## REPORT

OF

# THE COMMISSIONER OF AGRICULTURE.

DEPARTMENT OF AGRICULTURE, Washington, D. C., November 27, 1865.

SIR: I have the honor to submit to you my fourth annual report, but the first which it has been my privilege to make while the people of our beloved country, from one end to the other, were at peace pursuing their wonted avocations.

But the results of the various operations of the department which I am able to lay before you are necessarily exclusive of the States recently in insurrection; the brief lapse of time since the cessation of hostilities, and the imperfect mail facilities of those States, not permitting systematic correspondence by which could be obtained accurate and reliable information from that section of the country.

I most sincerely congratulate the country upon the return of peace to our people, and render thanks to Him who doeth all things well for his merciful kindness and manifold blessings; for while one section of our fair country has been laid waste, and her citizens subjected to the devastating consequences of wartheir implements of husbandry allowed to rust for want of use, and the earth to rest from yielding its products for the people's support—the other section has exhibited a condition of prosperity and plenty that would seem to ignore (were it not for the absence and loss of some of her best and bravest sons) the existence of a war. While more than a million of the hardy sons of toil have been called from their industrial pursuits to engage in warfare for the preservation of the Union, those at home have applied themselves with redoubled energy; and with the influence of higher wages in calling forth and economizing labor, and the aid of agricultural machinery and labor-saving implements and appliances, the farmer has been enabled to gather an abundant harvest. Thus those engaged in peaceful pursuits have been rewarded, even during the period of a most desolating war, with liberal wages for their labor and remunerative returns for the products of the farm.

The earth, too, has seemed to respond to the increased demand upon its fertility, and has given us, with the aid of the husbandman, an abundance having no parallel in the history of that portion of the country, feeding the army and navy as well as the great mass of people in civil life, and leaving a surplus for exportation to foreign countries, and charitable donations for the alleviation of the suffering people of other nations.

While these products have commanded seemingly exorbitant prices, the industrial classes have had constant employment at remunerating wages; nor have these rewards of labor been depreciated or sensibly affected by the return of a vast army to the ranks of industry, or by the emancipation of four millions of slaves. So great are our resources calling urgently for development, that instead of fears of competition from returned soldiers, emancipated slaves, or foreign immigrants, (now flocking to our shores,) there is seen a decided buoyancy in the labor market, with a demand for increase of wages and fewer hours of toil.

Not only the necessaries, but even the luxuries of life are therefore easily attainable. How immeasurably preferable is this condition of things for the laboring classes, to a necessity for comparative idleness with lower prices; for low rates would then fail to bring the comforts of life within their control, while, with employment and adequate compensation, scarcely any price can place them beyond their reach. The great aim of the government should be to adopt a policy by which the agricultural, mechanical, manufacturing, and other industrial interests throughout the country should be fostered and encouraged, and the present time would seem most propitious for the initiation of such a policy.

The great contest in which we have been engaged is, I trust, forever ended. The courage, strength, and physical endurance of our people has been fairly tested, and, in the providence of God, has been decided for the country. A free republican government has been sustained, and the great problem of the capability of the people for self-government has been solved, and we stand to-day before the world, after the most desperate and persistent conflict that history records, a united and, I trust, a wiser and better people, full of charity for our erring brethren, and gratitude to those who have perilled their lives for their country's sake.

The energies of the people are now required to build up the waste places. The results of the war having changed the system of labor in some of the States, wise counsels and wholesome legislation, with just and charitable discretion, will be demanded in directing and dealing with the freedmen. I have no fear of the results, if employers and employed will mutually adapt themselves to the existing state of things; and I believe that a higher state of prosperity than was ever before enjoyed by the people of the South will be ultimately attained. It may be that the system of free labor will not prove favorable to large landed estates; and I am willing to confess my full belief that such a result will be beneficial to the great masses and to the country. The average size of farms in the United States, in 1860, was 199 acres; almost double the average for Great Britain, which, in 1851, was 102 acres only, notwithstanding the great size of many baronial and aristocratic "holdings"—there being no less than 170,814 farms in the kingdom, or considerably more than one-half of the entire number, having less than 50 acres each. But the average in

the southern States is far greater than the general average for the United States, as the following table will show:

