

Agricultural Tariffs

The Tariffs on Barley, Oats and Corn

Theodore W. Schultz

Edited by

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MADISON, WISCONSIN**

THE TARIFFS ON BARLEY
OATS AND CORN

by

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Tariff Research Committee
Madison, Wisconsin

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EDITORS' INTRODUCTION

The tariffs on the course feed grains—barley, oats and corn, are excellent examples of purely nominal duties. They are practically without effect on the prices of these products. While the tariff on sugar is fully effective because we import half of our supply, and the tariff on dairy products is partially effective because we are on the borderline between an import and an export basis, the tariff on these grains is without constant or significant effect, because they are indirectly and directly on an export basis.

The small exports of feed grains in their original form, generally much less than 10 per cent of our production, are supplemented by relatively larger exports in the form of pork products. Inasmuch as the feed grains are used primarily for the production of meat, poultry and milk, their value is largely determined by the prices of these commodities. Since hogs are the chief consumers of feed grains, the relationship between grain and meat prices is not mathematically precise, but it can readily be seen that cheap meat means cheap grain, while high meat prices accompany high grain prices. In general meat prices govern grain prices though temporarily the relationship may be at least partially reversed. In the long run, therefore, the tariff on the feed grains can be effective only insofar as the price of meat products, especially pork, can be maintained above the world level. On the whole, thus far, this has not been achieved.

While the ineffectiveness of the tariffs on most Corn Belt products has always been recognized by economists, it seems that propagandists have succeeded in convincing the farmers that these duties are of great benefit to them. Recently, for instance, a representative from Nebraska, discussing the tariff bill, said, "The district I represent is an area of the best part of the American Corn Belt If this bill favors agriculture, it will favor Nebraska. With its passage practically every product of the Corn Belt will be protected",¹ on the other hand, some of the opponents of the bill called these duties "paper rates", "nominal rates", "useless duties", "quack duties", "gesture duties", "fake rates", "political breadpills", and other similar epithets. While some legislators appear to have been deluded about these rates, others, although personally aware that rates on exported commodities

¹ *Congressional Record*, September 19, 1929, pp. 3683-84.

were valueless, nevertheless were apprehensive about the effect upon their own political fate should they publicly proclaim that fact. In view of the popular belief in the tariff, they hesitated to criticize these duties lest it be believed that they were opposed to the best interests of their own constituents. Some representatives, however, in urging higher duties did so in the hope that the Export Debenture could be attached to the tariff bill, or enacted at a later date. Since it was hoped this would make the tariff effective on these export commodities, it was felt that the higher the rates could be put, the greater would be the benefits to be derived from the Debenture, if and when it could be enacted.

The prices of the feed grains are interdependent. As feeds they are interchangeable, and they consequently bear a fairly constant price relationship to one another, rising and falling together. This is illustrated by Professor Schultz's Table 6. The major determinants of corn prices are, (1) the size of the corn crop, (2) the quality, (3) the number of hogs and their price, and (4) the size of the oat and barley crops. The major barometer of feed grain prices is the price of corn, and from the demand side one of the limiting factors in corn prices is the price of hogs and pork. So long as the latter are on an export basis, there is little hope that the tariff on corn or the other feed grains will be of any considerable value to the farmer.

Barley. Barley is grown chiefly for feed in the North Central States, Minnesota, North and South Dakota and Wisconsin; and in California for sale to English buyers for malting purposes. About two-thirds of the barley produced is used as feed for meat and dairy animals on farms where it is grown. The other third enters the channels of trade, and of this only about a third, is exported. Minneapolis is the principal barley market. Shipments from the barley producing regions are assembled there and at several other centers and then sent on their way East to deficit feed areas. Since the deficit area is in the eastern part of the United States, the barley moves by lake routes to Buffalo or Montreal, from which points it is either distributed locally to satisfy domestic needs, or exported. These exports are, however, sporadic, while those of California have been rather consistent.

