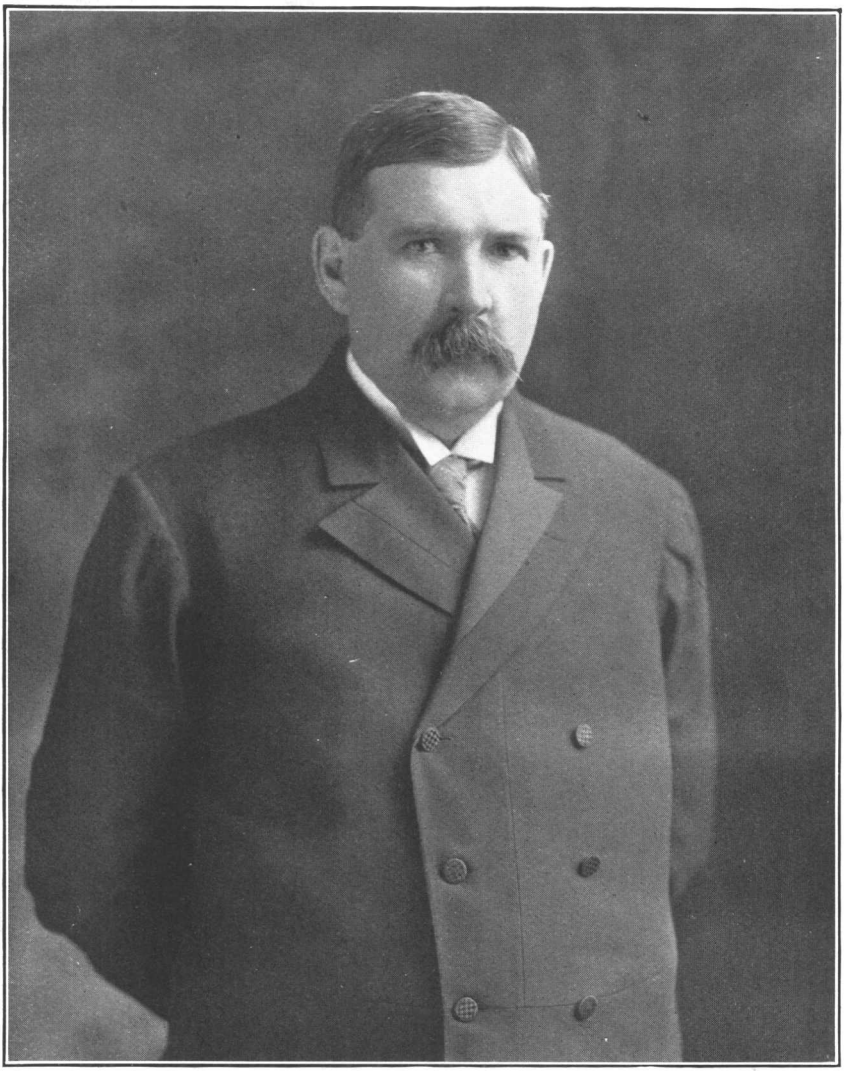

JONATHAN PRENTISS DOLLIVER, OF IOWA.

BORN NEAR KINGWOOD, PRESTON COUNTY, VA. (NOW WEST VIRGINIA), FEBRUARY 6, 1858.

DIED AT FORT DODGE, WEBSTER COUNTY, IOWA, OCTOBER 15, 1910.

Senator Dolliver represented the Tenth Congressional district of Iowa in the Fifty-first, Fifty-second, Fifty-third, Fifty-fourth, Fifty-fifth, and Fifty-sixth Congresses; was appointed United States Senator August 23, 1900, to fill the vacancy caused by the death of Hon. J. H. Gear; elected to succeed himself January 21, 1902, and reelected in 1907. His term would have expired March 3, 1913. Senator Dolliver succeeded, upon the retirement of Senator Hansbrough, to the chairmanship of the Senate Committee on Agriculture and Forestry, which position he held at the time of his death and filled with great acceptability to the Congress, the Department, and the country.

