Reports of the Kansas State Board of Agriculture

Section 49, Pages 1441 - 1470

These reports by the State Board of Agriculture include the proceedings of the board, reports for the previous year, maps of counties, abstracts of counties, miscellaneous articles, and reports of agricultural societies, the state fair, state and county statistics, agricultural industries and products, the agricultural college, and the Kansas Academy of Science. The annual reports began in 1872 and were succeeded by biennial reports beginning in 1877-78. Volume numbers were discontinued with the 1953-1956 report; the last being volume 44. From 1953 to 1976 the reports drop "biennial" from the title. Annual reports begin again from 1976 to 1984, except 1982-1983 which is biennial. The dates for each report reflects the reporting year and not the publication date, which was usually a year later. The title of each report reflects the form given on the title page. Only volumes 1 (1872), 2 (1873), 3 (1874), 4 (1875), the centennial edition (1875), 5 (1876), 6 (1877-1878), 7 (1879-1880), 10 (1885-1886), 11 (1887-1888), 13 (1891-1892), and 14 (1893-1894) are currently available.

Creator: Kansas State Board of Agriculture

Date: Bulk 1872-1984

Callnumber: SP 630.6 K13

KSHS Identifier: DaRT ID: 210899

Item Identifier: 210899

www.kansasmemory.org/item/210899

Mr. Kelly moved, that the Secretary have full power to visit the various counties of the State, to correct and verify data, and to consult with county boards and township trustees, whenever he may deem it advisable to do so, at the expense of the Board, or he may designate a member or members of the Board to do so.

The salary of James M. McFarland, chief clerk, was fixed at $1,000 per annum, payable in monthly instalments, at the end of each month.

The President was requested to obtain the opinion of the Attorney General concerning the pay of assessors, in case they should be unable to complete the census within the time prescribed by law. The following is the communication of the President, and the reply of the Attorney General:

CAPITOL BUILDING, TOPEKA, March 17, 1875.

SIR: Your attention is respectfully called to the act of March 10, 1875, providing for the taking of the census, with reference to the provisions therein controlling the time allotted and compensation provided for such work by township officers.

Section 1 provides for a compensation to township trustees of $3 per day.

Section 8 provides that the work of assessment and census taking be done at one and the same time.

We desire your decision as to the effect of this last section. Does it limit the period for which such trustees may be paid to the time actually required to make the assessment, or are they allowed to continue the period of work of census, and draw compensation therefor until such work is complete, although beyond the period of time required for the assessment?

By order of the Board.

GEO. T. ANTHONY,
President State Board of Agriculture.

To HON. A. M. F. RANDOLPH, Attorney General, State of Kansas.

OPINION OF THE ATTORNEY GENERAL.

STATE OF KANSAS, OFFICE OF ATTORNEY GENERAL,
TOPEKA, March 17, 1875.

Hon. Geo. T. Anthony, President State Board of Agriculture, Topeka, Kansas:

DEAR SIR: I have received your letter of the 17th inst., in which you ask whether, in my opinion, section 8 of "An act supplemental to chapter 137 of the Session Laws of 1873," approved March 5, 1875, and published March 10, 1875, limits the time for which the township trustee may be paid for his services under said act to the time duly employed by said officers in making the assessment?

Said section 8 is as follows:

"The services herein required to be performed by the several assessors of the State, shall be performed at the same time that he performs his services under the general assessment laws of the State, and in connection therewith, and shall not be allowed for such services separately, but for the time employed in taking the general assessment as for one and the same service."

In view of the clear, strict, and unambiguous language of this section, I am unable to see that an assessor can be lawfully allowed compensation for services done under it, after he has completed the assessment; and yet, in many cases, it will doubtless be *physically* impossible for such officer to perform all his duties under said act in the time within which he is by law required to complete the assessment.

I see no way to escape from this perplexity, and, at the same time to comply with said section 8, but the following:

Reports of the Kansas State Board of Agriculture

Section 77, p. 271, of Gen. Stat. is amended by sec. 1, ch. 30, p. 111, Laws of 1869, and is as follows:

"Whenever the board of commissioners shall be of the opinion that any township assessor is unable to perform the duties of his office according to law, they may authorize said assessor to appoint one or more deputies, who shall be sworn, and give bond similar to that of the assessor himself."

The above section is still in force. In many instances, the only way for the assessor to complete the taking of the census in the time within which the assessment must be completed, is for him to be assisted by deputies. Of course, the deputies must be paid for their services, and no expenses are saved by this mode.

Very respectfully, A. M. F. RANDOLPH, *Att'y General.*

W. P. Popenoe, of Shawnee county, was appointed Auditor of the Board.

FINANCIAL REPORT OF THE SECRETARY.

RECEIPTS.

SALARY OF SECRETARY.

To Appropriation for Salary of Secretary	$1,646 14	
To Undrawn Balance from 1874	153 86	
		$1,800 00

CLERK HIRE.

To Appropriation for Clerk Hire	$ 988 45	
To Census Appropriation	500 00	
To Undrawn Balance from 1874	211 55	
To Funds from Centennial Board, for Clerk Hire	100 00	
To Funds drawn on Voucher 825, not used, and returned	7 00	
		$1,807 00

POSTAGE AND EXPRESSAGE.

To Appropriation for Postage and Expressage	$ 599 00	
To Undrawn Balance	1 00	
To Census Appropriation	200 00	
		$800 00

EXPENSES OF MEMBERS ATTENDING MEETINGS OF BOARD.

To Appropriation for Members attending Meetings of Board	$ 477 22	
To Undrawn Balance	22 78	
		$500 00

TAXIDERMIC AND BOTANICAL COLLECTION.

To Appropriation for Taxidermic and Botanical Collection		$200 00

FOR PUBLISHING ANNUAL REPORT.

To Appropriation for Binding and Printing 3,500 copies of 4th Annual Report	$6,000 00	
To Census Appropriation	600 00	
		$6,600 00

BLANKS AND MISCELLANEOUS PRINTING.