Recently some hope has been entertained that a revival of the malting industry would be of great benefit to the farmers. Such a revival would, however, probably result in a distinction between

malting and feed barleys. The price of feed barley would probably be affected very little, though the prospective demand for malting barley would tend to raise the price of the better grades. The advent of prohibition caused the direct per capita consumption of barley to decline from 21 to 6 pounds per year. In 1917, 42 per cent of the crop was used for the production of alcohol and fermented liquors, while in 1931 only 3 per cent was so used.

The statistical analysis made by Professor Schultz bears out the previous observations that except for some extraordinary circumstances (see Chapter V) the tariff has been, aside from isolated instances, without value in raising Minneapolis above Winnipeg prices. At some times Winnipeg prices have actually been above those at Minneapolis. It is quite likely that the duty on barley will remain largely ineffective on the bulk of the crop, even though a considerable quantity is used to make fermented liquors.

Oats. The present duty of 16 cents per bushel on oats is without value to the farmer. Despite the decreasing use of oats as feed for horses, oat production has held close to its peak acreage. This is largely because climatic and economic conditions are not the determining factors in oat production. Oats have a place in the crop rotation in Corn Belt farms. Since they are extremely bulky, they cannot be shipped long distances; nevertheless, in recent years about 25 per cent of United States production was shipped out of the county where grown. Since oats are largely consumed locally, the American crop competes with the Canadian only in the eastern part of the United States. The grain moves from west to east along much the same lines as barley. As in barley, the North Central States constitutes the surplus area, the eastern states the deficit area. Oat production is nominally on an export basis, although only about one per cent of the crop is actually sold abroad, and the price depends almost entirely on domestic factors.

A statistical test of the effects of the oat tariff is not as readily made as it is in other products whose value is determined in fluid markets by national conditions. Local surpluses and scarcities may create purely local prices, which our organized markets do not entirely overcome. The closest approximation to national markets may be found in Minneapolis, Chicago, and Buffalo, and in Winnipeg and Toronto in Canada. A comparison of these prices shows that, except in unusual circumstances, the tariff on oats will probably continue to be without effect. Canadian prices have been sometimes lower, sometimes higher than American prices.

Corn. Although it is well known by economists that the tariff on corn has been practically without effect, it has been progressively raised until it is now 25 cents per bushel. These raises have been sought because it is argued that Argentine costs of production are lower than ours. Nevertheless, so long as corn remains on an export basis it must compete with foreign production whether or not it is "protected" by a United States duty.

The United States and Argentina are the only corn exporting countries of the western hemisphere. Although some Argentine corn is brought into the United States on the eastern and western seabords, it does not furnish effective competition. In the Liverpool market American corn seems to sell at a higher price than Argentine corn. The Argentine crop is predominantly flint, while that of the United States is of the dent variety. About 84 per cent of our corn is used on the farm, and only about 15 per cent enters commercial channels. This corn is shipped to deficit areas in the South and along the Atlantic and Pacific seabords. Shipments, of course, originate in the Corn Belt, where in spite of the fact that this is an efficient area for hog production, a surplus of corn is available.

About one-half of the corn entering the markets originates in Illinois and Iowa, while nine states supply 87 per cent. Although only about one per cent of the crop is exported as grain, one of the major price determinants of the total crop is the price of hogs and pork, which are on an export basis.

The relation between corn and hog prices is known as the corn-hog ratio. This ratio consists of the number of bushels of corn required to equal in value 100 pounds of hogs. It is an expression of the relative value of corn as a grain or as a hog feed. For the last several years it has averaged 11.4 bushels at Chicago. Since the response of the corn producer and the hog feeder to this ratio is not perfect, for reasons discussed by Professor Schultz and others, the prices of corn and hogs can get out of line temporarily. Over a period of years, however, they cannot get so far out of line as to remove the price of hogs from its position as the fundamental factor in the price of corn and the other feed grains.

However, corn is used not only as livestock feed, but for human consumption and for the production of alcohol. Some people believe that import restrictions on blackstrap molasses, which is also used to make alcohol, will increase the demand for corn. As early as 1824 efforts were made to put a duty on West India rum, in the interest

of corn producers. This is similar to the attempt to raise the duty on the blackstrap molasses in the Smoot-Hawley bill. It appears, however, that even were it possible to compel the entire industrial alcohol industry to use domestic corn, instead of blackstrap molasses, in making alcohol, only 3 per cent of the crop would be absorbed. Blending gasoline with alcohol is an outlet now being considered. It would require a tax on gasoline and even higher tariffs on blackstrap molasses in order to work successfully. Even so, it is very doubtful whether these taxes would have any appreciable effect on corn prices. Furthermore, it is possible that those alcohol manufacturers who did not continue to use blackstrap molasses in spite of the duty would produce synthetic alcohol.