	Acres of improved lands.	Acres of unim- proved lands.	Number of farms.	Average No. of acres in each farm.
Delaware Maryland Virginia North Carolina South Carolina Georgia Florida Alabama Mississippi Louisiana Texas Arkansas Tennessee Kentucky Missouri	8, 062, 758 654, 213 6, 385, 724 5, 065, 755 2, 707, 108 2, 650, 781 1, 983, 313 6, 795, 337 7, 644, 208	367, 230 1, 833, 304 19, 679, 215 17, 245, 665 11, 623, 859 18, 567, 732 2, 266, 015 12, 718, 821 10, 773, 929 6, 591, 468 22, 693, 247 7, 590, 393 13, 873, 828 11, 519, 053 13, 737, 939	6, 658 25, 494 92, 605 75, 203 33, 171 62, 003 6, 568 55, 128 42, 840 17, 328 42, 891 39, 004 82, 368 90, 814 92, 792	151 190 324 316 488 430 444 346 370 536 591 245 251 211 215

The large proportion—almost three-fourths—of unimproved land in farms, in addition to the unimproved public lands, illustrates pointedly the necessity that vastly more labor be applied to their cultivation. The most populous States in the Union have the smallest farms, commanding the highest price per acre; and the value per acre is, as a general fact, inversely proportionate to the size of the farms. Thus the farms of Massachusetts average 94 acres; of Rhode Island, 96; of Connecticut, 99; of New York, 106; of Pennsylvania, 109; and of Ohio, 114 acres.

Every head of a family should have a homestead if possible. Thus an incentive to industry is created, and a spirit of enterprise encouraged, that will soon double the products of the country, increase the wealth of the States, and add to the resources of the nation.

In this new order of things I feel the importance of the position which this department should assume towards the people of the States now reassuming their former relations with the rest of the country. With the question of reconstruction, or, more properly, reorganization, I have no concern; believing the subject to be in competent hands, and that its final and satisfactory settlement will be accomplished in due time. I shall, therefore, cheerfully put forth my exertions, to the best of my ability, in aid of measures of reconciliation and for the advancement of the interests of agriculture throughout the whole country, believing that branch of industry to be the foundation of the prosperity of all nations, and the fostering of its interests by the government to be absolutely essential to such prosperity. History furnishes abundant illustrations of this truth.

The southern States will need much aid and encouragement in the coming season. Their favorable climate and prolific fields should invite capital and stimulate labor. In no other section can crops be cultivated with less labor, nor are there any crops more remunerative than such as are peculiarly adapted to that section of the country. Their cotton is the best that has yet been produced in any country, and their sugar crop is one of great importance—Louisiana alone having produced in 1859 221,726 hogsheads of sugar and 13,439,772 gallons of molasses.

I have endeavored so to conduct the affairs of this department as to commend it to the favorable consideration of Congress and the approval of my countrymen, not doubting that its operations will be duly appreciated, and its labors ultimately crowned with complete success. I shall seek to increase its practical value and extend its influence, and hope it may continue to receive the liberal and fostering attention of Congress, and that those engaged in agriculture may be thereby stimulated to greater exertions and higher aims.

Our country possesses an advantage in soil and climate unsurpassed by any other on the globe for cultivating and perfecting all the necessary elements of subsistence and comforts for our entire population, with luxuries in abundance for the most cultivated tastes. With our extended and daily increasing system of internal improvements a failure of crops in one section of the country would scarcely be felt. These vast resources and appliances which spring into existence at the bidding of an industrious and energetic people daily add to the wealth and greatness of the nation, enhancing the happiness of the people; hence all are alike interested in the success of agricultural science; and if those engaged in it will pursue it with half the energy that characterizes those in other pursuits-availing themselves of all means of improvement, profiting by the practical experience of the most successful, and managing their farms systematically upon business principles-abundance and wealth will be their sure reward. From the wealth thus created and diffused throughout society will come with grateful pleasure the taxes for the support of the government and payment of the national debt, which, under equal and just laws, will be entirely extinguished with unprecedented celerity.

During the past year I have availed myself of the services of Messrs. V. D. Collins and John H. Klippart, gentlemen of skill and intelligence, well known to be devoted to the interests of scientific and practical agriculture, to visit parts of Europe and Asia, at a very small pecuniary outlay, compared with the advantages to be derived from their labors in the investigation of questions of present importance in the agriculture of this country. No reports having yet been received, the results of their labors will be given in detail in the agricultural report for 1865.