To Appropriation for Statistical Rolls, Blanks and Miscellaneous Printing	$1,094 55	
To Undrawn Balance	105 45	
To Census Appropriation	600 00	
		$1,800 00
Total		$13,507 00

DISBURSEMENTS.

For Salary of Secretary	$1,800 00	
For Clerk Hire	2,741 31	
For Postage and Expressage	893 22	
For Members attending Meetings of the Board	356 45	
For Taxidermic and Botanical Collections	193 00	
For Printing and Binding 3,500 copies 4th Annual Report	6,600 00	
For Statistical Rolls, Blanks and Miscellaneous Printing	1,647 40	
		$14,231 38
Total		

RECAPITULATION.

Total Receipts	$13,507 00	
Total Disbursements	14,231 38	
		$724 38
Total Deficit		

Reports of the Kansas State Board of Agriculture

STATEMENT OF TREASURER.

To Funds received for Salary of Secretary	$1 800 00	
By Amount paid out	1,800 00	
To Funds received for Clerk Hire	$1,807 00	
By Amount paid out	2,741 31	
Deficit		$934 31
To Funds received for Postage and Expressage	$ 800 00	
By Amount paid out	893 22	
Deficit		$ 93 22
Total Deficit		$1,027 53
To Funds received for Expenses of Members attending Meetings of the Board	$ 500 00	
By Amount paid out	356 45	
Balance on hand		$143 55
To Funds received for Botanical and Taxidermic Collection	$ 200 00	
By Amount pa d out	193 00	
Balance on hand		$ 7 00
To Funds received for Printing and Binding 3,500 copies 4th Annual Report	$6,500 00	
By Amount paid out	$6,500 00	
To Funds received for Statistical Rolls, Blanks and Miscellaneous Printing	$1,800 00	
By Amount paid out	$1,647 40	
Balance on hand		$152 60
Total Balance on hand		$303 15

RECAPITULATION.

Total Deficit	$1,027 53	
Total Balance on hand	303 15	
Total Deficit		$724 38

J. C. WILSON, *Treasurer.*

From the foregoing statement, it will be observed that there are unexpended balances, as follows, to wit: For expenses of members in attending meetings of the Board, $143.55; botanic and taxidermic collection, $7; miscellaneous printing, $152.60; total unexpended, $303.15.

There is a deficit in the postage account of $93.22, and clerk hire of $930.31; total deficit, $1,023.53; actual deficit balance, $720.43.

This deficit has been met by the personal obligations of the President, Secretary and Treasurer of this Board. The appropriations of the current year were based upon the estimates of this Board, and it is with chagrin and mortification that we are compelled to report a deficit; but as the circumstances out of which the deficit has arisen, could not have been foreseen, and were entirely beyond our control, and as the interests involved were too momentous to the State to hesitate whether to go on and complete the work mapped out for the year, or to stop with the expenditure of existing appropriations, we chose the former. The estimate for postage was based upon the then existing rates; but after the appropriation was made, the rates on third-class matter were doubled, increasing in one day our postage bill $200 on reports which were wrapped, stamped and ready for mailing. The majority of these were to fill the orders of Members of the Legislature. If there had been no change in postage rates, there would have been an unexpended balance.

The next and only other deficit is in the item of census clerk hire. Nothing has been left undone that could have been done to avoid this, but it was impossible. Office hours have been from 7 A. M. to 12 M., and from 1.30 to 6 P. M., with from two to four hours added of night work, when the clerical force could endure it.

The assorting, wrapping, boxing and shipping of over 50,000 packages of seeds to the several counties of the State, together with the exceedingly large correspondence growing out of and incident to the misfortunes of the previous year, have added largely to the clerical expense.

A very careful revision of the maps of the present report, including the addition of schoolhouses and mills, government, railroad, university, agricultural college lands, etc., etc., was made in this office, thereby saving several hundred dollars to the State.

After the census returns had been made of the acreage of the various crops, there was either a total or partial destruction of the same by young locusts in two tiers of counties, on the eastern border.

This devastated area was subsequently replanted, mostly to corn, potatoes, millet and Hungarian. The assessors' returns, therefore, showed a much larger acreage of wheat, oats, rye, barley, flax, etc, than there was left, and did not show enough corn, potatoes, millet, Hungarian, etc., nor the tillable acres remaining idle. This had to be corrected. There is no law making it the duty of assessors to go over the same work. Through the aid of county clerks, county commissioners and township trustees, corrections have been made as near as possible in accordance with the facts. Localities had to be visited, and careful computations made. All this required an extra amount of labor.

The census returns came to this office, in a majority of cases, in such bad shape, that it cost more than the entire appropriation for census clerical work to put the returns in intelligible shape for an accurate compilation. This required a very careful and tedious correspondence with county clerks and township and city assessors for the correction of obvious clerical blunders, the supplying of important omissions, and obtaining the meaning and intention of the assessors where the forms of the blanks were not strictly complied with. All this, however, can be better appreciated by an examination of the returns themselves in the office of this Board than by any description which could be given here. We will take this opportunity to say, however, that with the labor thus bestowed, made in connection with data already in the office, which enabled us to detect errors, we believe the census is a good one, as reliable as can possibly be taken under the existing system. This office is held responsible for an accurate compilation of statistics from year to year; but in all the machinery so far provided for this purpose, there is no responsibility of any one to the revising authority for accurate returns. This is a mistake, and ought to be remedied. By an economy at once misjudged and unfortunate, the time for which compensation was allowed to assessors was not increased on account of the new and laborious duty of taking the census. County commissioners did not feel sufficient interest to provide extra help, as held competent to do by the Attorney-General, and, as a result, it is very probable that errors and omissions have followed. But in the face of this, we are constrained to believe the general result quite as reliable as that of any census taken under direction of the General Government.

ACKNOWLEDGMENT.

Credit is due to citizens in all parts of the State for cheerful co-operation in furnishing valuable data for this volume. Without this local assistance we would have been unable to do justice to the various counties.

