4½	50 9	54 11¾	1.81	1.54	1.67
July 4..	60 3	39 9	54 10	1.83	1.21	1.67	July 3..	58 7½	47 3	53 7¾	1.78	1.44	1.63
11..	59 4½	45 9	54 8½	1.81	1.39	1.66	10..	59 9	50 0	54 9⅝	1.82	1.52	1.67
18..	62 0	48 6	57 3⅜	1.89	1.48	1.74	17..	59 9	51 0	56 2¼	1.82	1.55	1.71
25..	62 9	51 3	57 1⅝	1.91	1.56	1.74	24..	60 6	50 0	56 2⅞	1.84	1.52	1.71
							31..	60 0	50 0	56 1⅜	1.82	1.52	1.71

TABLE I.—WEEKLY AVERAGES AND RANGES OF BRITISH PARCELS PRICES FROM AUGUST 1922—*Concluded*

Week ending	Shillings and pence per quarter			Equivalent dollars per bushel			Week ending	Shillings and pence per quarter			Equivalent dollars per bushel		
	High	Low	Average	High	Low	Average		High	Low	Average	High	Low	Average
1926							**1927**						
Aug. 7..	59 4½	49 6	55 3	1.81	1.51	1.68	Aug. 6..	58 0	50 9	52 8⅞	1.76	1.54	1.60
14..	58 1½	48 6	54 2¼	1.77	1.48	1.65	13..	58 9	47 9	53 7⅞	1.79	1.45	1.63
21..	58 3	47 10½	52 11¾	1.77	1.46	1.61	20..	58 7½	45 6	53 4¼	1.78	1.38	1.62
28..	58 1½	47 9	53 6⅞	1.77	1.45	1.63	27..	58 7½	48 0	53 3⅜	1.78	1.46	1.62
Sept. 4..	59 0	48 4½	52 0½	1.80	1.47	1.58	Sept. 3..	57 3	47 0	52 1¾	1.74	1.43	1.59
11..	56 7½	48 0	51 2¼	1.72	1.46	1.56	10..	56 9	48 3	52 7¾	1.73	1.47	1.60
18..	57 0	48 9	52 10¼	1.73	1.48	1.61	17..	56 0	45 6	50 7½	1.70	1.38	1.54
25..	56 9	51 3	53 10⅛	1.73	1.56	1.64	24..	56 0	46 0	50 4⅜	1.70	1.40	1.53
Oct. 2..	56 6	50 4½	53 8½	1.72	1.53	1.63	Oct. 1..	55 6	44 4½	50 3	1.69	1.35	1.53
9..	56 6	50 3	54 1¾	1.72	1.53	1.65	8..	54 3	43 9	50 6½	1.65	1.33	1.54
16..	57 9	50 9	55 0⅞	1.76	1.54	1.68	15..	57 3	39 7½	50 10½	1.74	1.20	1.55
23..	63 3	52 10½	58 1⅝	1.92	1.61	1.77	22..	58 7½	37 6	49 6⅞	1.78	1.14	1.51
30..	64 6	55 0	59 11⅝	1.96	1.67	1.82	29..	55 0	37 3	48 10¾	1.67	1.13	1.49
Nov. 6..	62 3	53 9	58 7⅞	1.89	1.64	1.78	Nov. 5..	55 6	42 3	48 11⅜	1.69	1.28	1.49
13..	61 4½	54 3	58 1⅝	1.87	1.65	1.77	12..	56 0	43 9	48 0⅝	1.70	1.33	1.46
20..	59 6	51 9	56 3¼	1.81	1.57	1.71	19..	58 6	38 10½	49 10¾	1.78	1.18	1.52
27..	58 6	51 3	55 4	1.78	1.56	1.68	26..	58 0	41 6	50 5¼	1.76	1.26	1.53
Dec. 4..	58 0	49 3	54 10⅝	1.76	1.50	1.67	Dec. 3..	57 3	39 1½	48 9¾	1.74	1.19	1.48
11..	59 0	45 0	55 2¾	1.80	1.37	1.68	10..	54 3	39 6	48 4¼	1.65	1.20	1.47
18..	58 3	49 0	52 6⅞	1.77	1.49	1.60	17..	57 0	41 0	49 9⅞	1.73	1.25	1.51
25..	58 0	49 7½	54 8¼	1.76	1.51	1.66	24..	57 0	45 6	50 0	1.73	1.38	1.52