One of the limiting factors in raising the price of corn and the other feed grains above world levels is the one-eighth of our total hog products which are now exported. Lard, the most direct product of corn fed to animals, is strictly on an export basis, one-third of our production being sold abroad. These exports make the domestic price of the entire output of hogs, corn, and the other feed grains dependent upon the prices paid in the foreign markets. It appears, therefore, that so long as there are surpluses of meat products sold abroad the tariff on corn will continue to be without value to the American farmer.

*The Domestic Basis.*² Should, however, grains and meats cease to be sold in the export markets, the extent to which their prices could be raised within this country would depend largely upon the elasticity of demand of consumers for meat products. The Agricultural Adjustment Act of 1933 has for one of its purposes the reduction of production to a domestic basis. The tariffs on the feed grains and meats are an integral part of this program, for if it is hoped to raise domestic prices above world prices by restriction of production, a barrier must be put up against the foreign supply. The success of the crop restriction program as applied to grains and meat is, of course, uncertain. But even should it succeed it should not be forgotten that the ability to dispose of at home at higher prices whatever quantity of food is produced will still depend on the purchasing power of domestic consumers. So long as business continues to be depressed and unemployment still stalks the land, it will be difficult to raise prices to a level which appears satisfactory. To curtail production

² The views expressed here are those of the editors since the author did not discuss this question.

so greatly that only the higher income groups can afford meat is virtually impossible and clearly not desirable. To supply all of the domestic population with meat means that the price must remain quite low because the unemployed or partially employed and low income groups will be forced to curtail their purchases should prices rise beyond their reach. The butter tariff (See R. R. Renne, *The Tariff on Dairy Products.*) well illustrates the fact that prices can not be raised to profitable levels simply because a tariff protected commodity is on a domestic basis of production. The tariffs on barley, oats, and corn can not consequently be made effective, nor can the price of these grains be greatly raised simply by reducing or entirely eliminating exports, and restricting or prohibiting imports. Meat exports and imports may also disappear, but even with this done the prosperity of the Corn Belt farmer will still not be assured depending as it then would wholly upon domestic purchasing power.

JOHN R. COMMONS

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Madison, Wisconsin,
December 1, 1933.

AUTHOR'S PREFACE

This volume deals with the tariff in its relation to the coarse feed grains—barley, oats and corn. It is divided into three parts, each of which is a complete monographic study of one of these grains. My first intention was to include all of the principal cereal crops grown in the United States, but it soon became evident that in order to do a thorough piece of work it would be necessary to limit the field. Wheat was omitted because of the study then under way at the Brookings Institute of Economics and those being published by the Food Research Institute. Flaxseed, rye and buckwheat were originally given some attention as is shown by the pamphlet on *Agricultural Tariffs* released in 1929¹. For this study, however, I chose the feed grains for two reasons: (1) their importance to domestic agriculture, and (2) the lack of any previous research on them.

These three cereal crops are closely related, which makes it advantageous to deal with similar phases of each. In the main they are produced in the North Central states; the uses to which they are put are practically the same, and since national prohibition, which placed barley almost exclusively in the feed bracket, they have shown a very close price relationship. Corn clearly dominates the others in relative importance, whether measured by the price level, domestic supplies, or foreign trade. Barley, oats, and corn are important principally because they furnish the raw material upon which the gigantic livestock feeding industry of the large central area of the United States depends.

I have written for farmers, farm leaders, and men in public life who are interested in the influence of the tariff upon American agriculture. The bulletin is intended primarily for those farmers of the Corn Belt who desire to understand the tariff in terms of the basic production, marketing and price facts of their industry. Questions of tariff theory and method of verifying the effectiveness of tariffs have been avoided. It is an attempt to tell truly and clearly the relevant facts followed with concrete analysis and, in the end, to draw conclusions that are reasonable. To the tariff student it should be pointed out that this work contains all the important statistical data upon which my conclusions rest, and theoretical assumptions are easily inferred. This should facilitate critical appraisal by those readers conversant with the economic aspects of the tariff problem.