We are under special obligations to the following, to wit:

State and county officials, for valuable data from time to time; Judge F. G.

Adams, for the origin of county names; Revs. F. S. McCabe, S. D. Storrs, E. Gunn, B. L. Baldridge, the presiding Elders of the Methodist denomination, Rt. Rev. Thos. H. Vail, Revs. James H. Defouri, V. P. Wilson, T. F. Domblaser, for church statistics; Officers of U. S. Land Offices; Officers of the Academy of Science; Secretaries of Agricultural Organizations, and other correspondents too numerous to particularize.

LIBRARY.

The following additions have been made to the library during the year:

Ohio Agricultural Report, for 1873. 10 vols.—John H. Klippart, Secretary, Columbus, Ohio.

Indiana Agricultural Report, for 1873. 6 vols.; 1 vol., 1874.—Alex. Herron, Secretary, Indianapolis, Ind.

Geological Survey of Indiana, for 1873. 12 vols.—C. T. Cox, State Geologist, Indianapolis, Ind.

Wisconsin Historical Collections. Vols. 1, 2, 3, 4.—Judge Wm. C. Webb, Fort Scott, Kan.

Annual Reports of the Department of Agriculture, Victoria, Australia, for 1873 and 1874.—A. R. Wallis, Secretary for Agriculture, Melbourne, Australia.

Agriculture of Massachusetts, for 1874–75.—C. L. Flint, Secretary, Boston.

Report of Minnesota State Horticultural Society, for 1866–73.—A. C. Smith, Esq., Litchfield, Minn.

Transactions of the Massachusetts Horticultural Society, for 1874.—E. W. Bushnell, Treas. and Cor. Sec.

Second Annual Report of the New Jersey State Board of Agriculture, 1874.—Geo. H. Cook, Secretary, New Brunswick, N. J.

Seventh Annual Report of the Noxious, Beneficial, and other Insects of the State of Missouri.—Chas. V. Riley, State Entomologist, St. Louis, Mo.

Monthly Report of the Department of Agriculture.—Frank Watts, Com. of Agriculture, Washington.

Monthly Report of the Commerce and Navigation of the United States, for the Fiscal Year ending June 30, 1874.—Edward Young, Ph. D., Chief of the Bureau of Statistics, Washington, D. C.

Officers, Rules and Regulations, and Schedule of Premiums, for the Fair of 1875, of the Virginia State Agricultural Society.—E. G. Leigh, Sec'y and Treas., Richmond, Va.

Abstracts of the Meteorology of 1874. Condensed from the Records of the Kansas State Agricultural College.—Prof. W. K. Kedzie, Manhattan.

Catalogue of the Bow Park Herd Book of Thoroughbred Short Horns.—Hon. Geo. Brown, Bow Park, Ontario, C. W.

Twelfth Annual Report of the Massachusetts Agricultural College. 2 vols.—C. L. Flint, Boston.

Psyche Journal, Organ of the Cambridge Entomological Club. Nos. 1 to 9 inclusive.—B. Pickman Mann, Sec'y, Cambridge, Mass.

Annual Report of Agricultural Department, Washington, D. C., for 1873. 3 vols. —Fred'k Watts, Com. of Agriculture.

List of Premiums of the Iowa State Agricultural Society, for 1875.—John R. Shaffer, Sec'y, Fairfield, Ia. 20 copies.

First Annual Report of the Commissioner of Agriculture for Georgia, 1874.—Thos. P. Jones, Com. of Agriculture, Atlanta, Ga.

Nebraska State Horticultural Society. Address of the President, etc., for 1874.—D. H. Wheeler, Sec'y, Plattsmouth, Neb.

Agricultural Schools in Europe, by the Sec'y of the Mass. Board of Agriculture, C. L. Flint. 1 vol.—C. L. Flint, Sec'y, Boston.

Twelfth Annual Report of the Mass. Agricultural College. 2 vols.—C. L. Flint, Sec'y Board of Agriculture, Boston.

Transactions of the Vermont Dairymen's Association, for 1872-73-74. 3 vols.—Noted by O. S. Bliss, Sec'y and Treas.

List of Premiums and Regulations of the New York State Agricultural Society, for the 35th Annual Fair.

Consolidated Report of Crops, etc., for May, 1874.—Thos. P. James, Com. of Agriculture, Atlanta, Ga.

Sixth Annual Report of Transactions of the Vermont Dairymen's Association.—O. S. Bliss, Sec'y, Georgia, Vt.

Transactions of the Wisconsin State Agricultural Society, 1874-75.—W. W. Field, Sec'y, Madison, Wis.

Report of the Iowa State Agricultural Society, for the year 1874. 10 vols.—John Shaffer, Sec'y, Fairfield, Ia.

Nineteenth Annual Report of Maine Board of Agriculture.—S. L. Boardman, Secretary.

Twelve copies, Department of Agriculture, for 1873.—Frank Watts, Commissioner.

Annual Report of the Board of Regents of the Smithsonian Institution, 1874, 3 vols.—Prof. Joseph Henry.

Transactions of Department of Agriculture of Illinois, 1874. 20 vols.—A. M. Gailand, Secretary.

Sixth Annual Report of the Geological Survey of Indiana, by E. T. Cox, State Geologist. 6 vols.—Alex. Herron, Sec'y State Board of Agriculture.

Transactions of the Indiana Horticultural Society, for 1874.—Alex. Herron, Sec'y State Board of Agriculture.

MINERALS AND FOSSILS.

About 250 specimens have been added to the collections of Minerals and Fossils the present year, the collection now aggregating about 750 specimens. With few exceptions, these collections have been made by members of the Academy of Sciences, a co-ordinate department of this Board. Prof. B. F. Mudge has sent to the rooms numerous specimens of gypsum, calcite, and other minerals, from the western portion of the State. A list of specimens is omitted in this Report, for the reason that they have not been properly named and classified.

AGRICULTURAL SAMPLES.