YEARBOOK

OF THE

UNITED STATES DEPARTMENT OF AGRICULTURE.

1910.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1911.

[CHAPTER 23, Stat. at L., 1895.]

[AN ACT Providing for the public printing and binding and the distribution of public documents.]

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Section 73, paragraph 2:

The Annual Report of the Secretary of Agriculture shall hereafter be submitted and printed in two parts, as follows: Part One, which shall contain purely business and executive matter which it is necessary for the Secretary to submit to the President and Congress; Part Two, which shall contain such reports from the different Bureaus and Divisions, and such papers prepared by their special agents, accompanied by suitable illustrations, as shall, in the opinion of the Secretary, be specially suited to interest and instruct the farmers of the country, and to include a general report of the operations of the Department for their information. There shall be printed of Part One, one thousand copies for the Senate, two thousand copies for the House, and three thousand copies for the Department of Agriculture; and of Part Two, one hundred and ten thousand copies for the use of the Senate, three hundred and sixty thousand copies for the use of the House of Representatives, and thirty thousand copies for the use of the Department of Agriculture, the illustrations for the same to be executed under the supervision of the Public Printer, in accordance with directions of the Joint Committee on Printing, said illustrations to be subject to the approval of the Secretary of Agriculture; and the title of each of the said parts shall be such as to show that such part is complete in itself.

PREFACE.

The Yearbook for 1910 closely follows, in the main, the style and character of its predecessors. The tendency to increase the size of the volume has been as vigorously resisted as possible, considering the excellent material available for use. This volume has been prepared in the usual way, which is as follows: Early in June the Secretary calls upon each chief of bureau, division, or office to furnish titles of articles, from which, early in July, he selects those which seem to him most timely and interesting, and authorizes the preparation and submission of the manuscripts not later than December 1 for examination and publication, if found available for such use. Then follow the editing, selection of illustrations, proof reading, indexing, and finally the distribution, which now begins early in May. During a considerable portion of the year, therefore, the Yearbook is in course of preparation or distribution.

This volume contains 28 articles, including a wide range of subjects, each closely related to or describing some line of work of the department. Both in the nature of the articles presented and in the manner of treating the subjects the controlling idea has been that of practical utility, while the statements are as brief and couched in language as simple as possible.

The statistical tables with which the Appendix closes present the domestic production, prices, and commercial movement of the principal crops and farm animals with greater fullness than heretofore, and in the tables for world's production all the improvements of last year's volume are retained. The statistical tables represent a work of great magnitude, and have required considerable time for the collection of data and for tabulation after the close of the calendar year.

An appreciation of the true meaning of statistics requires that they shall be regarded as round numbers, however accurately expressed on paper. The degree to which statistical items should be rounded depends upon the size and nature of the item. In making up the table showing the production of wheat in the United States it is found advisable, for the sake of accuracy, to use 1,000 bushels as the unit of measurement; but in comparing the entire crop of one year with that of another, a simple and accurate method is to take 1,000,000 bushels as the unit of measurement; thus, the crop of 1910

amounted to 695 million bushels, as compared with 730 million bushels the year before. The same principle applies to the use of other statistics.

The sources of the figures contained in this book are the most trustworthy to be had. Production, acreage, and farm prices were computed from reports made to this department by thousands of regular correspondents, scattered throughout the country. Exports and imports of the United States are taken from reports of the Department of Commerce and Labor, which in turn compiles its data from sworn statements made by persons who export or import, and statistics relating to foreign countries are taken from their official publications (except in a few instances where none are available) and reduced to United States units of weight and measurement.

The review of the weather conditions for the year covered by the volume has been greatly condensed, but it is believed that it will meet the requirements of all those accustomed to consult the Appendix of the Yearbook for such information.

The illustrations in the volume comprise 31 text figures and 49 full-page plates, 8 of the latter being colored.