¹ Commons, John R., Hibbard, Benjamin H., and Perlman, Selig, *Agricultural Tariffs*, Freeport, 1929.

Part I, which takes up barley, breaks new ground virtually the entire way. Heretofore, for some reason, the economic phases of barley production, the disposition and movement of the crop, foreign trade, and the price characteristics of this grain have received little, if any, attention. In the section dealing with the malting industry I have tried to analyze the influence of the Eighteenth Amendment upon the demand for barley. This was necessary because the tariff on barley is inextricably connected with the demand for malting barley. In Part II oats are dealt with, and fortunately the materials needed were readily available. They required only to be brought together. Other investigators have covered the field of oat production and prices, so that it was possible to proceed directly to the tariff question with only a minimum discussion of the crop. In Part III, which deals with corn, a more elaborate treatment is given than in the case of the other two. The importance of corn—it exceeds both in acreage and value any other crop grown in the United States—justifies the emphasis. Students of corn and, particularly, hog prices, have made many valuable contributions to economic literature, and I have drawn freely upon these studies in order to get at the tariff issue. I have given special attention to the interdependence of corn and hogs, and have attempted to show its influence upon the long time general level of corn prices.

I wish to acknowledge the help and cooperation members of the Minneapolis, Milwaukee, and the Chicago Grain trades have given me and to thank Mr. W. T. Rawleigh for the financial assistance which make this study possible. My colleagues at Iowa State College have made available for me many valuable data, especially on corn. In these researches, I have had important assistance and criticism from Professor Walter A. Morton and Miss Jane Greverus. Professor B. H. Hibbard has unstintingly given his advice and invaluable criticism. To him especially I wish to express my gratitude.

Iowa State College

THEODORE W. SCHULTZ

December, 1933.

TABLE OF CONTENTS

	PAGE
Editors' Introduction	V
Author's Preface	XI
Table of Contents	XIII
List of Figures	XIV
List of Tables	XV

PART I—BARLEY

CHAPTER

I Production	I
II Movements of the Domestic and Canadian Crop	9
III Exports, the Malting Industry and Commercial Feeds	15
IV The Barley Tariff	26
V The Probable Effect of the Tariff Upon Prices	29

PART II—OATS

VI Production	41
VII Movement of the United States and Canadian Crops	47
VIII Imports and Exports	52
IX The Effects of the Tariff on Oat Prices	55

PART III—CORN

X The Corn Industry	66
XI Argentine Corn	71
XII Disposition and Movement in the United States	77
XIII Substitution of Corn for Imported Blackstrap Molasses	88
XIV Exports and Imports of Corn and Corn Products	94
XV Exports of Hog Products and the Tariff	100
XVI Domestic and Argentine Prices	106
XVII Summary of the Present and Probable Future Benefits from the Tariff on Corn	111
Index	114

LIST OF FIGURES

FIGURE	PAGE
1. Acreage, Production, Yield and Farm Price Trends of Barley	2
2. Geographical Location of Domestic Barley Areas	5
3. Barley Shipped Out of County of Origin	11
4. Barley Used in Making Fermented and Alcoholic Liquors	22
5. Movement of Minneapolis and Winnipeg Barley Prices	35
6. Cash and Future Price Differentials of Barley Between Minneapolis and Winnipeg	38
7. Acreage, Production, Yield and Farm Price Trends of Oats	42
8. Geographic Location of Domestic Oat Acreage	43
9. Production and Exports of Oats for Selected Countries	44
10. Canadian Production and Export of Oats	50
11. Annual Oat Prices of Chicago and Winnipeg Compared	58
12. Movement of Chicago and Winnipeg Oat Prices	59
13. Cash and Future Price Differentials of Oats Between Chicago and Winnipeg	62
14. Farm Prices, Production, Yield and Acreage of Corn	67
15. Production and Exports of Corn for Selected Countries	68
16. American and Argentine Corn Prices at Liverpool Compared	74
17. Geographical Situation of the Corn Belt	78
18. International Commerce in Pork and Pork Products	100
19. Corn Price Differentials Between Chicago and Buenos Aires Compared to Imports	106