Samples of corn, wheat, oats, rye, barley, buckwheat, timothy seed, millet, castor beans, flax, and cotton, together with specimens of mineral paint, lime, plaster paris, and cement, from different counties, have been placed on the conical stand in the agricultural room, for preservation and exhibition. We are endeavoring to make the collection complete by counties. Hundreds of strangers visit the rooms expressly to see the samples from the various parts of the State.

COLLECTION OF BIRDS.

The following is a list of the birds belonging to the collection in the office of the State Board of Agriculture. Eighty-nine specimens were obtained in 1874, and eighty-three added the current year:

1. *Turdus Swainsoni*—CAB.—Olive-backed thrush.
2. *Mimus Carolinensis*—(L.) GR.—Catbird.
3. *Harporhynchus rufus*—(L.) CAB.—Brown thrush, thrasher.
4. *Sialia sialis*—(L.) HALD.—Bluebird.
5. *Regulus calendula*—(L.) LICHT.—Ruby-crowned kinglet.
6. *Lophophanes bicolor*—(L.) BP.—Tufted titmouse.
7. *Parus atricapillus*—(L.)—Black-capped chickadee.
8. *Sitta Carolinensis*—GM.—White-bellied nuthatch.
9. *Sitta Carolinensis*—GM.—White-bellied nuthatch.
10. *Eremophila alpestris*—(FORST.) BOIE.—Horned lark. Male in winter plumage.
11. *Imniotilta varia*—(L.) V.—Black-and-white creeper.
12. *Parula Americana*—(L.) BP.—Blue yellow-backed warbler. Male.
13. *Helmitherus vermivorus*—(GM) BP.—Worm-eating warbler. Male.
14. *Helminthophaga pinus*—(L.) BD.—Blue-winged yellow warbler.
15. *Helminthophaga ruficapilla*—(WILS.) BD. Nashville warbler.
16. *Dendræca æstiva*—(GM.) BD.—Summer yellow warbler.
17. *Dendræca æstiva*—(GM.) BD.—Summer warbler. Male.
18. *Dendræca virens*—(GM.) BD.—Black-throated green warbler.
19. *Dendræca cærulescens*—(L.)—BD.—Black-throated blue warbler. Male.
20. *Dendræca cærulea*—(WILS.) BD.—Cerulean warbler.
21. *Dendræca coronata*—(L.) GRAY.—Yellow-rumped warbler.
22. *Dendræca Pennsylvanica*—(L.) BD.—Chestnut-sided warbler.
23. *Dendræca striata*—(FORST.) BD.—Black-poll warbler.
24. *Dendræca maculosa*—(GM) BD.—Black-and-yellow warbler.
25. *Seiurus aurocapillus*—(L.) SW.—Golden-crowned thrush.
26. *Seiurus noveborecensis*—(GM.) NUTT.—Water wagtail. Male.
27. *Oporornis formosus*—(WILS.) BD.—Kentucky warbler. Male.
28. *Geothlypis trichas*—(L.) CAB.—Maryland yellow-throat. Male.
29. *Icteria virens*—(L.) BD.—Yellow-breasted chat. Male.
30. *Icteria virens*—(L.) BD.—Yellow-breasted chat. Male.

31. *Myiodioctes mitratus*—(GM.) AUD'N.—Hooded fly-catching warbler.
32. *Myiodioctes pusillus*—(WILS.) BP.—Gr'n black-capped fly-catching warbler.
33. *Setophaga ruticilla*—(L.) SW.—Redstart. Male.
34. *Pyranga rubra*—(L.) V.—Scarlet tanager.
35. *Tachycineta bicolor*—(V.) CS.—White-bellied swallow.
36. *Ampelis cedrorum*—(V.) BD.—Cedar bird; cherry bird.
37. *Ampelis cedrorum*—(V.) BD.—Cedar bird. Male.
38. *Vireo olivaceus*—(L.) V.—Red-eyed vireo.
39. *Vireo gilvus*—(V.) BP.—Warbling vireo.
40. *Vireo flavifrons*—(V.)—Yellow-throated vireo.
41. *Vireo noveboracensis*—(GM.) BP.—White-eyed vireo.
42. *Pinicola enucleator*—(L.) V.—Pine grosbeak.
43. *Carpodacus purpureus*—(GM.) GR.—Purple Finch.
44. *Loxia leucoptera*—(WILSON)—White-winged crossbill.
45. *Chrysomitris tristis*—(L.) BP.—American goldfinch; yellowbird.
46. *Plectrophanes lapponicus*—(L.) SELBY. Lapland longspur. Donated by Chas. R. Kinsey, Silver Lake, Kansas.
47. *Plectrophanes lapponicus*—(L.) SELBY. Male.
48. *Passerculus savanna*—(WILS.) BP.—Savanna sparrow.
49. *Zonotrichia albicollis*—(GM.) BP.—White-throated sparrow.
50. *Chondestes grammaca*—(SAY.) BP.—Larkfinch. Male.
51. *Passerella iliaca*—(MERREM) SW.—Fox sparrow.
52. *Euspiza Americana*—(GM.) BP.—Black-throated bunting. Male.
53. *Goniaphea ludoviciana*—(L.) BOWDICH. Rose-breasted grosbeak.
54. *Cyanospiza amœna*—(SAY.) BD.—Lazuli finch.
55. *Cyanospiza cyanea*—(L.) BD.—Indigo bird.
56. *Cardinalis Virginianus*—(BR.) BP.—Red-bird. Male.
57. *Pipilo erythrophthalmus*—(L.) V.—Red-eyed towhee; chewink. Male.
58. *Pipilo erythrophthalmus.*—Female.
59. *Dolichonyx oryzivorus.*—(L.) SW.—Bobolink; skunk blackbird. Male.
60. *Agelæus phœniceus*—(L.) V.—Red-winged blackbird. Male.
61. *Agelæus phœniceus*—(L.) V.—Red-winged blackbird. Young male.
62. *Agelæus phœniceus*—(L.) V.—Red-winged blackbird. Female.
63. *Agelæus phœniceus*—Female.
64. *Sturnella magna*—(L.) SW.—Meadow lark; field lark.
65. *Icterus spurius*—(L.) BP.—Orchard oriole. Male. Adult.
66. *Icterus spurius*—Male. Immature.
67. *Icterus Baltimore*—(L.) DAUDIN.—Baltimore oriole.
68. *Icterus Baltimore*—(L.)—DAUDIN. Baltimore oriole. Male.
69. *Icterus Baltimore*—Female.
70. *Scolecophagus cyanocephalus*—(WAG.) CAB.—Brewer's blackbird. Male.
71. *Quiscalus purpureus*—(BART.) LICHT.—Crow blackbird. Male.
72. *Corvus Americanus*—(AUD.)—Common crow.
73. *Pica melanoleuca*—V. *var. hudsonica* (SAB.) ALL.—American magpie.
74. *Tyrannus Carolinensis*—(L.) BD.—King-bird; bee-martin.
75. *Myiarchus crinitus*—(L.) CAB.—Great crested fly-catcher.
76. *Contopus virens*—(L.) CAB.—Wood pewee.
77. *Empidonax minimus*—BD.—Least Fly-catcher.
78. *Empidonax flavirentris*—BD.—Yellow-bellied fly-catcher.
79. *Antrostomus vociferus*—(WILS.) BP.—Whip-poor-will. Adult male.
80. *Chordeiles Virginianus*—(BRISS.) BP.—Night-hawk.

