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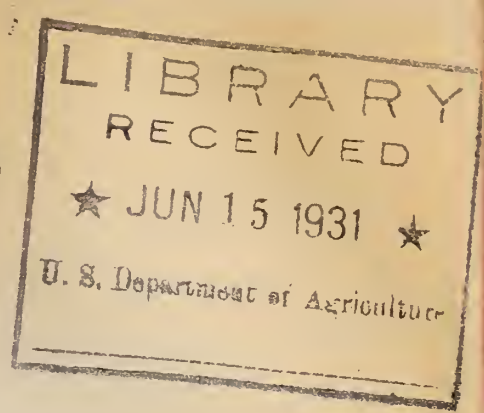
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UNITED STATES DEPARTMENT OF AGRICULTURE

Bureau of Agricultural Economics

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Agricultural Economics Bibliography No. 33



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WHEAT: COST OF PRODUCTION, 1923-1930

References Relating to the  
United States and Some Foreign Countries

Compiled by Louise O. Bercaw,  
Under the Direction of Mary G. Lacy, Librarian  
Bureau of Agricultural Economics

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Washington, D. C.  
January, 1931.

THE UNIVERSITY OF CHICAGO  
DEPARTMENT OF CHEMISTRY

1950

RESEARCH REPORT NO. 10

THE CHEMISTRY OF THE  
HYDROLYSIS OF ESTERS

BY  
J. H. GOLDSTEIN

Submitted in partial fulfillment  
of the requirements for the  
degree of Doctor of Philosophy

1950

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JANICE S. BROWN



### SOURCES CONSULTED

United States Department of Agriculture Library. Card Catalogue.  
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Agricultural Economics Literature (Issued by the Library, Bureau of Agricultural Economics, United States Department of Agriculture) v.1,1927 - v.4,1930.

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Experiment Station Record (Issued by the Office of Experiment Stations, United States Department of Agriculture) v.48, Jan.1923 - v.63, no.7, Nov.1930.

Library Supplement to B. A. E. News (Issued by the Library, Bureau of Agricultural Economics, United States Department of Agriculture) nos.1-38, Jan. 16, 1923 - Dec. 28, 1926.





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WHEAT: COST OF PRODUCTION, 1923-1930.

References Relating to the  
United States and Some Foreign Countries.\*

Compiled by Louise O. Bercaw,  
Under the Direction of Mary G. Lacy, Librarian,  
Bureau of Agricultural Economics

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GENERAL

1. App, Frank. Farm economics, management and distribution. 2d ed., rev. Philadelphia, Chicago & London, J. B. Lippincott company, 1928. 700p. (Lippincott's farm manuals) 281 Ap4  
Cost of producing farm products: p.486-507, chapter XIV.  
Three charts on p.494-496, taken from U. S. Dept. of Agriculture publications, show regional variations in cost factors and regional variation in cost of production in five spring wheat areas and nine winter wheat areas, 1919, and variation in net cost per bushel of winter wheat based on 284 records, 1919.
2. Boyle, J. E. Costs of grain handling in Argentina and the United States. (In Modern Miller, v.57, no.13, Mar. 29, 1930, p.19-20) 298.8 M72  
Shows that it costs less to grow and handle the United States wheat crop than it does to grow and handle the Argentine crop. The following reasons are given for this: bulk handling in the United States as against sack handling in Argentina; the grading system of the United States and the nograding system of Argentina; and the great development of future trading on the organized exchanges of the United States.
3. International labour office. The relation of labour cost to total costs of production in agriculture. Geneva, 1926. 66p. (C.E.I. 27. International economic conference, Geneva, May 4, 1927. Documentation) 285.9 In8I  
Deals with costs in South Australia, Canada, Denmark, France, Germany, England, Scotland, Irish Free State, Italy, the Netherlands, Poland, Sweden, Switzerland, and the United States. Data on wheat, or cereal, farming given for some countries.
4. Jasny, N. Die konkurrenzfähigkeit der wichtigsten überseeländer auf dem weizenweltmarkt. (In Berichte über Landwirtschaft, n. f., bd. 9, hft. 1/2, 1928, p.1-68) 18 G 31

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\*For references on labor requirements in producing wheat see Agricultural Economics Bibliography No. 26, Labor Requirements of Farm Products in the United States, issued by the Library, Bureau of Agricultural Economics, U. S. Department of Agriculture.

"Of the three factors which determine power of competition in the world market, cost of production, cost of export, and sales' price, the author gives an exhaustive account of the first and touches briefly on the other two in connection with wheat from Canada, the United States, New South Wales, and the Argentine Republic. Taking into consideration the varying conditions in the different countries, the differences in actual cultivation of the soil, in rent, in cost of labor and of transportation, he comes to the conclusion that Canada can place her wheat on the world market at a lower cost than the other exporting countries. The Argentine Republic comes next, while for New South Wales and the United States, especially the Pacific States, the cost is somewhat greater."- Agricultural Economics Literature, v.3, no.7, Sept. 1929, p.291.

5. U. S. Tariff commission. Wheat and wheat products. Report... Differences in cost of production of wheat, wheat flour, and wheat mill feed in the United States and Canada... Washington, Govt. print. off., 1924. 71p. 173T17W  
Investigation of wheat costs in Minnesota, North Dakota, South Dakota, and Montana, Manitoba, Saskatchewan, and Alberta for 1921-1923.

#### UNITED STATES

6. American agricultural chemical co. A survey of the farm problem with particular reference to wheat production costs. By Horace Bowker. New York, 1930. 16p. 59 Am32S  
Reprinted in American Fertilizer, v.73, no.4, Aug. 16, 1930, p.15-20.  
This survey was made "to ascertain the relationship between soil fertility and decreased farm profits." See p.8-9 for an analysis of wheat production costs on seven individual farms in Missouri, Kansas, Oklahoma, Illinois, Ohio, Indiana, and Pennsylvania. A comparison is made of costs of wheat produced with and without fertilizer.  
A table on p.11 gives detailed costs of producing wheat per acre on a Saline County, Ill., farm, with and without fertilizer.
7. Chamber of commerce of the United States, Washington, D. C. Agricultural service. "Average farm labor income" and "average cost of production." Washington, February 10, 1928. 24p. 281 C35A  
Variations in costs of producing staple farm commodities - wheat: p.8-11. Data are from the U. S. Department of Agriculture publications and are given for states, selected areas, and by yield groups.
8. Cooper, M. R., and Hawley, C. R. Cost of producing field crops, 1923. (Corn, wheat, oats, potatoes, and cotton) Washington, D. C., 1925. 28 p. (U.S.Dept. agr. Dept. circ. 340)

"The purpose of this report is to present in some detail the findings of an inquiry into costs of production of certain leading crops in 1923 and to make certain comparisons between the costs of production in 1922 and 1923. Corn, wheat, and oat crops were studied during both years, and the study for 1923 included also potatoes and cotton...

This study is based on the replies to a cost of production questionnaire which was mailed to crop and livestock reporters located in all of the states."-p.1.

For wheat production costs see p.11-16.

9. Food research institute, Leland Sanford junior university. Average pre-war and post-war farm costs of wheat production in the North American spring-wheat belt. p.173-207. (Its Wheat Studies, v.1, no.6, May, 1925) 59.8 F73

An abstract of this publication is given in International Review of the Science and Practice of Agriculture, new series, v.4, Apr. 1926, p.439-441.

This number, which "summarizes an extensive analysis of available data on farm costs of producing wheat in the spring-wheat belt of the United States and Canada under pre-war and post-war conditions", was prepared chiefly by M. K. Bennett with assistance from Joseph S. Davis and with suggestion from Carl L. Alsberg and Alonzo E. Taylor.

There is also a supplement to this paper entitled Average Pre-War and Post-War Farm Costs of Wheat Production in the North American Spring-Wheat Belt, Processes of Adjustment and Computation, by M. K. Bennett.