LIST OF TABLES

TABLE	PAGE
1. United States, Average Barley Production and Exports by Areas, for Five Year Periods, 1905-1930	3
2. Average Barley Production in Selected Countries for the Five Years 1926-27 to 1930-31	6
3. Average Barley Receipts and Shipments of Chief Markets 1924-1928	12
4. Four-year Average Distribution of Canadian Barley Crop, 1925-26 to 1928-29	14
5. Average Commercial Distribution of Western Division (Canada) Barley, 1925-26 to 1928-29	14
6. Prices of Corn, Oats, and Barley for Crop Years 1922-23 to 1930-31	16
7. Average United States Barley Exports by Country of Destination, 1927-28 to 1930-31	17
8. Barley Cleared for Exports via Selected Customs Districts, 1924-28	19
9. Number of Malt Establishments and Bushels of Barley Malt Produced in 1927 by States	21
10. Average Production of Fermented Liquor in the United States for Five-year Periods from 1901 to 1930	21
11. United States Import Duties upon Barley, Barley Malt, and Other Barley Products, 1883-1930	27
12. Comparison of Average Annual Prices of Malting Barley and Feed Barley at Minneapolis, 1925-26 to 1930-31	32
13. The Average Annual Barley Cash Price and Future Price Differentials of Minneapolis over Winnipeg, 1920-1931...	37
14. United States Average Annual Oat Production, Exports, and Imports, for Five-year Periods, 1911-31	41
15. Average Oat Production and Exports for Selected Countries 1926-27 to 1929-30	45

16.	Shipments of Oats from the Primary Markets of the Upper Lake Region, 1920-30	48
17.	United States Oat Exports by Country of Destination, 1921-22 to 1930-31	52
18.	United States Oat Exports, Imports, and Annual Trade with Canada, 1920-31	53
19.	Comparison of the Amount of Canadian Oats Exported via Canadian and United States Ports, 1920-21 to 1930-31....	54
20.	Average Annual Differentials of Cash Oat Prices of Chicago over Winnipeg, 1920-21 to 1930-31	60
21.	Average Annual Differentials of Chicago Oat Future Prices over Winnipeg, 1920-21 to 1930-31	62
22.	Average Annual Differentials of Minneapolis Cash Oat Prices over Winnipeg, 1920-21 to 1930-31	63
23.	United States Import Duties on Oats, 1883-1930	65
24.	Average Production and Exports of the Principal Corn Producing Countries, 1924-1929	69
25.	United States Import Duties on Corn, 1909-1930	70
26.	United States and Argentine Corn Production, 1920-21 to 1931-32	72
27.	Average Production and Exports of Argentine Corn for Five-year Periods, 1901-1930	73
28.	Average Annual Liverpool Prices of United States and Argentine Corn, 1912-13 to 1928-29	75
29.	Average Corn Receipts at Primary Markets, 1926-27 to 1930-31	79
30.	United States Corn Production, Per cent of Crop Marketable, and Quantity Shipped out of County of Origin, 1921-1932	80
31.	Corn Shipped out of County of Origin in Principal Surplus States, 1922-1926	81
32.	Shipments of Iowa's Commercial Corn, 1925-26 to 1928-29.	82
33.	Origin of Chicago Corn Receipts, 1923 and 1928	83

34.	Origin of Milwaukee Corn Receipts, 1923 and 1928.....	84
35.	Blackstrap Molasses and Corn Used for Production of Alcohol and Other Distilled Liquors, 1910-1931	89
36.	Sources of Supply of Blackstrap Molasses, 1922-1927	91
37.	United States Alcohol Production and Corn Estimated Necessary for Total Industrial Alcohol Production, 1920-1929	92
38.	Average United States Foreign Trade in Corn, Including Meal, for Five-year Periods, 1900-1929	97
39.	Total Corn Imports for United States and for Porto Rico, 1922-1931	98
40.	United States Average Production and Exports of Pork for Five-year Periods, 1900-1929	103
41.	United States Production and Exports of Lard, Five year Annual Averages, 1900-1929	103
42.	Comparative Freight Rates on Shipments of Domestic and Argentine Corn	108
43.	Average Annual Margin of Chicago No. 3 Yellow Corn Over Argentine Corn as Quoted at Buenos Aires, 1921-22 to 1930-31	109
44.	United States Exports of Corn and Corn Products Including Pork and Lard, 1909-10 to 1931-32	113