The portrait of Hon. Jonathan Prentiss Dolliver, distinguished as a Representative and afterwards as a Senator in Congress from Iowa, has been selected as a frontispiece. Because of the conspicuous services rendered to agriculture by Senator Dolliver during his public career, recently terminated by death, the selection will be appreciated by the friends of agriculture throughout the country.

JOS. A. ARNOLD,
Department Editor.

WASHINGTON, D. C., *April 20, 1911.*

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YEARBOOK

OF THE

U. S. DEPARTMENT OF AGRICULTURE.

REPORT OF THE SECRETARY.

Mr. PRESIDENT:

I respectfully present my Fourteenth Annual Report, covering the work of the Department of Agriculture for the year 1910.

AGRICULTURAL PRODUCTION OF 1910.

HIGHEST VALUE EVER REACHED.

PROSPERITY MAINTAINED.

Year after year it has been my privilege to record "another most prosperous year in agriculture." Sometimes the increased prosperity has been due to weather unusually favorable to agriculture, sometimes to higher values caused either by a greater yield or demand, or by greater money returns due to a scant production; but usually the advance in farmers' prosperity has been in spite of various drawbacks. It would seem that this country is so large in extent and has such varied climate, soil, and crops that no nation-wide calamity can befall its farmers. Combined with this strong position in agriculture, the Nation may now begin to derive increased confidence in its agriculture because of improvements that are permeating the whole country in consequence of a grand movement sustained by the National Department of Agriculture and the various state agencies.

VALUE OF ALL PRODUCTS.

Nothing short of omniscience can grasp the value of the farm products of this year. At no time in the world's history has a country produced farm products within one year with a value reaching $8,926,000,000, which is the value of the agricultural products of this country for 1910. This amount is larger than that of 1909 by $305,000,000, an amount of increase over the preceding year which is small for the more recent years.

The value of farm products from 1899 to the present year has been progressive without interruption. If the value of that census year be regarded as 100, the value of the agricultural products of 1900 was 106.4; that of 1901 was 112.7; that of 1902 was 119.1; that of 1903 was 124.8; that of 1904 was 129.8; and that of 1905 was 133. The year 1906 was an extraordinary one for agriculture, both in quantity and in value of production. The value increased to 143.4, as compared with 100 representing 1899. In the next year, 1907, the value of agricultural products rose to 158.7; in the next year, 1908, to 167.3; in 1909 to 182.8; and in 1910 to 189.2, or almost double the value of the crops of the census year eleven years preceding. During this period of unexampled agricultural production, a period of twelve years during which the farmers of this country have steadily advanced in prosperity, in wealth and in economic independence, in intelligence and a knowledge of agriculture, the total value of farm products is $79,000,000,000.

CHIEF CROPS.

In the statement that follows concerning the crop quantities and values for 1910, no figures should be accepted as anticipating the final estimates of this Department to be made later. Only approximations can be adopted, such as could be made by any competent person outside of this Department. All values are for products at the farm, unless otherwise stated, and in no item are values at the produce or commercial exchange.

CORN.

A National asset amounting to 3,000 million bushels, worth 1,500 million dollars, is found in the corn crop. Its production this year was 3,121,381,000 bushels, a crop that exceeds that of even the great agricultural year 1906. It is greater than the average crop of the preceding five years by 14 per cent.

A notable feature of corn production this year is the growing importance of the South. This has been manifested in a small way in very recent years, but now the increased magnitude of the crop in that section, both absolute and relative to National production, forces itself upon the attention.

Let a comparison be made with corn production in the South in the census year 1889, or twenty-one years ago. At that time the South Atlantic States produced only 6.2 per cent of the National crop of corn. This year they produced 9.1 per cent, or an increase relatively of about one-half. The relative increase for the South Central States is even greater, being from 14.8 per cent of the National crop of 1889 to 23.4 per cent in 1910. Then the South produced hardly more than one-fifth of the National crop; now it produces one-third.

The power that this increased corn production gives to southern farmers with respect to independence, release from buying feeding stuffs, in producing meat, and maintaining dairy and other domestic animals is well understood.