10. Surface, F. M. The stabilization of the price of wheat during the war and its effect upon the returns to the producer... Washington, D.C., United States grain corporation 1925. 100p. 284.3 Su7

"The cost of producing wheat and the margin of profit to producers during the war": Appendix H. p.79-91. Includes charts and tables based on U. S. Dept. of Agriculture data.

11. Tolley, H. R., Black, J. D., and Ezekiel, M. J. B. Input as related to output in farm organization and cost-of-production studies. Washington, D. C., 1924. 44p. (U. S. Dept. agr. Dept. bul. 1277)

"The purpose of this bulletin is to present a method of studying the effect of variations in details of farm practice upon the profitableness of the farm business."-p.1. Illustrative data for potatoes, wheat, beef cattle, etc., are given.

12. U. S. Dept. of agriculture. Cost of producing field crops, 1929. (In its Crops and Markets, v.7, no.6, June, 1930, p.220-221)

Includes three tables. One shows in detail, 1929 costs of producing corn, wheat, and oats, by geographical divisions. Net per acre and per bushel costs are also given. Another table shows

per acre and per bushel costs for the same for 1924, 1925, 1926, 1927, 1928, and 1929.

Another table shows detailed per acre costs of producing cotton, 1929, by yield groups. Data are also given for net cost of lint per acre and per pound.

Similar statistics are given in the June numbers of Crops and Markets for 1929, 1928 and 1927, and the June numbers of Crops and Markets Monthly Supplement, 1926, 1925 and 1924.

The 1924-1928 reports include data on costs of producing potatoes. Number of reports obtained is given in each table also.

13. U. S. Dept. of agriculture. The wheat situation. A report to the President, by Henry C. Wallace. Washington, Govt. print. off., 1923. 126p. 1 Ag6W  
"Cost of producing wheat": p.36-42. "Costs and other factors in the marketing of wheat": p.42-48.
14. U. S. Dept. of agriculture. Yearbook of agriculture, 1928. Washington, D. C., 1929. 1145p.  
Wheat: cost of production, by states, 1927: p.1040-1041, table 510. Includes the following: number of reports, average acreage in wheat per farm, average yield per acre, detailed gross costs per acre, credit per acre (straw), and net cost per acre and per bushel.  
Wheat: cost of production, by yield groups, 1927: p.1041, table 511. Includes the same items as table 510.  
Wheat: production costs and yields, by states, annually, 1923-1927, inclusive: p.1042, table 512. Net cost per bushel and per acre, and yield per acre are given.  
Similar statistics are given in earlier year-books.
15. U. S. Dept. of agriculture. Yearbook of agriculture, 1930. Washington, D. C., 1930. 1080p.  
Cost of producing wheat, corn, and oats; tables 522 and 523, p. 989-990. For 1928 the following statistics are given: number of reports, acreage per crop per farm, yield per acre, detailed gross costs per acre, credit per acre for by-products, and net cost per acre and per bushel. For the years 1923-1928, inclusive the following are given: number of reports, net cost per acre and per bushel, and yield per acre. Data are given for the United States and by geographical divisions.
16. Washburn, R. S. Cost of producing winter wheat in central Great Plains region of the United States. 1924. 36 p. (U. S. Dept. Agr. Bul. 1198)  
"A study of basic cost requirements, as well as acre and bushel costs for the crop year 1920... The cost items are labor and power, materials, and other costs." Data obtained from wheat growers in Missouri, Kansas, Nebraska and Oklahoma.

Colorado

17. Burdick, R. T., and Pingrey, H. B. Cost of producing crops on irrigated farms. Fort Collins, 1929. 72p. (Colo. Agr. exp. sta. Bul. 353)  
For costs of producing wheat, annually 1922-1928, inclusive, and labor requirements see pages 50-53, 59-63.
18. Colorado. State board of immigration. Year book of the state of Colorado, 1928-1929. Denver, 1929. 290p. 252.11 C714  
"Cost of production of crops, 1923 (from reports to U. S. Department of Agriculture)": p.79. Table gives number of reports, average yield per acre, gross cost per acre, credit per acre, net cost per acre and per bushel, and value per acre and per bushel for wheat, corn, and oats, in Colorado, and in other states.

Idaho

19. Hunter, Byron, and Nuckols, S. B. An economic study of irrigated farming in Twin Falls County, Idaho. Washington, D. C., 1926. 75p. (U. S. Dept. agr. Dept. bul. 1421)  
"The investigation covered a four-year period, 1919 to 1922, inclusive. It included (1) a study of the agricultural development and readjustments of the Twin Falls south side project, (2) a business analysis of the farms studied during each of the years 1919-1922, (3) the cost of producing each of the seven primary crops grown in 1919, 1920, and 1921, and (4) the average cost of keeping work horses and the cost of horse labor per hour in 1921." -p.4.  
Wheat is one of the crops for which data on cost of production and cultural practices and labor used per operation are given.

Illinois

20. Case, H. C. M., and Bonnen, C. A. Cost of producing farm products on 18 farms in Knox and Warren counties, 1924. Urbana, University of Illinois, College of agriculture, Department of farm organization and management [192-?] 39p. Mimeographed. 281 I16C  
Cost of production figures are given for corn (husked, hogged and cattedled down), oats, winter and spring wheat, soybean hay, barley, clover seed, clover hay, alfalfa hay, mixed hay, timothy hay, oats hay, cattle, beef, sheep, pork, and poultry products, also labor and tractor costs.  
Tables showing detailed expenses incurred and labor required in producing winter and spring wheat, net cost per bushel, income, profit, etc., are given on p.11-13.
21. Case, H. C. M., and Bonnen, C. A. Cost of producing farm products on 14 farms in Champaign and Piatt counties, 1924. Urbana, University of Illinois, College of agriculture, Department of farm organization and management [1925?] 36p. Mimeographed. 281 I16

"Data were obtained by route method of study."

Costs of producing corn, oats, wheat, soybeans, hay crops, pork, beef; poultry products; summary of cost data on crops, Hancock County, 1913-22; horse and tractor costs; cattle costs; cost of selected items of expense; and measures of efficiency of the farm as a unit are tabulated.

Table showing detailed expenses incurred and labor hours required in producing wheat, net cost per bushel, net profit per acre, etc., is given on p.9.

22. Illinois. Agricultural experiment station. A year's progress in solving farm problems of Illinois. Annual report... forty-second... for year ended June 30, 1929. Urbana, 1929. 270p.

"Wide variations in grain costs could be controlled": p.165-167. Table 61, p.166, shows variation in cost of a bushel of growing corn, wheat, and oats in Champaign and Piatt Counties, annually, 1920-1927, inclusive. Table 62, p.168-169, is a detailed summary of cost accounts for selected grain (winter wheat, corn, oats) crops in Clinton County, 1926, 1927, and 1928.

Table 80, p.211, in the Report for 1927/28 shows in detail cost of producing field crops (corn husked in field, oats, winter wheat, soybeans threshed, clover and mixed hay) in 1927 on Champaign and Piatt County farms.

Table 73, p.184, of the Report for 1926/27 shows in detail the three year average cost of producing field crops (including spring and winter wheat) in Knox and Warren Counties, 1923, 1924, and 1925. Table 74, p.186, shows cost of producing field crops in 1926 on Champaign and Piatt County farms.

Table 40, p.110, of the Report for 1925/26, shows costs of producing crops (including winter wheat) in Champaign and Piatt Counties and in Knox and Warren Counties during 1925.

23. Kennedy, E. E., comp. Illinois. The Corn belt committee estimate of the average production cost of farm products for the state of Illinois... 8p. Mimeographed. Pam. Coll.

"This method of arriving at production costs for farm products was approved unanimously by the Corn Belt Committee, and the twenty-four affiliated groups December 21st, 1925, at Des Moines, Iowa... Submitted by the 'committee to ascertain cost of production'. Milo Reno, Chairman."

"Authorities": p.8.

Data are given for corn, oats, wheat, barley, rye, hay, hogs, veal, cattle, lambs, wool, poultry, butterfat, and eggs.