A very malignant disease among cattle, called the "rinderpest," or cattle plague, has been prevailing for some time, with fatal effect, in Russia, Great Britain, and other European countries. Its ravages have been exceedingly severe, destroying in many instances whole herds of the most valuable and carefully bred cattle of Europe. It seems to be both contagious and infectious, and much apprehension is felt for the safety of the cattle of this country. The importance of the subject seems to demand the immediate action of Congress, prohibiting the importation of farm-stock during the prevalence of the disease.

The rooms now occupied by this department are entirely inadequate for its

accommodation, being located, in part, in the Patent Office building, with other rooms in buildings disconnected from it. The increasing demand of the Bureau of Patents for additional room must shortly render it a matter of necessity to surrender the rooms now occupied by this department. For the better arrangement of the increasing collection of specimens in the museum, or object-library, and for greater convenience in the transaction of the business of the office, additional and more contiguous accommodation is highly desirable. I trust, therefore, that Congress will take measures for the erection of a suitable building, at as early a day as possible, for the use of the department.

Large quantities of new and valuable seeds, cuttings, and plants have been distributed during the last year throughout the country, in order to test the adaptability of such varieties to the various soils and climates of the different sections. These experiments, whenever they have proved a success, have been of inestimable value, not only improving qualities, but also increasing the crop productions per acre, and inciting to emulation in the introduction of new varieties.

In the distribution of seeds, 234,945 packages have been delivered to senators and representatives in Congress, 119,693 to agricultural and horticultural societies, and 408,593 to regular and occasional correspondents, and in answer to personal applications—making a total distribution of all varieties of seeds of 763,231 packages.

The distributions from the experimental and propagating garden during the past year have been mainly confined to varieties of the small fruits, such as grapes, strawberries, gooseberries, raspberries, and currants. Of these about 35,000 plants have been distributed through the usual channels.

The process of testing the respective merits of varieties of fruits is in active progress, so far as the capacities of the garden will permit. Additions are constantly being made to the list of plants selected for the above purpose. It is my constant endeavor to preserve the distinguishing feature of the garden for the propagation and dissemination of specialties, under intelligent supervision, and avoid its degeneration into a commercial nursery.

A new propagating house has been erected, substantially fitted with the most improved facilities, and is now in successful operation.

For the purpose of ascertaining whether among the many valued fruits of tropical regions there may be any worthy of artificial culture, I have had an apartment in one of the green-houses arranged in a suitable manner for their growth, and have opened a correspondence towards securing as complete a collection of these plants as practicable.

The assignment to this department of reservation No. 2, lying immediately west of the Smithsonian grounds, for the purpose of an experimental farm, has afforded an opportunity for the initiation of a series of experiments designed to test the value of foreign cereals, forage plants, and garden vegetables.

The grounds, with an unbroken soil of somewhat tenacious clay, came into my possession about the middle of April, quite too late to admit of being put in proper tilth for obtaining the best results during the present season. A few acres, duly fertilized and suitably pulverized, were planted with 346 varieties of

seeds, including 18 kinds of Indian corn, 34 of beans, 13 of peas, 77 of potatoes, (52 of which were seedlings,) 33 of melons, and many varieties, respectively, of tomatoes, beets, and other vegetables.

Specimens of cotton matured quite perfectly with the aid of fertilizers and high culture. Some of the foreign seeds promise to be acquisitions to our agriculture, either by virtue of excellence in quality, productiveness, or adaptation to special uses, soils, or climate. Further experiments will develop more completely and accurately their peculiar characters and values.

During the autumn the remaining portion of the grounds has been seeded with grasses and cereals, especially with wheats, embracing sixty-two varieties, from France, Prussia, Russia, Great Britain, Chili, and China. Valuable results are confidently expected to accrue eventually from these experiments.

An office and stable have been erected, at small expense, and a supply of Potomac water brought upon the premises.

The donations and additions to the museum have been increased to such an extent during the past year that the two small rooms appropriated to that purpose have been completely filled, and many of the most interesting specimens of fibres, sugars, seeds, &c., cannot be exhibited for want of space, and are therefore unavailable to those desiring to study them. The museum has been enriched by specimens of sheep and domestic poultry, showing the true types of the various breeds, and to what purpose each breed is specially adapted.