While the value of this corn crop is below that of 1909 and also of 1908, its amount belongs to stories of magic. It can hardly be reckoned at less than $1,500,000,000, a sum sufficient to cancel the interest-bearing debt of the United States, buy all of the gold and silver mined in all of the countries of the earth in 1909, and still leave to the farmers a little pocket money.

The corn crop is a National asset in more than one sense. It is not merely wealth in existence for the time being, but it is an asset of perpetual recurrence. Year after year, throughout the ages, a stupendous amount of corn, with incredible value, can be produced.

The cotton crop, including seed, is worth this year only three-fifths of the value of the corn crop; the wheat crop only two-fifths; the hay crop, less than one-half. All of the cereals, except corn, are together worth only three-fourths as much. The great allied iron and steel industries had in the latest census year for which results have been published, 1904, a production worth only 60 per cent of the value of this year's corn crop.

COTTON.

For many years the cotton crop was fourth in value among the crops, being exceeded usually by corn, wheat, and hay. But in those days the price of cotton was very low. The crop of this year may be worth in lint and seed a round $900,000,000 at the farm, or more than the corn crop was worth in any year prior to 1901, or more than the wheat or hay crop was ever worth.

Apparently the cotton crop of this year, including seed, is worth $129,000,000 more than the crop of last year, and that crop was far above any previous one in value. During the last five years the cotton crop had an average value of $685,000,000, so that the value for this year is 13 per cent above the five-year average.

The number of bales in this year's cotton crop will be determined by the Bureau of Statistics of this Department in December, and at the present writing no forecast of that estimate can be suggested. From commercial sources, however, it is evident that the cotton production of this year will be considerably short of being a record breaker, although possibly it may be the fourth in order of magnitude that this country has produced.

The average cotton crop of the preceding five years had a weight which perhaps is not far from most of the commercial estimates for the crop of this year.

HAY.

Wheat has often contended with hay as to precedence in value and the place in 1910 goes to hay, notwithstanding its short crop. The value of the hay crop is about $720,000,000, an amount which has been exceeded but once, and that in 1907, when the crop was worth $744,000,000. Indeed, the value of the crop of this year is much above that of the high crop values of other preceding years, illustrating the principle that a somewhat deficient crop is usually worth more in the aggregate than an abundant one. The value of the crop of this year is 13 per cent above the average of the preceding five years.

The quantity of the hay crop is 60,116,000 tons, and has been exceeded a dozen times. It is 5 per cent below the average crop of the preceding five years. The feeding value of the hay crop, however, is greater than its tonnage implies. Alfalfa has entered into the production of this crop in recent years and has now become in itself a crop of large proportions.

In relative geographic distribution, the hay crop has changed perceptibly during the twenty-one years since the census year 1889. During the interval the North Atlantic States have increased their production of the National crop from 24.3 to 27.8 per cent; the Western division, 7.9 to 16.4 per cent; the South Atlantic, from 3.1 to 3 9 per cent; the South Central, from 3.3 to 5.8 per cent; the two southern groups of States, from 6.4 to 9.7 per cent; and consequently, the North Central States have lost relatively in a marked degree, or from 61.4 to 46.1 per cent of the National crop.

WHEAT.

Fortunately the wheat crop is divided into two sowings, autumn and spring, and consequently it is not improper to regard wheat as having two crops. These to some extent cover the same territory, but they belong largely to different geographic areas, subject to different climatic accidents, with the frequent result that one of the crops is a successful one and the other is not. Such was the fact this year, when the winter crop was a large one and the spring-sown crop suffered from severe drought.

The production of both crops this year is 691,767,000 bushels, or substantially the average of the preceding five years, whereas the value is about $625,000,000, or 7.6 per cent above the five-year average.

The quantity of this year's wheat crop has been exceeded four times, but the value has been exceeded only once, in 1909, although the crop of 1908 was nearly as valuable.