24. Rauchenstein, Emil, and Ross, R. C. Cost of producing field crops in three areas of Illinois, 1913-1922. Urbana, 1926. 67p. (Ill. Agr. exp. sta. Bul. 277)

Detailed cost records for corn, wheat, oats, clover, timothy mixed hay, redtop, cowpeas, soybean hay are given for Franklin County; for Hancock County costs are given for corn, wheat, oats, clover alfalfa, timothy, mixed hay, and rye. Data include labor requirements.

On pages 54-64 corn, wheat, oats, and clover costs are summarized by periods. Costs for crops are also given for Champaign and Piatt Counties.

25. Wheatcraft, F. W. Cost of production in Illinois. (In *Prairie Farmer*, v.99, no.6, Feb. 5, 1921, p.165,186)

Average cost of production figures for Illinois are given for corn, oats, wheat, barley, rye, hay, hogs, veal, beef, mutton, wool, poultry, butter, and eggs. These are probably the Corn Belt Committee's figures.

### Indiana

26. Overton, M. H. A study of the cost of producing wheat and oats in central and southern Indiana (Data from Hancock and Washington counties) Lafayette, 1923. 24p. (Ind. Agr. exp. sta. Bul. 272)  
Based on farm records for the year 1921.

### Iowa

27. Hopkins, J. A., jr. The crop system in Iowa county. Ames, 1929. p. 279-316. (Iowa. Agr. exp. sta. Bul. 261)  
Table XVI; Wheat-Physical and financial costs per acre, annually 1925-1927, inclusive, with average for the period and high and low costs for 1927.
28. Iowa. Farm bureau federation. Iowa farm costs and incomes in 1923. Des Moines, 1924. 14p. 281 F222  
"This is a report on work conducted by the Iowa Farm Bureau Federation and the Iowa Experiment Station. It shows general financial statements, losses and gains, unit costs of important products, operating costs per acre for corn and oats, and man labor, horse, and tractor costs per hour on the basis of cost accounts kept each year since 1920 on about 20 farms in Marshall County, Iowa, and since 1921 on about the same number in Shelby County." -Experiment Station Record, v.53, p.687.
29. Iowa county cost route - 1926. Report No. 6. Small grain crops. 9p. Mimeographed. Pam. Coll.  
"It is the purpose of this report to give the more important data on the costs, yields and values of ... [oats, barley and wheat] on the Iowa County Cost Route for 1926. This includes twenty-two farms rather better than the average, which in 1926 kept complete cost records in cooperation with the Agricultural Economics Section



of the Iowa Agricultural Experiment Station and the Bureau of Agricultural Economics of the United States Department of Agriculture."

Wheat: table III, p.8.

30. Kennedy, E. E., comp. Iowa. The Corn Belt committee estimate of the average production costs of farm products for the state of Iowa... 9p. Mimeographed. Pam. Coll.

"This method of arriving at production costs unanimously approved by the Corn Belt Committee, December 21st, 1925, at Des Moines, Iowa. Submitted by the 'Committee to ascertain costs of production'----Milo Reno -- Chairman."

"Authorities":p.2,8-9.

Figures are given for corn, oats, wheat, hay, hogs, veal, wool, lambs, chickens, butter fat, and eggs.

#### Kentucky

31. Kentucky. Agricultural experiment station. Annual report, 38th, 1925, pt. 1. Lexington, 1926.

On p.8-9 is given a short report of a study of the effect of yield on cost of producing wheat. "These data were obtained in connection with cost studies in the Purchase Region of western Kentucky as to the effect of wheat yields and the average cost per bushel." The result is given in tabular form.

32. Nicholls, W. D. Low yields increase production costs. (In Southern Agriculturist, v.56, no.18, Sept. 15, 1926, p.7)

Includes a table "which shows the results from cost records kept under the supervision of the writer on the wheat crop on 19 farms in Western Kentucky in 1925."

#### Minnesota

33. Kennedy, E. E., comp. Minnesota. The Corn belt committee's estimate of the average production cost of farm products for the state of Minnesota... 8p. Mimeographed. Pam. Coll.

"This method of arriving at production costs of farm products was approved unanimously by the Corn Belt Committee and the twenty-four affiliated groups, December 21st, 1925, at Des Moines, Iowa... Submitted by Committee to ascertain cost of production."

"Authorities": p.8.

Cost data are given for wheat, corn, oats, barley, rye, buckwheat, flax, potatoes, hay, hogs, veal, other cattle, lambs, wool, poultry, butter fat, and eggs.

#### Missouri

34. Missouri. Agricultural experiment station. How the experiment station solves farm problems... Report... July 1, 1927, to June

30, 1928. Columbia, 1929. 95p. (Missouri. Agr. exp. sta. Bul. 272)

Table 8, p.24, shows in detail cost of producing wheat in Missouri during the year 1927.

A table showing cost summary of farm crops (1910-1927) in dollars per acre, which includes wheat, is given in the 1928/29 report (Bul. 285, p.29). Labor requirements for growing wheat are given on p.31.

A table showing cost of producing one acre of corn, wheat, and oats in Missouri for 1924 is given in the Report for 1924/25, p.68 (Bul. 236).

### Montana

35. Montana. Dept. of agriculture, labor and industry. Division of publicity. Montana, v.1, no.6, Apr. 1927. 68p. 252.49 M762

Table showing detailed average costs of producing wheat in the states of Montana, North Dakota, and Kansas, 1923 and 1924, p.31. Per acre and per bushel costs are given, also, for these states and for the United States.

36. Wilson, M. L., and Murdock, H. E. Reducing the cost of Montana's dry land wheat harvest. Bozeman, 1924. 53p. (Mont. State col. agr. and mechanic arts. Ext. serv. Bul. 71)

"This bulletin is not presented as a harvesting text book, for there are few if any recommendations of a direct nature. Rather it is an offering to the Montana dry land farmer of the various systems that some farmers have used in solving the problems of harvesting costs." -p.5. It is not a statistical bulletin.

### Nebraska

37. Kennedy, E. E., comp. Nebraska. The Corn belt committee estimate of the average production cost of farm products for the state of Nebraska... 8p. Mimeographed. Pam. Coll.

"This method of arriving at production costs was unanimously approved by the Corn Belt Committee and the twenty-four affiliated groups on the 21st day of December, 1925, at Des Moines, Iowa... Submitted by committee to ascertain cost of production. Milo Reno, Chairman."

"Authorities": p.8.

Cost data are given for wheat, corn, oats, barley, rye, hay, potatoes, sugar beets, hogs, veal, other cattle, poultry, butter fat, and eggs.

### New York

38. Warren, G. F., and others. Cost accounts for six years on some successful New York farms. Ithaca, 1923. 139p. (N. Y. Cornell. Agr. exp. sta. Bul. 414).

"Published records of farm business operations": p.138-139.

Table 88, p. 130-131, gives detailed costs per acre of producing and marketing wheat, 1914, 1915, 1916, 1917, and 1918, with average. Labor and material requirements, value and yield of grain, cost of production and marketing per bushel, etc., are also given.

A summary of averages, 1914-1920, for wheat is given on p.137. For distribution of labor on various crops see p.30-62.

#### North Carolina

39. North Carolina. Dept. of agriculture. Cooperative crop reporting service. Farm forecaster, no: 53, Apr. 1929. 44p. 2 N815F  
"Cost per acre of crops on North Carolina farms, 1926, 1927, and 1928": p.31. Detailed costs are given for corn, wheat, oats, potatoes, cotton, and tobacco.