In my former report it was recommended that the collection of insects, birds, and model fruits belonging to Mr. Townend Glover, entomologist of the department, should be purchased by the government, and made the nucleus of a national agricultural and economic museum. This subject is earnestly pressed upon the attention of Congress.

The sum of five hundred dollars has been expended in sending Mr. Glover to Paris, to represent the interest of this department at the exposition of insects useful or injurious to the crops, which was held at the industrial palace, under the patronage of the minister of agriculture of France; where I am happy to say he received the first premium of the large gold medal of the Emperor Napoleon for his yet unfinished work on the insects of America, a work as original in its plan of arrangement as it will prove to be valuable in its proposed remedies for the destructive insects. He was nearly four months absent, and on his return brought specimens of the various silk cocoons and silk-producing insects, together with prepared skins of animals and game birds which are susceptible of domestication, and may with advantage be introduced and acclimated in this country. It is sincerely to be hoped that a portion of the propagating grounds, or some other convenient place, may be set apart for the purpose of commencing a garden of acclimation, from whence the llama, cashmere goat, and the improved breeds of domestic fowls, might be distributed to different parts of our country.

The ailanthus silkworm, which has succeeded so well in France, has been reintroduced this year from Paris. This insect may now be considered as perfectly acclimated, and the silk produced by it is very strong and of good quality.

Since my last report the laboratory has been fitted up and provided with

apparatus and other means of investigation. In regard to the practical results obtained I would refer to the report of the chemist, as showing that some original investigations have been made, and many questions answered which have been propounded by farmers, technologists, sugar-producers, and others, in all parts of the country.

Minerals, ores, and geological specimens have been received by mail and otherwise, in considerable quantities. Such as proved valuable, and could be properly identified as to locality, were retained as a nucleus for a mineralogical cabinet.

The field open for chemical science never was so great as at the present time. Chemistry being indeed the life and soul of an intelligent, rational agriculture, the governments of Europe—Germany taking the lead—impressed with this unquestionable fact, have established experimental agricultural stations, consisting of an experimental garden and a complete analytical laboratory. The chemist, provided with assistants, institutes on the spot such original experiments, and tests such theoretical problems in reference to agriculture, as would seem most prolific of benefit to the farming community and the world at large. To instruct the farmer as to the difference between robbing and tilling the land, to teach him to understand and take a lively interest in the practical experiments above alluded to, travelling teachers have been appointed, connected with these agricultural stations, whose office it is to impart useful knowledge to the masses by lectures and conversations. Thus every one may gradually be prepared to receive and profit by the rich stores of science open to every intelligent farmer.

Such is the appreciation of chemical science in Germany, where schools and private laboratories so abound, that at the present time two large laboratories on the most complete scale, are in the course of construction at Berlin and Bonn, at the expense of the state.

In the collection of statistics, during the past year, unusual attention has been given to farm stock. The waste of horses and mules by war, and the army consumption of meats, excited fears of deficient supplies of domestic animals, rendering necessary a reliable exposition of the number, price, and value of each kind in the several States—a labor undertaken with much care, and accomplished, it is believed, notwithstanding its difficulty, with a fair measure of success.

The tables of statistics resulting from these labors are applied to important uses—foiling the designs of speculators and correcting their misrepresentations; enabling the farmer to obtain the worth of his cereals, wool, meats, and other agricultural products; and directing the purchaser of store animals in what quarter to obtain most easily and cheaply his needed supplies for fattening. Accurate statistics, affecting commercial dealings in farm products, may thus prove of immediate and almost incalculable service to the agricultural community.

I may here remark that this system of collecting, compiling, and publishing farm statistics is attracting the attention and eliciting the commendation of European nations, and that many of their most practical statisticians acknowledge freely its superiority over prevailing European systems.

That these statistics, obtained monthly through thousands of intelligent correspondents, upon specific subjects peculiarly appropriate to the season, should be placed before the country at the time, and not be deferred until the publication of the annual report, is indisputable. The leading purpose in their presentation is to furnish a guide to producers in the necessary mutations of crop and stock production, and to act on the markets before the disposition is made of cereals, meats, and fibrous products of the farm. Hence the necessity and the origin of the monthly report. Its publication, at first opposed by several agricultural papers, under the erroneous impression that it might conflict with private interests, excites no opposition since it is seen to avoid ordinary topics pertaining to agriculture, and to consider only those that are national in their character or bearing.