INDEX

<i>Page No.</i>	<i>Page No.</i>
Alcohol, Industrial	88
Motor Fuel	90, 91
Argentina Corn	
Production	71, 69
Violent Production Fluctuations.....	72, 73
Competition	66
Exports	68-69, 73
Production	72, 73
Prices in Liverpool	74-75
Attitude of Rural Press Toward	
Tariff	26-28
Baker, O. E.	10, 46
Beer	1, 10, 40
Bentley, Ronald C.	47, 81, 82
Black, A. G.	90, 91, 92
Blackstrap Molasses	90
Conversion into Alcohol	88, 89
Tariff	89
Production	90-91
Sources of Domestic Supply	91-92
Outlook	112
Bjorka, Knute	101-102
Buenos Aires	106-107
Corn Price Differential on Chicago.....	69
Buffalo and Toronto Oat Prices	56, 64-65
California	
Barley	1, 3, 10, 16
Barley Exports	18
Buyers of California Barley	18
Malting Barley	3
Corn	74
Feed Barley	24
Canada	
Barley Production	4-5, 6
Movement of Barley Crop	13-14
Barley Exports	15
Oat Production	44, 45, 50
Movement of Oat Crop	47, 49
Distribution of Oat Crop	49-50
Frost Damages to Barley	5
Oat Exports	50
Oat Imports from United States	52-53
Canadian Grain Exports via United	
States	14, 54
Chicago.....	10, 47, 48, 109, 24, 56-62, 68, 70
Origin of Corn Receipts	83
Commerce in Domestic Corn	80
Comparability of Foreign and Do-	
mestic Grain	
Barley	33-34
Oats	57-58
Corn	73
Competing Feed Crops	15
Consumption	
Barley	10, 18, 20, 23
Corn Oil	95
Corn Starch	95
Corn Belt	
Crop Rotations	45-46
Geographical Location	78-79
Corn Equivalent of Corn Products.....	104
Corn Hog Ratio	84, 105
On Chicago Market	85
Farmers Response to	85-86, 101
Influence of Freight Rates	86
Cox, Rex W.	77, 94
Dakotas	
Barley Production	1, 3
Movement of Barley Crop	9-13
Malting Barley	22
Oats Production	43, 46
Corn Production	78-79
Deficit Feed Grain Areas	
Corn	79
Barley	9-11
Oats	53, 64-65
Dickson, James G.	7
Domestic Basis	6
Drawback Privilege	98, 99
Duluth	12, 24, 48-49, 63
Effect of Tariff on Prices	
Barley	39-40
Oats	49, 55, 64
Corn	107-109, 111-112
Eighteenth Amendment	1, 8, 10, 20, 40
Elliott, F. F.	82, 85-86
Ellis, Lippert S.	88
Equalization Fee	66, 105
European Barley Malt	1, 3
Exports	
Barley	1, 16, 17, 18, 23, 24, 35
Oats	52-53, 41, 45
Corn	94, 68, 113
Lard	102, 103, 113