81. *Trochilus colubris*—(L.)—Ruby-throated humming-bird. Male.
82. *Ceryle alcyon*—(L) BOIE.—Kingfisher.
83. *Coccyzus erythropthalmus*—(WILS.) BD.—Black-billed cuckoo.
84. *Picus pubescens*—(L.)—Downy woodpecker.
85. *Colaptes auratus*—(L.)—SW.—Golden winged woodpecker; flicker; yellow-hammer. Male.
86. *Colaptes auratus*—(L.) SW.—Female.
87. *Strix flammea*—(L.) *var. Americana* (AUD.) CO.—Barn owl.
88. *Bubo Virginianus*—(GM.) BD.—Great horned owl.
89. *Scops asio*—(L.) BP.—Screech owl.
90. *Syrnium nebulosum*—(FORST.) GR.—Barred owl.
91. *Nyctea nivea*—(DAUD.) GR.—Snowy owl.
92. *Nauclerus furcatus*—(L.) VIG.—Swallow-tailed kite.
93. *Accipiter fuscus*—(GM.) BP —Sharp-shinned hawk.
94. *Falco polyagrus*—(BD.)—Prairie falcon.
95. *Falco sparverius*—(L.)—Sparrow-hawk.
96. *Buteo borealis*—(GM.) V.—Red-tailed buzzard. Young male.
97. *Archibuteo sancti-johannis*—(GM.)—Rough-legged buzzard. Black hawk.
98. *Archibuteo ferruginous*—(LICHT.)—Great ferruginous buzzard.
99. *Pandion haliaetus*—(L.) SAV.—Fish-hawk.
100. *Tetrao obscurus*—(SAY.)—Dusky grouse. Male.
101. *Tetrao obscurus*—Female.
102. *Pediœcetes phasianellus*—(L.) ELL.—Sharp-tailed grouse. Female.
103. *Cupidonia cupido*—(L.) BD.—Pinnated grouse; prairie hen. Male.
104. *Cupidonia cupido*—(L.) BD.—Prairie hen. Female.
105. *Bonasa umbellus*—(L.) STEPH.—Ruffed grouse. Male.
106. *Ortyx Virginianus*—(L.) BP.—Quail. Male.
107. *Ortyx Virginianus*—(L.) BD.—Quail. Female.
108. *Charadrius Virginicus*—(BORCK.)—Golden plover. Male (spring).
109. *Charadrius Virginicus*—Immature.
110. *Aegialitis vociferus*—(L.) CASS.—Kildeer plover.
111. *Philohela minor*—(GM.) GR.—American woodcock. Female.
112. *Gallinago Wilsoni*—(TEMM) BP —Wilson's snipe.
113. *Recurvirostra Americana*—(GM.)—Avocet.
114. *Steganopus Wilsoni*—(SAB.) CS.—Wilson's phalarope.
115. *Macrorhamphus griseus*—(GM. LEACH.—Red-breasted snipe
116. *Macrorhamphus griseus*—(GM.) LEACH.—Red-breasted snipe. Young.
117. *Tringa maculata*—(V)—Pectoral sandpiper.
118. *Ereunetes pusillus*—(L.) Cass.—Semi-palmated sandpiper.
119. *Totanus melanoleucus*—(GM.)—Greater Tell-tale. Spring plumage.
120. *Limosa fedoa*—(L. ORD.—Marbled godwit. Male.
121. *Limosa fedoa*—Female.
122. *Numenius longirostris*—(WILS.)—Long-billed curlew.
123. *Numenius borealis*—(FORST.) LATH.—Esquimaux curlew.
124. *Ardea herodias*—(L.)—Great blue heron.
125. *Nyctiardea grisea*—(L.) STEPH., *var nœvia*—BODD (ALLEN.)—Night heron. Adult male.
126. *Nyctiardea nœvia*—Night heron. Immature. Female.
127. *Botaurus minor*—(GM.)—Bittern.
128. *Porzana Carolina*—(L.) V.—Carolina rail.
129. *Fulica Americana*—(GM.)—Coot.