The annual and monthly reports are entirely distinct in their character. The first treats of subjects of a permanent nature, in the form of carefully written essays. The second is confined to topics less permanent, and often of transient or passing importance; it considers them briefly, touching upon leading points only, avoiding details, and ignoring the ornaments of style and a labored arrangement.

A brief general summary of the more important statistics of this division are as follows:

### GENERAL SUMMARY RELATING TO FARM STOCK.

Showing the total number of live stock for January, 1864 and 1865, the increase and decrease thereof, the general average price of each kind, the value of each kind, and the total value of all.

Animals,	1864.	1865.	Increase.	Decrease.
Horses Mules Cattle and oxen Cows Sheep Hogs	4, 049, 142 280, 847 7, 965, 439 6, 066, 748 24, 346, 391 16, 148, 712	3,740,933 247,553 7,072,591 5,768,130 28,647,269 13,070,887	4,300,878	308, 209 33, 294 892, 848 298, 618
Total	58, 857, 279	58, 547, 363	4, 300, 878	4,610,794

### Number, average price, and total value in January, 1865.

Animals.	Number.	Average price.	Total value.
Horses Mules Cattle and oxen Cows Sheep Hogs	3,740,933 247,553 7,072,591 5,768,130 28,647,269 13,070,887	\$80 84 102 08 26 17 36 70 5 40 8 55	\$302, 425, 499 25, 041, 488 185, 090, 087 211, 718, 270 154, 807, 466 111, 796, 318
Total value			990, 879, 128

#### GENERAL SUMMARY RELATING TO CROPS

Showing the number of bushels, &c., of each crop, the number of acres of each, the value of each, and the bushels, acres, and value of all, and the increase and decrease of the same, for the years 1863 and 1864, and the comparison between the same years.

#### AMOUNT OF CROPS.

right was a surface.	1863.	1864.	Increase.	Decrease.
Indian corn	397, 839, 212 173, 677, 928	530, 451, 403 160, 695, 823	132, 612, 191	12, 982, 105
RyeOats	19, 989, 335 170, 129, 864 12, 158, 195	19, 872, 975 175, 990, 194 10, 716, 328	5, 860, 330	116, 360
Buckwheat	15, 786, 122 98, 965, 198	18, 700, 540 96, 532, 029	2,914,418	2, 433, 169
Total	888, 546, 554	1, 012, 959, 292	141, 386, 939	16, 974, 201
Tobacco	163, 353, 082 18, 346, 730	197, 460, 229 18, 116, 691	34, 107, 147	230, 039

#### ACREAGE OF CROPS.

Indian corn Wheat Rye Oats Barley Buckwheat Potatoes Tobacco Hay	15, 312, 441 13, 098, 936 1, 439, 607 6, 686, 174 557, 299 1, 054, 060 1, 129, 804 216, 423 15, 641, 504	17, 438, 752 13, 158, 089 1, 410, 983 6, 461, 750 540, 317 1, 051, 700 902, 295 239, 826 15, 034, 564		224, 424 16, 982 2, 360
Total	55, 136, 248	56, 238, 276	2, 208, 867	1, 106, 839

#### VALUE OF CROPS.

Indian corn	\$278,089,609	\$527,718,183	\$249, 628, 574	
Wheat	197, 992, 837	294, 315, 119		
Rye	20, 589, 015	31, 975, 013		
Oats	105, 990, 905	139, 381, 247	33, 390, 342	
Barley		16,941,023	3, 444, 650	
Buckwheat		21, 986, 763	9, 326, 294	
Potatoes		77, 184, 043		
Tobacco		29, 335, 225		
Hay	247, 680, 855	365, 707, 074	118, 026, 219	
Total	955, 764, 322	1,504,543,690	548, 779, 368	

The above tables of the general summary do not show the exact comparative differences between the years 1863 and 1864, because the latter year embraces the crops of Kentucky, which are not in the year of 1863. Deducting Kentucky from 1864, the comparison will be as follows:

Table of comparison between 1863 and 1864.