#### North Dakota

40. Benton, A. H. Cash and share renting of farms. Agricultural College, 1924. 5lp. (N. Dak. Agr. exp. sta. Bul. 171)  
Costs of producing wheat, corn silage, potatoes and corn fodder and division of expense between landlord and tenant are tabulated. "Figures are based on cost of production data furnished by Rex E. Willard... and North Dakota Experiment Station Bulletin 165 - Cost of Production and Farm Organization by Rex E. Willard, Hutzler Metzger, and T. S. Thorfinson," published in 1922.  
For cost of producing wheat see p.17-20.
41. Kennedy, E. E. North Dakota. The Corn Belt committee's estimate of the production costs of farm products for the state of North Dakota... 8p. Mimeographed. Pam. Coll.  
"This method of arriving at the cost of production of farm products was unanimously approved by the twenty-four affiliated groups of the Corn Belt Committee, December 21st, 1925, at Des Moines... Submitted by the 'Committee to ascertain cost of production.' Milo Reno, Chairman."  
"Authorities:" p.8.  
Cost of production figures are for wheat, oats, corn, barley, rye, flax, hay, potatoes, hogs, veal calves, lambs, wool, chickens, butterfat, and eggs.
42. Kuening, A. C. Fact-finding for northwestern North Dakota farming - 1908-1924. Agricultural College, 1925. 36p. (N. Dak. Agr. exp. sta. Bul. 190)  
Data for wheat are given in tables 10, 12, and 14, p.34 and 36, which show labor requirements per acre and costs, profits, and losses in operation of irrigation demonstration farm unit, Williston substation, 1924.

43. North Dakota. Agricultural college. Farm management. Preliminary estimates on cost of producing wheat, rye, and flax for 1926. [Agricultural College] August 18, 1926. 4p. Mimeographed. Pam. Coll.

This publication was sent by Rex E. Willard, state agent in farm management. Comparative data are given for 1925.

The library has also a similar 3-page publication giving figures for 1924 and 1925.

44. North Dakota wheat growers association. Facts; Comparative statement, cost of production schedule, income schedule. Grand Forks, N. Dak., The North Dakota wheat growers association, 1926. 30p. 59 N813  
"Operating cost for an average 320 acre North Dakota farm, operating cost schedule, average of five year period 1920-24, inclusive:" p.10. Costs are given in detail.

45. Willard, R. E. Cost of producing crops in North Dakota. Fargo, 1926. 32p. (N. D. Agr. exp. sta. Bul. 199)

Table 1, p.14, Acre cost, yield per acre and cost per bushel of wheat, North Dakota, 1919, 1920, 1921, 1922, 1923, 1924 and 1925.

Table 9, p.17, Comparison of the costs per acre of wheat in North Dakota, 1919, 1920, 1921, 1922, 1923, 1924 and 1925.

Tables 12-14, p.20-21, Amount of various items of cost per acre of wheat in the Red River Valley, Central North Dakota, and in Northwestern North Dakota, 1921, 1922, 1923 and average. 1921 figures given for Southwestern North Dakota.

Table 30, p.32, comparative costs of production in various sections of North Dakota, 1921-1922-1923 for wheat, rye, flax, oats, barley and potatoes.

46. Willard, R. E. Estimate on cost of production. Records from 100 North Dakota farms on wheat, rye and flax. (In Dakota Farmer, v.44, no.19, Oct. 1, 1924, p.792)

Costs for 1924 with some comparative figures for 1922 and 1923.

47. Willard, R. E. What it costs to raise your wheat. (In Dakota Farmer, v.43, no.17, Sept. 1, 1923, p.742)

Estimate based on 122 records secured in 10 counties of North Dakota.

### Ohio

48. Falconer, J. I., and Dowler, J. F. Variations in costs of producing corn, wheat, and other crops in Greene county, Ohio. Wooster, 1926, p.231-284. (Ohio. Agr. exp. sta. Bul. 396)

Tables are given showing for each farm the man, horse, and tractor labor used per acre, the expenditures for labor, manure

and fertilizer, taxes, interest, seed, equipment, etc., the yield, and the total costs per acre and per unit of growing corn up to harvest, and of growing and harvesting wheat, oats, hay, clover and timothy pasture, and alfalfa hay. Data given are usually for the years 1920-1924. Standard labor requirements and units of materials used for production per acre are also given.

49. Morrison, F. L. Variations in crop production costs in Medina County, Ohio. Wooster, 1930. 52p. (Ohio. Agr. exp. sta. Bul. 453)  
Presents an analysis of the crop production costs of 35 farms in the east-central part of Medina County, Ohio. Cost records were collected during 1920-1924 and are for the following crops: corn for grain, corn for silage, oats, wheat, mixed clover and timothy hay, and timothy hay. Detailed per acre costs are given. Cost per unit is also given for each crop.

#### Oregon

50. Washburn, R. S., and Scudder, H. D. Cost of producing winter wheat and incomes from wheat farming in Sherman County, Oreg. Washington, 1927. 40p. (U. S. Dept. agr. Dept. bul. 1446)  
"The data on which this bulletin is based were obtained by personal interviews with actual farm operators in a study of the cost of winter wheat production and farm organization for 1920, 1921, and 1922." -p.3.  
Pages 11-20 deal with cost and utilization of important factors of production (man labor, horse work, and farm machinery). Pages 21-26 deal with average costs by tenure. Table 22, p.26, gives the estimated cost per acre and per bushel of producing winter wheat in 1923 and 1924.
51. Washburn, R. S., and Scudder, H. D. Cost of using horses, tractors and combines on wheat farms in Sherman County, Oreg. Washington 1926. 44p. (U. S. Dept. agr. Dept. bul. 1447)  
"The purpose of this study is to show what present owners and prospective purchasers of combines and tractors can reasonably expect in the way of costs of using combines, horses, and tractors, and to present some of the important points which should be considered in the selection of combines and the choice of motive power in a region of relatively large grain farms.  
"Data on which this bulletin is based were obtained by personal interviews with actual farm operators during a study of the cost of winter wheat production and farm organization for the calendar years 1920, 1921, and 1922." -p.1-2.
52. Washburn, R. S., Scudder, H. D., and Gunn, R. V. Cost of producing winter wheat and incomes from wheat farming, Sherman County, Oregon, 1920-1921. A preliminary report. Washington, D. C.,

U. S. Dept. of agriculture, Bureau of agricultural economics,  
Division of farm management and costs, May, 1923. 1lp. Mimeographed.  
1.9 Ec75W

Issued in cooperation with the Oregon Agricultural College.  
9 statistical tables are given.

53. Wheat growers economic conference, Moro, Oregon, 1926. Report.  
Corvallis, [1926] 7lp. (Oreg. Agr. col. Ext. serv. Ext. bul.  
391) 275.29 Or3

"Farm management group report": p.15-26. "All of the tabulated data in this report are taken from manuscripts by R. S. Washburn, United States Department of Agriculture, and H. D. Scudder, Oregon Experiment Station, reporting the Wheat Cost Survey in Sherman county, Oregon.

"This study shows the itemized and total costs of production of more than 3,800,000 bushels of wheat on 160,000 acres of wheat land during the three years 1920, 1921, and 1922. It shows the cost of every operation and differing method under every condition as to soil, topography, and rainfall, size of farm, equipment, yield, etc., of the section, and all the factors bearing on cost." -p.15-16.

Estimated cost figures are given for 1923 and 1924.

"World supply and demand group report": p.47-68. For approximate average cost of growing wheat per acre in 1923 in the Pacific Northwest, Alberta, Canada, and the soft red winter states (Missouri, Indiana, Kansas, Oklahoma) see p.53-54. Data were compiled from figures published by the U. S. Tariff Commission and the U. S. Dept. of Agriculture.

#### South Carolina

54. Jensen, W. C. Farm organization and cost of production on cotton farms in Anderson County, S. C. Clemson College, S. C. 10lp.  
(S.C. Agr. exp. sta. Bul. 221)

"This survey was planned with the hope of assembling, interpreting and presenting important facts and principles on the organization, management and practices on cotton farms in the Piedmont region of South Carolina.

"The principal objective in view was the study of economic factors involved in the operation of these farms with the purpose of providing fundamental facts and principles for determining the more profitable plans for farm organization under boll weevil conditions, under the labor, land and market conditions prevailing as well as under the climate and soil conditions existing in the area.

"It was the aim to analyze the individual enterprises as regards importance, cost of production and factors affecting costs. Cotton, corn, grain and hay were given most attention in this analysis.