130. *Anser hyperboreus*—(PALL.)—Snow goose. Male.
131. *Anser hyperboreus*—Female.
132. *Anser albifrons, var. Gambeli*—(HARTL.) Cs.—White-fronted goose.
133. *Branta bernicla*—(L.)—Brant goose. Female.
134. *Branta Canadensis*—(L.)—Canada goose; wild goose. Male.
135. *Anas Obscura*—(GM.)—Dusky duck. Male.
136. *Dafila acuta*—(L.) JENYNS.—Pintail.
137. *Dafila acuta*—(L.)—Pintail. Female.
138. *Chaulelasmus streperus*—(L.) GR.—Gadwall; grey duck. Male.
139. *Mareca Americana*—(GM.)—Widgeon. Male.
140. *Moreca Americana*—Female.
141. *Querquedula Carolinensis*—(GM.)—Green-winged teal Male.
142. *Querquedula discors*—(L.) STEPH.—Blue-winged teal. Male.
143. *Querquedula discors*—Female.
144. *Spatula clypeata*—(L.) BOIE.—Shoveler.
145. *Aix sponsa*—(L.) BOIE.—Wood duck; summer duck. Male.
146. *Aix sponsa*—(L.) BOIE.—Wood duck. Male.
147. *Aix sponsa*—Female.
148. *Fuligula affinis*—(EYTON.)—Lesser blackhead duck. Male.
149. *Fuligula affinis*—Female. Immature.
150. *Fuligula collaris*—(DONOVAN.) BP.—Ring-necked duck.
151. *Fuligula vallisneria*—(WILS.)—Canvas back.
152. *Bucephala clangula*—(L.) GR.—Golden eye.
153. *Bucephala albeola*—(L.) BD.—Butter-ball.
154. *Bucephala albeola*—(L.) BD. Ruffle-head. Female.
155. *Erismatura rubida*—(WILS.) BP.—Ruddy duck. Male.
156. *Erismatura rubida*.—Female.
157. *Mergus merganser*—(L.)—Merganser. Female.
158. *Mergus serrator*—(L.)—Red-breasted merganser.
159. *Mergus serrator*—(L.)—Red-breasted merganser.
160. *Mergus cucullatus*—(L)—Hooded merganser. Male.
161. *Mergus cucullatus*—Female.
162. *Pelecanus trachyrhynchus*—(LATH)—White pelican. Male.
163. *Pelecanus trachyrhynchus*.—Female.
164. *Graculus dilophus*—(SW.)—Double-crested cormorant. Male.
165. *Graculus dilophus*—Female.
166. *Larus argentatus*—(BRUNN.)—Herring gull; common gull. Adult female.
167. *Larus argentatus*—(BRUNN.) (?)—Herring gull. Immature.
168. *Larus Delawarensis*—(ORD.)—Ring-billed gull.
169. *Sterna hirundo*—(L.)—Wilson's tern; common tern. Male.
170. *Sterna Forsteri*—(NUTT.)—Forster's tern.
171. *Colymbus torquatus*—(BRUNN.)—Loon.
172. *Podiceps cristatus*—(L.) (LATH.) Crested grebe.

PROF. W. K. KEDZIE'S REPORT.

It is with great pleasure that we present the following report of Prof. W. K. Kedzie, of the State Agricultural College, and Chemist to this Board. It will be seen that a system of exchange and inter-communication has been arranged between this Board and the leading Agricultural Institutes of the Old World, and, if cultivated, must be of great interest and benefit to us as a State.

KANSAS STATE AGRICULTURAL COLLEGE, CHEMICAL DEPARTMENT,
November 10, 1875.

To the Secretary of the State Board of Agriculture:

DEAR SIR:—In accordance with your request, I hereby submit to you a brief report of my own observations, during a recent visit to the agricultural experiment stations of Europe, more particularly those of Germany, which have recently taken so high a rank. As a complete account of the work and objects of these institutions would occupy an entire volume, it is obviously beyond the province of this report to attempt anything further than a very brief outline of the methods of European farm culture, as illustrated by what was courteously shown me by the authorities of a few of the principal stations. On March 29th last, just before sailing from New York, I received from your office the following general letter of introduction:

OFFICE OF KANSAS STATE BOARD OF AGRICULTURE,
TOPEKA, March, A. D. 1875.

Prof. W. K. Kedzie, Chemist to the Kansas State Board of Agriculture, is hereby appointed and commissioned to represent this Board in Continental Europe and Great Britain in making investigations of experiment stations and museums of agricultural organizations, and to make arrangements for a mutual exchange of publications and products.

In testimony whereof, we have hereunto subscribed our names, and affixed our official seal.

GEORGE T. ANTHONY, *President.*

ALFRED GRAY, *Secretary.*

With copies of the above commission in English, German and French, and with similar official letters of introduction from Governor Osborn and the United States Secretary of State, I found myself cordially received, and every facility and opportunity for examination freely offered. I, at the same time, received from your office a dozen volumes of the Report of your Board for the year 1874, which I carefully distributed among the more prominent Agricultural Societies of England and Germany. I was much gratified at the general admiration which the handsome appearance of the volume elicited; even those to whom English was an unknown tongue, at once appreciating the graphic manner in which the general features and resources of Kansas are pictured by the abundance of maps and charts, which the Report contains.

Probably nothing will impress itself more strongly on the attention of the American traveler over continental Europe, than the great variety and diversity of the methods of farm culture which there prevail. While a man may journey for many hundred miles over the continent of America, without observing any essential difference either in the kind or character of farm crops, or in the general methods of

farm management, he will find in traveling the same distance across the continent of Europe, quite as many different systems as there are nations practicing them. These systems he will observe varying in all shades and degrees of completeness, from almost perfection on the one hand to a culture so shabby and slovenly that it would be deemed a disgrace to the worst frontier farming in America. Over many portions of the continent also, there is a notable absence of improved farm machinery; and through countries where the most improved implements are generally in use, they will very generally be found to have originated from either English or American inventions. A professor of agricultural mechanics in one of the foremost of German Universities, recently said to me, "It is to the inventive genius of you Americans that we in Germany must look for our improved farm implements."

The two most important factors which enter into the problem of national farm economy, are upon the two continents of course almost wholly reversed. Here land is cheap and farm labor correspondingly expensive. There, land is in many countries, scarcely to be purchased at any price, and from the density of population farm labor is so low-priced as hardly to be said to have a market value.