	1863.	1864.	Increase.	Decrease.
Total, bushels	888, 546, 554 163, 353, 082 18, 346, 730° 55, 136, 248 \$955, 764, 322	18,004,366	71, 274, 596 	22, 849, 32 342, 36 1, 185, 45

The table of comparison between 1863 and 1864 exhibits much that is important. The increase in the bushels of grain is large, and the decrease in the pounds of tobacco raised is also great. The decrease in acres cultivated is 1,185,451, but the increase in the value of the above crops is \$484,651,113.

The first increase is from the corn crop, and the last may be attributed to an increase in the currency, or a spirit of speculation.

General summary of the amount of the crops of 1865, compared with those of 1864 and 1863.

	1865.	1864.	1863.
Wheat, bushels Rye, bushels Barley, bushels Oats, bushels Corn, bushels Buckwheat, bushels Potatoes, bushels	148, 552, 829	160, 695, 823	179, 404, 036
	19, 543, 905	19, 872, 975	20, 782, 782
	11, 391, 286	10, 632, 178	11, 368, 155
	225, 252, 295	176, 690, 064	173, 800, 575
	704, 427, 853	530, 581, 403	451, 967, 959
	18, 331, 019	18, 700, 540	15, 806, 455
	101, 032, 095	96, 256, 888	100, 158, 670
Total bushels  Hay, tons Tobacco, pounds	1,228,501,282	1, 013, 429, 871	953, 288, 632
	23,538,740	18, 116, 751	19, 736, 847
	183,316,953	197, 468, 229	267, 267, 920

In the western States the wheat crop is very deficient in quality. It has been estimated by the department that the deficiency in both quantity and quality is 26,241,698 bushels; in quantity alone 12,172,944 bushels. The quality of the corn crop is excellent, and that of the remaining crops is believed to be an average. The number of bushels in 1865 exceeds those of 1864 by 215,071,411.

The prices, average, and value of the crops of 1865 will not be calculated until February next. The greatness and excellence of the corn crop must be gratifying to all.

The balance of the appropriation for the service of the fiscal year ending June 30, 1865, remaining unexpended on the 1st of December, 1864, was \$95,891 51. There was appropriated for the fiscal year ending June 30, 1866, \$155,300.

The expenditures from December 1, 1864, to November, 1865, amount to \$152,614 70, leaving an unexpended balance of \$98,584 81.

Since my last report of the special appropriation of \$20,000 "for investigations to test the practicability of preparing flax and hemp as a substitute for cotton," there has been expended \$4,500 40, leaving a balance of \$10,500 remaining in the United States treasury.

The increasing demand made upon the department for the agricultural report, which is yearly becoming more extended and urgent as the appreciation of its value and usefulness is widened and intensified, induces me to ask Congress for an additional number of copies. The limited number allowed for circulation by the department forbids a very liberal distribution among those engaged in agricultural pursuits, who especially desire and seek the information it contains; many of whom are dependent upon the department for their supply. A single copy to each of its correspondents would alone absorb nearly the entire annual allotment to the department.

There should also be retained a sufficient number of each volume for the future supply of foreign exchanges, libraries, and agricultural and kindred associations.

Respectfully submitted,

ISAAC NEWTON,

Commissioner of Agriculture.

His Excellency Andrew Johnson, President.

## REPORT

OF

# THE POSTMASTER GENERAL.

POST OFFICE DEPARTMENT,

November 15, 1865.

Sir: The revenues of this department for the year ended June 30, 1865, were \$14,556,158 70, and the expenditures \$13,694,728 28, leaving a surplus of \$861,430 42.

The ratio of increase of revenue was 17 per cent., and of expenditure 8 per cent., compared with previous year.

The portion of the revenues accumulated in depository and draft offices, under the supervision of the Finance office of this department, was \$7,136,024 46; collected by the Auditor, \$2,329,855 08; and retained by postmasters for salaries and office expenses, \$5,090,279 16.

The estimated expenditures for the year ending June 30, 1867, are \$18, 678, 000 The revenues estimated at 10 per cent. increase over

last year	\$16, 011, 773
Add amount equal to 50 per cent. of the receipts	
in 1860 from States lately in rebellion	758, 770
Appropriation for free matter	700, 000

- 17, 470, 543

Also for steamship service between the United States and Brazil for

500, 000