"It was also desired to study each farm as a unit, making an inventory of all properties, listing the receipts and expenditures, and calculating the incomes.

"In addition, it was planned to make comparisons as to relative profitableness of the crops subsidiary to cotton." -p.2-3.

For costs of producing wheat, distribution of labor and relative profitableness of wheat as compared with oats see p.45-50,76,95.

55. Jensen, W. C. Farming for profits, Anderson and similar areas of South Carolina. Clemson College, 1926. 69p. (S. C. Agr. exp. sta. Bul. 230)

In cooperation with the Bureau of Agricultural Economics, U. S. Dept. of Agriculture.

Table 19, p.56, gives quantity input (labor requirements, seed, and fertilizer) and cost in dollars of one acre of wheat and cost per acre and per bushel, net returns per acre and per bushel, yield per acre, and price per bushel for wheat in 1924.

56. Jensen, W. C., and Russell, B. A. Piedmont farm business studies. Clemson College, 1930. 42p. (S. C. Agr. exp. sta. Bul. 264)

"In 1927, a detailed study of the costs, returns, and profits from farming in this typical Piedmont cotton area was made by the South Carolina Experiment Station. The present study is in reality a 'follow-up' study, since farm organization and cost-of-production studies had been made in Anderson county prior to 1927, and the results were summarized and published as Station Bulletins 221 and 230. This report points out the present status of farming in the area and indicates some of the recent developments in production." -p.6.

Table 12, p.39, gives requirements and costs of producing one acre of wheat on upper Piedmont farms studied, 1927-1928.

57. Robinson, F. H., and Jensen, W. C. An agricultural production, consumption, and marketing study in the Greenville, South Carolina, trade area. Clemson College, 1927. 83p. (S. C. Agr. exp. sta. Bul. 240)

Table 19, p.42, Costs, yields, and net returns above costs in the production of feed crops (corn, oats, wheat, cowpea hay, alfalfa hay) in the Anderson area in 1924.

Table 17, p.81, Cost of producing one acre of wheat in the Anderson area in 1924.

58. Russell, B. A. A study of economic conditions in the Lexington-Batesburg section of South Carolina. Clemson College, 1926. 36p. (S. C. Agr. exp. sta. Bul. 233)

"Enterprise analyses and costs": p.23-35.

On these pages are to be found tables giving detailed statistics of cost of producing one acre each of cotton, corn, wheat, oats,

cowpea hay, on farms in the Lexington area, in 1924; cost of developing one acre of asparagus to four years of age in the Ridge Springs Section, 1923 to 1925; cost of producing one acre of asparagus in the Ridge Springs Section, in 1925; cost of marketing a crate of asparagus in this section; cost of developing one acre of peaches to 4 years of age in the McBee area; cost of producing one acre of peaches, McBee area in 1925; and cost of keeping a mule on 55 farms in the Lexington area in 1924.

South Dakota

59. Benedict, M. R. A handbook on South Dakota farm production costs. Pierre, 1923. 40p. (S. Dak. Dept. agr. Circ. 4)  
1922 cost of production figures secured from Kingsbury County farmers for wheat, corn, oats, barley, potatoes, flax, rye, hay, pork, cattle, hogs, lambs, and wool.  
Costs of wheat production, 1922: p.6. High, low, and average costs per acre and per bushel, and labor and material requirements per acre are given, also South Dakota average yields and farm prices, annually 1913-1922, and acreage and production in the United States, annually 1913-1922.
60. Benedict, M. R., and Worsham, C. G. A handbook on South Dakota farm production costs and crop statistics. Pierre, 1924. 75p. (S. Dak. Dept. agr. Circ. 8)  
1922 and 1923 figures computed from the Kingsbury County cost route for the production of corn, oats, barley, potatoes, flax, rye, wild hay, alfalfa, pork, butter fat, poultry and eggs, beef, sheep, and wool.  
For cost of wheat production see p.16. Gives average, highest and lowest costs per acre, also cost per bushel, labor and material requirements, yield per acre, and average price received.
61. Bonnen, C. A. Preliminary report of the cost of producing farm products on 20 farms in Brown county, 1925. Brookings, South Dakota State college of agriculture and mechanic arts, Dept. of farm economics [1926] 22p. Mimeographed. 281 So8  
Issued in cooperation with the Bureau of Agricultural Economics, U. S. Dept. of Agriculture.  
"Cost of producing wheat (acre basis) - Brown county, 1925": p.6. Detailed costs, labor hours required, yield per acre, and number of acres are given for each of 20 farms.
62. South Dakota. Dept. of agriculture. Cost of production division. Annual report, January 1, 1923. [Pierre, 1923?] 52p. 2 So843  
Mimeographed.  
Wheat is among the crops for which cost of production and labor requirement data are given in detail. See p.7-8,15-24,27,29 for data from the Oldham route.



63. South Dakota. Dept. of agriculture. Report, 1924/25. [1925?] 34 p.  
2 So84B

"Annual report, Cost of production division, South Dakota Department of agriculture, covering the period January 1, 1925, to June 30, 1925, inclusive," - p.9-25.

Data are given for average cost of producing pork and beef, per cwt., potatoes, wheat, oats, corn, rye, alfalfa, wild hay, and barley per acre, 1922, 1923, and 1924; and cost of producing timothy seed, clover seed, alfalfa seed, sweet clover seed, spelt, silage, timothy and clover, flax, and corn fodder per acre, 1924.

64. South Dakota. Dept. of agriculture. Cost of production division. Annual report, January 1, 1925. [Pierre? 1925?] 20p. Mimeo-graphed. 2 So842

Preliminary figures showing the cost of producing wheat, cost route, Kingsbury County, for 1924 are given on p.10. Per acre costs are given in detail. Man, horse and tractor labor hours, yield, and cost per bushel are also given.

65. Worsham, C. G. Progress report on farm cost of producing crops and livestock in South Dakota in 1922. Pierre, 1923. 25p. Mimeo-graphed. (S. Dak. Dept. agr. Circ.7)

Average, highest, and lowest cost figures given for butterfat, pork, poultry and eggs, beef, corn, fodder, silage, oats, barley, wheat, rye, flax, potatoes, alfalfa, alfalfa seed, timothy and clover, timothy seed, clover seed, sweet clover, millet and wild hay, also cost of man labor and horse labor.

For cost of producing wheat see p.13-14.

#### Texas

66. Reynolds, E. B., and Killough, D. T. Crop rotation in the Blackland region of central Texas. College Station, 1927. 21p. (Tex. Agr. exp. sta. Bul. 365)

Table 11, p.18, shows gross returns per acre, total cost of production, net returns per acre, and gain per acre in favor of rotation over continuous for the crops in the different cropping systems for the six years 1916, 1919, 1920, 1921, 1922 and 1924. Crops are cotton, corn, oats and wheat.

67. Schwulst, E. B. Extension of bank credit. Boston and New York, Houghton Mifflin company, 1927. 357p. 284.2 Sch9

Appendix I, p.281, Cost of wheat production. Table gives cost of laying by, cost of harvesting and yield for Hale and Carson counties, Texas, 1921 and 1922. Another table gives for Central Texas cost of laying by, cost of harvesting, and yield, for 1922. Data are from financial statements of farmers.

Utah

68. Cardon, P. V. Cost reduction in dry-farming in Utah. Logan, 1930. 27p. (Utah. Agr. exp. sta. Bul. 215)

"Major economic influences, known to be affecting farming generally throughout the United States, are forcing the adoption of cost-reduction methods in dry-farming practice in Utah...

"It is with the more direct methods of cost reduction [in wheat farming] that the present study is concerned, that is, the more economical uses of labor and equipment. Less direct methods, being primarily agronomic, are considered herein only incidentally in connection with economic aspects,"-p.3.

Numerous tables and charts are given. See particularly table 14, p.24, Summary of Cost per Acre of Growing Wheat on Dry-land in Utah, as reported by different investigators, at intervals from 1906 to 1927.