Wheat is another crop that has undergone perceptible change in relative geographic distribution since the census year 1889, but in a less degree than corn and hay. During the twenty-one years the fraction of the National crop produced in the North Atlantic States declined from 6.8 to 5.9 per cent; in the North Central States, from 68.6 to 62.9 per cent; whereas there were increases in the other geographic divisions—from 5.9 to 6.6 per cent in the South Atlantic; from 5.2 to 9.7 in the South Central; and from 13.5 to 14.9 in the Western States.

OATS.

Easily the fifth crop in point of value is oats, a position that it has long occupied. The value this year is probably over $380,000,000, and has been exceeded in this respect only by the crop of 1909. Compared with the average value of the five preceding years, this year's value is 12 per cent greater.

In quantity the crop of this year is a magnificent one. For the second time in the history of this country the crop exceeds one billion bushels, the precise estimate standing at 1,096,396,000 bushels, or about 90 million bushels above the great crop of 1909. The crop of this year is 22 per cent greater than the average of the five previous years.

The production of this crop has shifted somewhat into the South Central and Western States in comparison with the National production since 1889. The share of the North Atlantic States has declined from 10.8 to 8.6 per cent; of the South Atlantic States, from 2.9 to 2 per cent; of the North Central States, from 79.7 to 77.2 per cent; the South Central States gained the difference between 4.7 and 6.5 per cent; the Western States the difference between 1.9 and 5.7 per cent.

POTATOES.

Next in order of value is the potato crop, which was exceeded in only two or three former years. Compared with the average value of the five previous years, the value for this year is 1 per cent greater. With the exception of the crop of 1909, which was in a degree an overproduction, the crop of potatoes this year was the largest ever grown in this country, the preliminary estimate of this Department being 328,787,000 bushels. This quantity is 8 per cent greater than the average for the preceding five years.

SUGAR.

Beet-sugar production in 1910 has been subject to vicissitudes of climate and other influences. A smaller acreage of sugar beets was planted in Colorado; there was a lack of moisture necessary to a full

crop in Utah and Idaho; whereas the production of California, Michigan, Wisconsin, and other States considerably exceeds that of last year, partly due to three new operating factories. Five new factories will be in operation in 1911—two in California and one each in Colorado, Utah, and Nevada. All acreage planted this year returned beets excellent in both quality and quantity.

It is too early now to forecast accurately the production of beet sugar for 1910, but the indication is that the crop will be about as large as that of 1909, or, say, 512,000 short tons. The factory value of this sugar is about $51,000,000, or hardly less than the value of the crop of 1909, which was the record year.

Commercial estimates indicate that the cane-sugar crop of this year will be about 347,000 short tons, which has been frequently exceeded in recent years. The factory value of this sugar is about $28,000,000, an amount that has been exceeded in four years.

If prospects are realized, the entire sugar crop of factory production, beet and cane combined, will be about 859,000 short tons, or a production that has been exceeded in only one year, 1909. In factory value the two sugar crops will equal about $79,000,000, and if to this be added the value of molasses, sirup, beet pulp, and sorghum and maple products, the combined value of the production of sugar, sirup, and molasses, with subsidiary products, is about $97,000,000, or only $4,000,000 under the high-water mark of 1909.

TOBACCO.

The tobacco crop has slightly exceeded the production of the record year 1909, and its 967,150,000 pounds are 26 per cent above the average production of the five preceding years.

Apparently the tobacco prices of 1909 are barely maintained for the crop of this year, and the total value of the crop is therefore about the same as it was for the crop of 1909, or, say, $95,000,000. No tobacco crop previous to 1909 was worth its amount by fully 20 million dollars.

Tobacco, under the better prices of recent years, is steadily climbing upward in production. The average prices for the last five years, including 1910, have been 10 cents a pound and a little better. It seems to be required that the average price of the crop, all types and grades included, shall not decline if this crop is to maintain its increasing production.

BARLEY.

Barley this year has hardly maintained the average production of the preceding five years, the production of this year being 158,138,000 bushels, as compared with the five-year average of 161,240,000.