Throughout the better portion of England the combination of circumstances is such as to produce perhaps the most ideally perfect system of farm culture in existence. From their enormous population and from the great value of farming lands, it of course becomes a matter of national importance to make the best use of them possible. The combination of English farming lands into large estates, render it possible for them to realize the benefits resulting from the employment of large capital. Improved and complicated farm machinery is here seen in all its perfection—steam plows being not infrequently employed; thorough underdrainage is carried to its utmost limit; natural and commercial manures are employed in quantities which, to us, would appear excessive. And as a natural result of this system of "high farming," the crops which follow are in many cases enormous.

On the other hand, just across the English channel, in the little province of Belgium, the peculiarities of "small farming" are seen in all their perfection. This is strikingly seen in the tract of country lying between the cities of Ghent and Antwerp, known as the Walsland, once a barren moor, but now probably the most fertile and productive tracts of farming land in existence. The farms are rarely over from five to ten acres in extent, and the cultivation ordinarily bestowed on a choice garden bed, is here given to every acre of land throughout the province. In consequence of the small size of the estates, the methods of culture are of the simplest imaginable type, the labor being performed by the entire family, men, women and children.

The number of crops removed from the land each year is astonishing, and it is no infrequent sight to find the man of the household harvesting one crop, while close behind him, the family cow and donkey yoked together and driven by the woman, are doing the plowing for the immediately succeeding crop. With such a system of cropping, the amount of manure applied each year is of course immense, in some cases as high as sixty tons to the acre; and a farm of ten acres will not infrequently be found to be carrying from thirty-five to forty head of stock. Again, proceeding farther east and south-east upon the continent, the character of the farm culture once more changes.

Through some portions of Germany and Austria, the traveler will be carried for miles through a country entirely undivided by fences, blossoming with most luxuriant crops, and yet without a habitation in sight for long distances. The pictur-

esque isolation of farm life, as commonly prevailing in America, is in this region almost wholly unknown, the cottages of the farm laborers being grouped together in little clumps or villages, and the laborers themselves frequently walking considerable distances to their farm work. But especially interesting to a Kansan, is the region extending further south, through the peninsula of Italy. No observant traveler through this region, can fail to be strikingly impressed by the strong similarity existing between certain portions of Kansas, and of Central Italy, both in the nature of the climate and the general features and appearance of the countries. The frequent and somewhat boastful allusion to Kansas as "the Italy of America" is by no means so entirely without foundation in fact as is generally supposed. The similarity is also rather heightened than otherwise, by the abundance of the long-horned and long-limbed breed of cattle, plainly of Spanish descent, the well-known origin of the Texas cattle, so prominent in the stock trade of this State. But no traveler can have failed to admire the remarkable thrifty and thorough farm culture of many portions of Central Germany. This condition is in no small degree due to these agricultural experiment stations, for which Germany has so long been famous. The Germans have always understood the importance of a thorough understanding, and equally thorough application of chemical principles in the growth of farm crops. There is probably no people among whom the work of the agricultural chemist is held in so high favor, and every facility and encouragement is offered him. In the prosecution of his investigations from Germany, these experiment stations have extended to nearly every portion of Europe, a good number being now in existence in France, and several through Northern Italy.

The valuable results which have accrued to the practical agriculture of every region where they have been established, can hardly be over-estimated. They are frequently incorporated with the *Landwirthschaftlichen Academies*, which correspond quite closely to our own agricultural colleges, and these, in their turn, have frequently a general connection with some one of the large universities.

Sometimes these stations are established under the special supervision of the agricultural society of the province, in which they are located. They all receive Government aid, and in return, are required to make to the Minister of Agriculture, at Berlin, a rigid report of their investigations throughout the year, in connection with such general statistics as may be demanded, which are published in an official volume. Any failure on the part of the reporter in rigid accuracy in the return of these reports and statistics, is followed by serious official censure. These stations are invariably under the supervision of some man who has distinguished himself by special research in some one of the sciences specially relating to practical agriculture. One of the first of these institutions which I visited, was the Agricultural Academy of Popplesdorf, near the University of Bonn, and under the able supervision of Dr. Dünkelberg. I was here placed under special obligations to the courtesy of Prof. Geissler, who spent an entire day with me in the examination of the various departments of the Academy. This institution has now been established some twenty-five years, and is well supplied with buildings and apparatus. Its chemical laboratories, three in number, are arranged with great convenience for the special examinations of farm products, manures, etc. The museums of commercial manures, and of food products, are exceedingly full and complete. Connected with the Academy is a fine farm, divided into two portions, of which one is devoted to *pure* experiments,—that is, the use of manures and the growth of crops without reference to cost, for the determination of chemical principles. The other portion is the experimental farm proper, in which the question of profit and loss is most carefully considered, both in the application of manures and the crops

produced therefrom. Minute attention is here given to the best methods in the growth of the cereals. A field was pointed out to me, which for twenty successive years had been sown to wheat without manure; on one portion, broadcast, by hand, upon the other, sown by drill. The difference in favor of the latter was very striking. I was also shown a field of rye, which, during the preceding season, had been cut three times for green fodder, then wintered over, and when I saw it, was heading out and promising to produce a heavy yield of grain. The plan was strongly recommended by the farm superintendent. The farm is also very well stocked; their favorite breed of cattle being a cross between the Holstein, or Dutch cattle, and the English Short Horn. This cross produces large fine animals, remarkable as milk producers, both in quantity and quality. The botanist of the Academy, Dr. Körnicke, also exhibited to me his collection of seeds and grain products, without doubt the most complete and extensive in Europe.

As desired, I have made preliminary arrangements for an exchange between your office and the Academy, not only of reports and publications, but also securing the promise of a complete set of the commercial manures in general use in that portion of Germany, with their value as fertilizers attached, and also a complete suite of their farm products. They desire, in return, full sets of the farm products of Kansas, more particularly specimens of the smaller cereals — Indian corn in the ear, cotton, flax, and the castor bean.