Washington and Idaho

69. Cooper, H. R. Cost of wheat production and incomes from farming in eastern Washington and northern Idaho for the years 1919, 1920, and 1921. Preliminary report. Washington, 1923. 36p. Mimeographed. 1.9 Ec75Wh

U. S. Dept. of Agriculture, Bureau of Agricultural Economics, Divisions of Cost of Production and Farm Management in cooperation with Idaho and Washington State Colleges of Agriculture.

Thirteen statistical tables are given.

West Virginia

70. Dadisman, A. J. Organization and management of typical West Virginia farms. Morgantown, 1924. 75p. (W. Va. Agr. exp. sta. Bul. 187)

"About 25 records were obtained by personal visits to farmers during the summers of 1915 and 1923 with respect to the total cost of producing corn, oats, wheat, buckwheat, and potatoes for the previous years in Preston and Brooks counties. These are shown, and the distribution of man and horse labor on these crops in Preston County is presented graphically." - Experiment Station Record, v.52, p.589.

Wisconsin

71. Kennedy, E. E., comp. Wisconsin. The Corn belt committee's estimate of the average production costs of farm products for the state of Wisconsin... 8p. Mimeographed. Pam. Coll.

"This method of arriving at production costs of farm products was approved unanimously by the Corn Belt Committee and the twenty-

four affiliated groups December 21st, 1925, at Des Moines, Iowa. Submitted by the 'Committee to ascertain the Cost of Production.' Milo Reno, Chairman."

"Authorities": p.8.

Cost data are given for wheat, corn, oats, barley, rye, buckwheat, hay, clover seed, potatoes, tobacco, sugar beets, hogs, veal cutlets, average other cattle, wool, lambs, chickens, whole milk, and eggs.

### FOREIGN COUNTRIES

#### Argentine Republic

72. Cost of grain production in Argentina. A comparison. (In Review of the River Plate, v.65, no.1872, Oct. 21, 1927, p.23) 286.8 R32  
Summarizes statements made by Senor Esteban Placenza, President of the Federación Agraria Argentina, concerning cereal production costs in Argentina compared with other countries. Reasons are given as to why the cost is higher in Argentina, but no cost of production figures are given.
73. Farming conditions in Argentina. Improvement the first essential in any orderly scheme of national progress. (In Review of the River Plate, v.66, no.1925, Oct. 26, 1928, p.13, 15) 286.8 R32  
Contains a brief statement to the effect that "investigators appointed by the Ministry of Agriculture in early 1927 to get at the facts regarding the costs of grain production stated in their report that it cost \$10. to produce 100 kilos of wheat, \$12. to produce 100 kilos of linseed and \$4.50 to produce 100 kilos of maize."
74. Foreign crops and markets, v.6, no.11, Mar. 14, 1923, p.173-194.  
Issued by the Bureau of Agricultural Economics, U. S. Dept. of Agriculture.  
Cost of wheat production in Argentina 1922: p.179. This gives estimates of the cost on a farm of 395.36 acres, run on the share rental basis. The information was taken from a consular report dated Dec. 19, 1922.
75. Pfannenschmidt, Ernst. Die argentinische landwirtschaft ... nach dem todo des verfassers bearb. und statistisch ergänzt. Berlin, P. Parcy, 1926. 202p. (Der weltmarkt für agrarische erzeugnisse. Untersuchungen des Forschungsinstituts für agrar- und siedlungswesen zu Berlin. Hrsg. von M. Sering. Hft. 2) 13 G13A no.2  
Die gestehungskosten des ackerbaues: p.165-177. Wheat is included. A translation of this section is in files of the Division of Statistical and Historical Research, U. S. Bureau of Agricultural Economics.

Australia

76. Certain factors in production costs of wheat in South Australia. (In International Review of Agriculture, pt. 2, Monthly Bulletin of Agricultural Economics and Sociology, year 21, no.7, July, 1930, p.241-250) 241 In82  
This article is based on the following: Perkins, A. J. An enquiry into present day value of capital invested in South Australian wheat farming and its influence upon current costs of production, in Journal of the Department of Agriculture of South Australia, v.33, no.9, Apr. 1930; and Eighth annual report of the Turretfield demonstration farm, 1928-29, in Journal of the Department of Agriculture of South Australia, v.33, no.4, Nov.1929.
77. Crawford, W. Cost of wheat production. (In South Australia. Dept. agr. Journal, v.29, no.10, May, 1926, p.888-890) 23 So84  
Detailed estimates of costs and requirements for the production of wheat in South Australia based mainly upon actual experience are given.
78. New South Wales. Government statistician. The official yearbook of New South Wales, 1928-29. Sydney, Alfred James Kent, I.S.O., Govt. printer, 1930. 839p. 271.1 St20  
Cost of growing wheat in New South Wales: p.589-591. Gives a table which "provides an indication of the financial results of the operations of a wheat-grower cropping annually an area of 230 acres for grain and 20 acres for hay for horse-feed, under the conditions described." Figures are for 1925/26, 1926/27, 1927/28, and 1928/29.  
Earlier yearbooks should also be examined.
79. Perkins, A. J. Eighth annual report of the Turretfield demonstration farm (1928-29), including detailed analysis of farming costs. (In South Australia. Dept. agr. Journal, v.33, no.4-6, Nov.15, 1929-Jan. 15, 1930, p.282-295, 392-410, 488-498) 23 So84  
The cost of wheat growing at Turretfield: no.5, Dec.16, 1929, p.392-399.
80. Perkins, A. J. An enquiry into present day value of capital invested in South Australian wheat farming, and its influence upon current costs of production. (In South Australia. Dept. agr. Journal, v. 33, no.9, Apr. 15, 1930, p.772-800) 23 So84  
The determination of capital invested in agricultural undertakings and the part played by interest and depreciation on this capital in costs of production are studied in connection with Turretfield Demonstration farm and 129 South Australian wheat farms. The conclusion is that "given the means and ability to put into force the best farming practices, interest and depreciation charges

are not unduly heavy in productive, fertile areas; in the poorer class of country, on the other hand, whilst land values are low, interest on improvements and farm plant are frequently excessive at ruling rates for agricultural produce." - Agricultural Economics Literature, v.4, no.7, Sept., 1930, p.367.

81. Perkins, A. J. Seventh report of the Turretfield demonstration farm (1927-28), including detailed analysis of farming costs. (In South Australia. Dept. agr. Journal, v.32, no.3, Oct. 15, 1928, p.206-222; no.4, Nov. 15, 1928, p.304-324; no.5, Dec. 15, 1928, p.400-410) 23 So84

"A brief report of general agricultural conditions is followed by a detailed analysis of general expenses and of the cost of production of individual crops and of livestock." - Agricultural Economics Literature, v.3, no.5, May, 1929, p.188. Wheat is included in the crops for which costs are given.

82. Perkins, A. J. Sixth report of the Turretfield demonstration farm (1926-27), including detailed analysis of farming costs. (In South Australia. Dept. agr. Bul. 214, p.3-50) 23 So84B

Gives detailed statements of expenditures incurred in growing wheat, hay, cereal hay, oats, barley; and field peas, in raising sheep, pigs, and dairy cattle, and in keeping work horses. Data are mainly for the year 1926/27, although some earlier comparative data are given.

83. Richardson, A. E. V. The application of economic research to the agricultural industries. (In Economic Record (Australia) v.4, no.7, Nov. 1928, p.249-259) 280.8Ec4

Cost of production of farm commodities: p.253-255. This contains statistics from accounts of production costs from the Turretfield, South Australia demonstration farm (South Australia. Dept. agr. Bul. 214). Detailed figures for the cost of production of wheat, average of four years, are given.

84. Russell, Sir John. Farming in Australasia: its bearing on British farming. (In Journal of the Farmers' Club; part 2, Mar. 1929, p.21-30) 10 L84

This paper is accompanied by one table which shows the average cost per acre of producing wheat as given by the Primary Producers Association of Western Australia.