This year's crop, however, has been exceeded only three times, in 1909, 1908, and 1906.

In point of value the crop of 1910 has been exceeded only in 1907, and the value of this year is 16 per cent above the average of the previous five years.

The price of barley suddenly increased about 60 per cent, to 66.6 cents in 1907, after which it declined to about 55 cents a bushel in 1908 and 1909; but a higher price than this is indicated for the crop of this year.

In relative geographic redistribution of the barley crop since 1889, the share of the North Atlantic States has declined from 12.2 to 2 per cent, while the share of the North Central division of States has increased from 60.3 to 62.8 per cent, and that of the Western States from 26.9 to 34.4 per cent.

FLAXSEED.

Flaxseed follows barley in order of importance of value of crop. At this writing the indication is that the value of the flaxseed production of this year will be about $33,000,000, which would be the record amount were it not for the greater value of the crop of 1909. Compared with the previous five years, the value of this year's crop is 13 per cent greater.

While the value of this year's crop remains near the top, the production is far below that of recent years, the preliminary estimate being 15,050,000 bushels.

The low production and high value of the flaxseed crop are reconciled in the high price of flaxseed per bushel beginning early in this year. The November 1 price at the farm in 1908 was $1.08; in 1909, same month, $1.40; and in 1910, same month, $2.29.

RYE.

Next in order of value is the rye crop, the 32,088,000 bushels being worth at the farm about $23,000,000. This crop is constant in production and varied little in value in recent years. A larger share of the National crop is now produced in the North Atlantic States than in 1889, the increase being from 28.4 to 33.9 per cent. During this time the North Central States have declined in their share from 63.2 to 57 per cent.

RICE.

Rice production in 1910 remains substantially at the figure of 1909, or, say, a little over 1,000,000,000 pounds of rough rice. No year previous to 1909 produced as large a crop; it exceeds the average of the previous five years by 25 per cent.

The price of rice, however, has declined, so that the crop of this year is worth hardly $16,000,000, or about the same as the crops of

1906 and 1907. This value has been exceeded in 1908 and 1909, so that the value of this year's crop is about 2 per cent below the five-year average.

HOPS.

The estimates of persons outside of this Department indicate that the hop crop of this year will be 13 per cent below the average quantity of the preceding five years, and the smallest crop in a dozen years or more. The farm price of hops in 1910 has improved somewhat over the average of the previous five years, so that the total value of the crop of this year is 3 per cent above the five-year average.

ALL CEREALS.

For transportation purposes and as a rough indication of the production of all cereal crops, a statement of the total production of these crops in bushels is interesting. In no previous year has the production of these crops equaled the 5,140,896,000 bushels of the cereals of 1910. The production of this year is 13 per cent above that of the five-year average, which is about 4½ billion bushels.

In value, however, the cereals of this year fall below that of 1908 and 1909, principally on account of the decline in the farm price of corn. This year's value is $2,710,000,000, or about $230,000,000 below the total for 1909 and $50,000,000 below that of 1908; however, it is 11 per cent above the five-year average.

SUMMARY OF COMPARISONS.

This is the year of highest production for corn, oats, the total of all cereals, and for tobacco. But the only crop that reached its highest value this year is cotton.

The list of crops that stand next to the highest, either in quantity or value, or both, is much larger than the foregoing. In production next to the highest year are found for 1910 the crops of rice, hay, beet sugar, and the total for all sugar. In the list of the crops that are next to the highest in value are wheat, oats, barley, tobacco, flaxseed, beet sugar, and the total for all sugar.

The potato crop was third in order of quantity and the corn crop and the total for all cereals were third in value. Barley and rye were fourth in production and potatoes fourth in value. Fifth in production was wheat and fifth in value rice.

The average production of the five years preceding 1910 includes the remarkably productive year 1906 and was generally a period of vigorous production. Notwithstanding the high character of the period, the production of 1910 is above the five-year average in the case of corn, oats, rice, rye, buckwheat, beet sugar, the total for all sugar, potatoes, tobacco, and wool.