1927							31..	51 6	41 9	48 6⅝	1.57	1.27	1.48
Jan. 1..	56 0	49 0	54 0½	1.70	1.49	1.64	**1928**						
8..	55 6	39 0	52 4⅞	1.69	1.19	1.59	Jan. 7..	55 4½	38 6	47 9⅜	1.68	1.17	1.45
15..	55 3	44 1½	52 1	1.68	1.34	1.58	14..	55 0	41 0	48 4½	1.67	1.25	1.47
22..	56 0	39 9	51 7⅞	1.70	1.21	1.57	21..	55 1½	39 10½	49 6⅝	1.68	1.21	1.51
29..	56 9	41 6	52 6¼	1.73	1.26	1.60	28..	51 0	47 4½	49 2⅝	1.55	1.44	1.50
Feb. 5..	57 0	41 3	53 4½	1.73	1.26	1.62	Feb. 4..	51 10½	43 7½	48 4⅝	1.58	1.33	1.47
12..	57 6	41 0	53 2⅞	1.75	1.25	1.62	11..	55 6	42 0	47 2⅞	1.69	1.28	1.44
19..	58 0	40 0	52 5½	1.76	1.22	1.60	18..	55 0	43 0	47 10	1.67	1.31	1.46
26..	57 6	45 3	52 9½	1.75	1.38	1.60	25..	53 1½	41 6	48 10	1.62	1.26	1.48
Mar. 5..	57 7½	45 3	52 6¼	1.75	1.38	1.60	Mar. 3..	52 10½	41 7½	48 6½	1.61	1.27	1.48
12..	59 0	40 9	52 7½	1.80	1.24	1.60	10..	53 10½	43 0	49 8⅝	1.64	1.31	1.51
19..	57 3	44 6	52 11	1.74	1.35	1.61	17..	52 10½	46 6	50 9½	1.61	1.41	1.54
26..	57 1½	40 3	51 5⅞	1.74	1.22	1.57	24..	55 6	42 9	50 10¼	1.69	1.30	1.55
Apr. 2..	57 4½	48 0	51 10	1.74	1.46	1.58	31..	53 0	43 3	49 11¾	1.61	1.32	1.52
9..	56 9	49 0	51 11⅝	1.73	1.49	1.58	Apr. 7..	53 3	45 1½	50 9⅝	1.62	1.37	1.54
16..	56 6	35 9	50 10⅛	1.72	1.09	1.55	14..	55 10½	46 0	51 11⅝	1.70	1.40	1.58
23..	57 0	39 9	51 2¼	1.73	1.21	1.56	21..	56 9	47 6	53 6⅞	1.73	1.44	1.63
30..	56 9	37 9	51 9⅜	1.73	1.15	1.58	28..	57 1½	47 6	53 1¾	1.74	1.44	1.62
May 7..	57 9	41 9	52 7⅞	1.76	1.27	1.60	May 5..	57 6	47 10½	53 7⅞	1.75	1.46	1.63
14..	58 9	44 0	54 0½	1.79	1.34	1.64	12..	56 4½	51 0	54 0⅝	1.72	1.55	1.64
21..	58 0	47 6	53 11¾	1.76	1.44	1.64	19..	55 4½	45 7½	53 6¼	1.68	1.39	1.63
28..	58 3	44 3	54 8⅜	1.77	1.35	1.66	26..	55 4½	47 1½	52 1⅜	1.68	1.43	1.58
June 4..	62 0	53 6	56 9⅞	1.89	1.63	1.73	June 2..	54 6	44 9	49 2⅜	1.66	1.36	1.50
11..	57 3	53 6	55 8	1.74	1.63	1.69	9..	54 9	41 9	49 10½	1.66	1.27	1.52
18..	59 1½	52 9	55 8¾	1.80	1.60	1.70	16..	54 3	43 7½	49 0½	1.65	1.33	1.49
25..	57 4½	45 3	54 8½	1.74	1.38	1.66	23..	53 0	38 4½	47 8¾	1.61	1.17	1.45
July 2..	59 3	49 4½	53 6½	1.80	1.50	1.63	30..	51 6	36 0	47 6¼	1.57	1.09	1.45
9..	59 4½	50 9	54 5⅝	1.81	1.54	1.66	July 7..						
16..	58 3	41 9	52 6¼	1.77	1.27	1.60	14..						
23..	55 6	48 3	52 11¼	1.69	1.47	1.61	21..						
30..	59 3	46 6	52 8	1.80	1.41	1.60	28..						

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