Exports (Continued)	Imports
Hog Products100	Barley13, 17, 19-20
Corn Oil95, 113	Oats41, 52-53
Corn Starch95, 113	Corn96, 106
Glucose and Grape Sugar96, 113	Origin of Corn Imports97
Corn Equivalent104	Pacific and Atlantic Coast Corn
Pork103, 113	Imports98
Export Debenture66, 105	Iowa
Farm Value	Corn Movement82
Barley15	Oats Production43
Corn66	Movement of Oats47, 48
Oats41	Center of Corn Belt78-79
Feed Barley3-4, 18, 20, 24	Surplus Corn Region81-82
Feeding Value1	Effect of Corn Hog Ratio87
California3	Lard
Yields7	World Trade100
Exports3	Foreign Demand102
Prices32	Production103
Deficit Areas9-11	Liverpool Corn Prices74, 75
Domestic Trade24	Malting Barley.....3, 5, 10, 16, 18, 20, 21
Federal Farm Board	Exports3, 23
20, 31, 39-40, 58, 59, 60, 65, 109, 110	Prices32
Fermented Liquors1, 10, 21, 40	Malting Industry20
Production21-22	Number of Establishments21
Flint Corn73, 107	Malt Production23
Fordney-McCumber Tariff Act.19, 53, 64	Pacific Coast10
Foreign Demand	Manufactured or Processed Products
Pork and Lard102	of Corn
Fort Williams-Port Arthur ...9, 12, 33, 63	Corn Oil95, 113
Freight Barrier ...32, 33, 56, 86-87, 90-91,	Corn Starch95, 113
93, 106, 108, 112	Glucose and Grape Sugar.....96, 113
Futures Prices	Markets
Barley36, 38	Barley10-11
Oats60-61	Oats47-48
Differentials37	Shipments from primary markets
Geographical Adaptability of Barley ...5-7	of the upper Lake Region.....47
Early Maturity6, 7	Corners and Squeezes37, 38
Haaq, G. C. and Ezekiel, Mordecai.101	Corn79
Hog Products101	McKinley Tariff Act28, 32
Pork and Lard Production103	Minneapolis10, 31, 33, 36, 38-39, 63
Exports103, 111	Minnesota
Corn Equivalent of Exports.....104	Barley Production1, 3
Holmes, C. L.81	Movement of Barley Crop9-13
Illinois	Malting Barley22
Oats Production43	Oats Production43, 46
Movement of Oats47, 48	Corn Production78-79
Surplus Corn Region82-83	Milwaukee11, 24, 48
Industrial Alcohol Plants90-91	Origin of Corn Receipts84

CHECKED

Material for

Motor Production	88, 93
Monopoly Price	31-39, 40
Motor Fuel	90, 91
Nourse, E. G.	102
Nurse Crop	
Barley	7
Oats	41
Parana Valley	71-72
Prices	
Interdependence of Feed Grains	15-16
Fluctuations	36, 37, 61-62
Oat Price Structure	55-56
Buffalo and Toronto Oat Prices	56
Corn	106-110
Oats	57-63
Barley	33-39
Price Differentials	
Barley	9, 30, 35, 37-39
Oats	56-57, 63
Corn	75, 106, 109, 69, 75
Method	39, 107
Prohibition Legislation	8 21-22, 24
Malt Production Since	23
Production	
Barley	1, 9-10, 13
Oats	41, 45
Corn	66, 69
Lard	103
Black Strap Molasses	90-91
Alcohol	92
Production	91
Production Areas	
Barley	1, 45
Oats	43
Corn Belt	78, 72
Surplus Corn Areas	81-82
Production Cycles	64
Production Fluctuations	30, 72

Pork

Foreign Demand	102
Exports	113
Production	103
Exports	103
Porto Rican Corn Imports	97, 99
Regional Maladjustments	29-31
Replacement of Horses and Mules	46
Russia	5, 6, 44, 45, 66, 69
San Francisco	9, 18, 24
Scab Epidemic in Barley	7, 8
Seasonal Distribution of Barley Receipts	12
Seed Oats	64
Shepherd, Geoffrey S.	70, 90, 92
Shift from Oats to Barley	7, 46
Shipments to Pacific Southwest, Corn	84
Smoot Hawley Tariff Act	64, 66, 88
Substitution	
Feed Grains	15
Corn for Blackstrap Molasses	88-93
Tariff Acts	
Barley	27
Oats	65
Corn	70
Taylor, Alonzo E.	70, 77, 95, 102
Uses of Corn	79
Wallace, Henry A.	104
Wells, Oris V.	86
Winnipeg	
Barley	33, 36, 37, 38-39
Oats	56-63
Wisconsin	
Barley Production	1, 3
Movement of Barley Crop	9-13
Malting Barley	22
Wright, Sewall	85
World Production	
Barley	6
Oats	44
Corn	66