#### Belgium

85. Delos, Alb. Vie chère et coopération rurale. (In Annales Gembloux, 29 année, no.4, Apr.1923, p.97-126) 13 G28

"Comparisons are made between the costs of producing wheat and sugar beets in Belgium in 1912 and in 1922, and estimates of

the cost in 1922 of raising horses on the farm are given. Examples are also given indicating the profit to the producer of marketing livestock through cooperative packing houses. A number of typical cooperative abattoirs and sugar factories are discussed from the point of view of their rôle in the economic development of rural sections under the present conditions of high producing costs to the farmer." -Experiment Station Record, v.49, p.895.

Canada

86. Canada. Dept. of agriculture. Dominion experimental farms. [Reports] 1929. Ottawa, 1930. 101 Ex6R
- The reports for the year 1929 which contain cost of production statistics for wheat are listed below. Reports for previous years should also be examined for further data.
- Report of the Chief supervisor on the illustration stations in British Columbia, Alberta, Saskatchewan and Manitoba. (See various pages in the report.)
- Report of the Dominion field husbandman. (See paragraph on p.34.)
- [Report of the] experimental farm, Brandon, Man. (See p.20-22 for tables showing costs of producing wheat on summer-fallow, wheat following wheat, wheat after corn, and wheat after grass and clover.)
- [Report of the] experiment farm, Indian Head, Sask. (See p.26-27)
- [Report of the] experimental station, Kapuskasing, Ont. (See p.16-17 for cost of producing garnet wheat.)
- [Report of the] experimental station, Morden, Man. (See p.14 for a table showing cost per acre to produce wheat on bare summer-fallow).
- [Report of the] experimental station, Rosthern, Sask. (See p. 27 for table showing costs per acre producing wheat after fallow, wheat after wheat, wheat after hoed crop, wheat after rye crop, and wheat after sweet clover.)
- [Report of the] experimental station, Swift Current, Sask. (See p.5-7,18.)
87. Canada. Dominion bureau of statistics. Cost of grain production in Canada, 1923. Ottawa, 1924. 22p. 253 0332M
- "Partly reprinted from the Monthly Bulletin of Agricultural Statistics, June, 1924."
- Part of these statistics are reprinted in the Canada Year Book, 1924, p.264-266.
- The data in this report "consist of averages compiled from the returns of individual crop correspondents, who, reporting upon conditions in their respective districts, are themselves practical farmers." Detailed cost per acre data are given for spring wheat,

fall wheat, oats, rye, barley, corn and flax in Canada, and the various provinces and districts, for 1923. Per bushel costs are also given for Manitoba, Saskatchewan, and Alberta. Comparative per acre costs are also given for 1911 and 1913.

88. Canada. Dominion bureau of statistics. Cost of grain production in Canada, 1924. (In its Monthly Bulletin of Agricultural Statistics, v.18, no.204, Aug. 1925, p.240-253) 253 C332M

This report is similar to the one issued in 1923. The questionnaire used to obtain the data "was similar to that which was issued for the inquiry of 1924, except that the items of cost for seeding and cultivation were amalgamated instead of being required separately, and the inquiries respecting flax were limited to the three Prairie Provinces. A new item providing for the cost of hail insurance was added." Spring and fall wheat, oats, rye, barley, corn, and flax are the grains for which statistics are given.

89. Canada. Parliament. House. Select special committee to inquire into agricultural conditions. Proceedings (revised)... Ottawa, 1924. 2v. 31.2 C163P

V.1 Cost of production figures are given for: wheat in Manitoba, p.346-362; apples for 1922, p.464-473; apples in 1921, p.534-535; cherries and plums, p.496-497; hogs, 1920-1922, p.529-532; poultry and eggs, 1920-1921, p.517-521; milk, year ending May 1923, p.522-529; beef cattle, year ending May 1923, p.532-533.

Prof. Leitch gives some cost of production figures for 17 farms in Dufferin County for the years ending May 1921 and May 1922, p.507-516. The crops he mentions are: oats, mixed grain (for feed), spring wheat, barley, hay, roots, and potatoes.

90. Godfrey, E. H. "Canadian farming, with special reference to costs of production and conveyance of produce to English ports." (In Journal of the Farmers' Club, pt. 5, June, 1924, p.78-97; discussion on p.97-104) 10 L84

For costs of producing, transporting and marketing wheat see p.86-92.

91. Hopkins, E. S., Gosselin, A., and Armstrong, J.M. Cost of producing farm crops in eastern Canada. Ottawa, 1929. 48p. (Canada. Dept. agr. Bul. 115, new series) 7 C16B

After a study of cost of production factors the writers present data which show the cost of producing various crops. For cost of producing barley and wheat see two paragraphs on p.15.

92. McKillican, W. C. Experiments with wheat at the Dominion experimental farm, Brandon, Manitoba; a summary 1889-1923. Ottawa, 1924. 55p. (Canada. Dept. agr. Bul. 42, new series) 7 C16B

On p.53 and 54 there are tables giving detailed statistics on the cost of growing wheat on summer fallow, 1894, 1914, and 1923, and cost of growing wheat on stubble land fall ploughed, 1923.

China

93. Swen, W. Y. A study of types of farming, costs of production and annual labor distribution in Weihsien County, China. Nanking, China, The University of Nanking, College of agriculture and forestry, 1928, p.641-681. Pan. Coll.  
Reprinted from the "Chinese Economic Journal" August, 1928. "References"; p.681.  
"This study of types of farming in Weihsien County has been conducted with the co-operation of the Agricultural Department of the Presbyterian Mission (North) at Weihsien. Mr. A. L. Carson, the agriculturist in charge, together with Mr. Yen, his assistant, were responsible for introducing the writer to farmers who were already friends of the Mission. In this way suspicion on the part of the farmers was obviated. Data on cost of production and distribution of labor for the various crops were obtained from twenty-four farmers. Other information was obtained by questioning farmers and by observation of conditions. The data pertain to the year 1924." -p.642.  
Tables 4 and 5, p.664, show quantity requirements per mou for production of wheat, kaoliang, millet, yellow soybeans, sweet potatoes, and tobacco, and costs, receipts and net profits per mou for the same crops. Tables and charts showing cost of production per unit, profits per man-work unit, semi-monthly distribution of total man labor by hours and of animal labor by hours, a comparison of costs and receipts, etc., for these crops are given on p.665-680.

Czechoslovak Republic

94. Hartmann, Joe. The Czechoslovak sugar industry; its situation in relation to crop restriction proposals. (In Facts About Sugar, v.26, no.1, Jan.1931, p.7,39) 65.8 F11  
Includes statistics showing the cost of producing and the gross returns from one hectare of sugar beets compared with the cost of producing and the gross returns from one hectare of wheat.

England

95. Carslaw, R. McG. Four years' farming in East Anglia, 1923-1927. Being a detailed investigation of the costs and returns on twenty-six farms. Cambridge, 1929. 125p. (Cambridge Univ. Dept. agr. Farm economics branch. Rept. 12) 281.9 C14  
This report, which is a supplement to the series of "interim" reports (some of which are listed below) is presented as "a complete analysis of the results of four years' activity on what there is little reason to doubt are representative farms well distributed throughout the five million acres that comprise the Eastern Counties Province."



For wheat see p.50-53,110,111, and the Index.

"Interim" reports in this series which contain data on wheat are as follows:

Report No. 1: An economic and financial analysis of fourteen East Anglian farms in 1923-24, by J. A. Venn.

Report No. 2: An economic and financial analysis of six Eastern counties farms in 1924-25, by J. A. Venn and R. McG. Carslaw.

Report No. 3: An economic and financial analysis of fifteen East Anglian farms in 1924-25, by J. A. Venn and R. McG. Carslaw.

Report No. 4: An economic and financial analysis of seven Eastern counties farms in 1925-26, by J. A. Venn and R. McG. Carslaw. 1926.

Report No. 6: An economic and financial analysis of thirteen East Anglian farms in 1925-26, by J. A. Venn and G. G. Gianetti. 1927.

Report No. 8: An economic and financial analysis of seven Eastern counties farms in 1926-27, by R. McG. Carslaw and G. G. Gianetti. 1927.

Report No. 10: An economic and financial analysis of fifteen East Anglian farms in 1926-27, by R. McG. Carslaw and W. H. Kirkpatrick. 1928.

Report No. 11: An economic and financial analysis of five Eastern counties farms in 1927-28, by R. McG. Carslaw and W. H. Kirkpatrick. 1928.

96. Oxford, University. Agricultural economics research institute. Occasional notes, v.1, no.11, July, 1930. 11p. 281.90X20  
Wheat costs and returns, Oxford and Northants Province, 1925-1928, signed by R. T.: p.3-5. Includes two tables which show costs and returns of wheat on three farms, 1925,1926,1927, and 1928, and net cost of wheat and price received per cwt. for wheat for the same years for a larger number of farms.
97. Reid, J.W. Cost accounts on an institute farm. (In Great Britain. Ministry of agriculture. Journal, v.36, no.1, Apr. 1929, p.39-44)  
This is a summary of cost accounts kept at the Institute farm for 1923-1926, complete and detailed records for which have been published in Bulletin 4, Herts Institute of Agriculture, Oaklands, St. Albans, December 31, 1927.  
Three paragraphs on cereal (wheat, barley, oats) costs are given on p.40-41.
98. Ruston, A. G., and Anderson, O. Farm profits and farm losses; six years' financial records of Yorkshire farms. Leeds, 1928. 47p. (University of Leeds and the Yorkshire council for agricultural education [Publications] 155) 103 Y8G

The subjects of the five chapters, or sections, of this publication are: Introduction; Variations in yearly financial results; Factors influencing these yearly variations; What makes for success; and Where has success been found?

Included in the statistical data are cost per acre figures for potatoes, carrots, wheat, barley, oats, and roots.

99. Thomas, Edgar, and Blagburn, C. H. Economic and financial results on three arable-sheep farms, 1924/25, 1925/26, 1926/27. Reading, 1928. 38 p. (Reading Eng. University college. Faculty of agriculture and horticulture. Accounting studies 1 - Bul. 36)  
103 R223

Table 10, p.23, shows prime costs, returns, and surpluses per acre of wheat, barley, and oats, on three different farms for 1924, 1925, 1926, and average.

Table 11, p.25, shows average prime costs per acre of wheat, barley, and oats, 1924-27.

100. Whetham, C. D. The economics of agriculture with special reference to the lag between expenditures and receipts. (In Royal agricultural society of England. Journal, v.85, 1924, p.122-159)  
10 R81

"The problem I have set myself is to find a real if approximate value for what I propose to call the 'economic lag' of different kinds of farming": p.123. This article is illustrated by tables and diagrams showing increase in prices of produce from arable land and grass-land and increase in costs of production on an arable farm and on grass land compared with the average of the three years 1911-13 (1) as a percentage, and (2, in italics) as weighted for the fraction of the total sales and costs represented by each commodity. Years covered are 1914-1924.

Appendix 1, The Normal Economic Lag, gives the "economic lag" in detail for root crops, barley, oats, seeds hay, wheat, grass, meadow hay, sheep, milk, bullocks, and pigs. Poultry and eggs are also included but no details are given.

101. Wyllie, James. Investigation into farming costs of production and financial results. VI. Corn growing: costs of production and financial results. Wye, Kent, n.d. (Wye, Kent. South-eastern agricultural college, Dept. of economics. Report no.6) 280.9 W97  
Data are given for wheat, barley, oats, beans, peas, and mixed corn for 1924, 1925, and 1926.

#### France

102. Faugeras, J. Analysis of the different operations in growing wheat after sugar-beet.... [Paris, 1929] 9[1]p. Mimeographed. Pam.Coll.  
Prepared for the Fourth International Conference of Scientific Management held in Paris in June, 1929.  
Last page is a Table of Units.

Germany

103. Cost of labour in German agriculture. (In International Labour Review, v.22, no.1, July, 1930, p.81-84) 283.8 In8

This is a summary of the material on cost of agricultural labor in relation to total costs of agricultural production as given in a series of reports on German agriculture issued by the Agricultural Sub-Committee of the Commission to Enquire into Conditions of Production and Marketing of German Industry (Ausschuss zur Untersuchung der Erzeugungs- und Absatzbedingungen der deutschen Wirtschaft).

A table shows average costs of production and of labor per hectare on various groups of farms (cereal, green-crop, sugar beet) in Germany.

India

104. Patil, P. C., Shirmane, T. G., and Pawar, T. B. Studies in the cost of production of crops in the Deccan. No.1 - Crops in the neighbourhood of Poona. Poona, 1928. 70p. (India, Bombay presidency. Dept. agr. Bul. 149 of 1927). 22 B63B

A mimeographed notice bound with the bulletin is to the effect that Bulletin No. 149 of 1927 "has been withdrawn from the official list."

Tables showing cost of production of wheat, 1925/26: p.54-55.

Irish Free State

105. Adams, J.M. Farm costings. (In Irish Free State. Dept. lands and agr. Journal v.24, no.4, Feb. 1925, p.351-373) 10 Ir2J

This consists of "extracts from the public evidence given before the Agricultural Commission by Mr. J. M. Adams, Department of Agriculture." Products for which cost of production data are given are oats, wheat, and barley (grain and straw), hay, potatoes, flax, and milk, for 1914, 1920, and 1922. Other cost data are also given.

Mexico

106. Mexico. Secretaria de agricultura y fomento. Perspectiva para las explotaciones agricolas-ganaderas en el distrito federal. Mexico, Talleres graficos de la nacion, 1925. 25p. 31.5 M572

This contains various tables in which are to be found cost of production "por tonelada" of alfalfa, cost of production "por hectolitro" of Indian corn, wheat and barley, cost of maintaining a milch cow for one day, and the cost of producing an egg (detailed).

Palestine

107. Pinner, Ludwig. Wheat culture in Palestine. Tel-Aviv, 1930. 123p. (Palestine economic society. Bul., v.5, no.2, Aug. 1930) 280.9 F17B

This is "the first and more general part of a monograph on The Wheat of Palestine which is to be published in full by the Agricultural Experiment Station of the Jewish Agency."

"Cost of production and estimate of profits": p.63-71. Two tables show expenditures and receipts of the fellah on 1 hectare of wheat. Net income is also given.

108. Wilkansky, Yizhak. The transition from primitive to modern agriculture in Palestine, by I. Elazari-Volcani [pseud.], Tel-Aviv, 1925. 52p (Palestine economic society. Publications IV) 280.9.P17

Also published as Bulletin of the Palestine Economic Society, v.2, no.1, June, 1925 (280.9 P17B)

"This essay was delivered as an address to the Palestine Economic Society and contains the substance of my works 'Baderech' and 'Midoth', and is meant to serve as an introduction to a new book dealing with certain problems in more detail." -p.2.

Table showing average costs of production of summer [maize, sesame, sunflowers, and pumpkins] and winter [vetch for hay, cereals, beans, linseed, clover, and stock beets] crops per ha in L.E.: p.42.

#### South Africa

109. Cost of wheat production. Result of an independent investigation. (In South Africa. Dept. agr. Journal, v.12, no.2, Feb.1926, p.176-180). 24.Un3

Brief account of an investigation conducted by Dr. Carel Potgieter on the returns of 1922 and 1923, particularly.

Includes a graph showing comparative costs of production in Swellendam, Caledon, Eredasdorp, Malmesbury, Piquetberg, Moorreesburg, the Cape, and the Free State.

#### Spain

110. Herce, P. Coste de produccion del trigo en Guadalajara (Spain) (In "Informe remitido a la Comision provincial, pp.4-5. Guadalajara 1928")

An abstract of this article is given in International Review of the Science and Practice of Agriculture, new series, v.1, no.1, Jan.-Mar. 1923, p.199-201. (241 In32)

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