The Agricultural Academy of Hohenheim has, until quite recently, held the highest rank among similar institutions in Germany. It is now, probably, equaled in every respect by that of Halle, which I next visited. I was here particularly indebted to the courtesies of Prof. Wüst, who very affably exhibited to me the full workings of the Academy. The general plan and design is, of course, very similar to the Academy of Popplesdorf, though in some respects it is conducted on a more extended plan. Upon the grounds of the Academy is a small, but well filled agricultural laboratory, under the special direction of the agricultural society of the province, which will illustrate very fully the work commonly performed by the laboratories of these experiment stations. It controls the entire manufacture and sale of all commercial manures within the province. Dealers are compelled to forward to this laboratory fair samples of all their fertilizers; these are analyzed and the price graded accordingly. The director of the laboratory has power at any time to send an assistant to any factory to collect such samples as he chooses; and the manufacturer is bound to abide by the result of the analysis. Thus all frauds and adulterations, so frequently perpetrated by these manufacturers in this country, are avoided. In the same manner, all samples of wool produced in the province are examined in this laboratory, the amount of water contained estimated, as well as the waste resulting from washing and cleaning; and both buyers and sellers make their bargains upon results obtained by the chemist. All fraud or loss to either party is thus entirely prevented. The general agricultural laboratory of the Academy is exceedingly large and well regulated — the work of its students being principally directed to the chemical examination of farm soils. Connected therewith is also a microscopic laboratory for the investigation of fungoid diseases frequently infesting farm crops. The farm in connection with the Academy is wholly experimental, and exceedingly well handled. Manufacturers of farm machinery send their implements here to be tested, and after thorough trial the tool is returned to them, with a certificate stating its value.

Their collection of sheep is not only the largest but the most numerous in variety that I saw upon the continent. I found Dr. Kühn, the Director of the Academy, desirous of making the same preliminary arrangements with your Board for an

exchange of products and publications, as in the case of the Academy of Poppiesdorff. He promises particularly to furnish you a complete suite of the wools of Continental Europe, and probably possesses better facilities for completing such a collection than any other collector on the continent. He desires, in return, to obtain typical sets of the farm products and resources of the State; and as he is now prosecuting important investigations as to the causes of smut, rust and other fungoid diseases of cereals, he desires to obtain specimens of diseased grain, as it occurs in this State. It will be quite unnecessary for me to enumerate the many other stations which I visited, and examined with great care, for while each has some specially distinctive feature of its own, their general plan and design are much the same. Of the experimental stations proper, probably none is more important than that under charge of Prof. Kuhn, at Moeckern, near Leipzig, under the direction of the Agricultural Society of the province. A large experimental farm is in connection with this station, and it leases more land as needed from the surrounding farmers.

Its laboratory performs exceedingly important work in the examinations of manures, wools, etc., and in experimenting upon the feeding of animals. Particularly interesting to me was the station of the Academy in connection with the University of Leipzig, whose experimental laboratory is under the able direction of Prof. Stohman. This laboratory was, without exception, the most extensive and complete of the kind that I visited. A large proportion of its work is devoted to the thorough investigation upon the nutrition of animals; in which the effect of different methods of feeding is very carefully determined, both by examination of the animal excrements, and in the measurement of the amount of carbonic acid and watery vapor respired. In this examination, an ox undergoing a certain process of feeding is placed in a large air-tight room built of sheet-iron, and connected with a complicated respiratory apparatus, by which means the effect and comparative value of the food, as shown by its influence upon the respiration, is easily determined.

But no account of the experimental enterprises of European agriculture would be worthy of notice, which omitted the celebrated farm of Lawes and Gilbert, at Rothamstead, near London, England. I was particularly fortunate in my visit there, finding myself most opportunely in the midst of a party of some fifteen members of the Royal Agricultural Society of England, headed by Dr. Voelcker, the able chemist of the Society, and with them made my survey of their extensive series of experiments.

The estate is an extensive one, of some 2,000 acres, the property of Mr. Lawes, and the series of farm experiments there in progress are probably the most reliable and extended in existence. One of our own countrymen, Dr. Pugh, at one time President of the State Agricultural College of Pennsylvania, was for some time connected with them in this work. With the assistance and supervision of the eminent chemist, Dr. Gilbert, the investigations which have been here in progress, have been not only deeply interesting to chemists, but in every way as valuable and important to practical farmers. Every experiment, while conducted with scrupulous care and nicety, is carried on in a style which is equally practical and comprehensive. Many of the absurd and visionary theories which Liebig was so fond of promulgating among the farmers of Germany, were quietly exploded by fair and impartial experiments upon this farm at Rothamstead. Of course, but the merest outline of the many interesting features of this farm can be here given.

Their experiments in the growth of grasses for the production of hay, are especially interesting. In these investigations, they consider the hay as a *crop*, and treat it as such; and so startling are the results which they have obtained by the contin-

uous use of particular manures, for a long period of years, that their fifteen experimental grass belts, though stretching side by side, are as distinctly separated in color to the eye as if fenced off into as many different fields. I was here shown a clover patch which, by careful treatment, had grown a healthy crop of clover for the past twenty years, without the least indication of "clover sickness."

Their experiments upon the growth and manuring of small grain of all kinds—and especially upon a large number of varieties of wheat, have been carried on upon a vast scale, and for a long period of years. The great length of time required to completely exhaust the effect of even a single heavy dressing of manure, was well shown in the case of a field of wheat, which, once manured, had been successively cropped to wheat, without any further fertilizing, for fourteen years; and yet was constantly increasing in yield. It was estimated that at least thirty years more would be required to completely exhaust the effect of the one application of manure.

The investigations here in progress upon the influence of rainfall upon the yield of crops, and of loss by drainage waters, are also very extended. An immense rain gauge exposing a surfaee of the one-thousandth of an acre is employed. By means of a circular pit, carefully built up with masonry, the entire drainage waters are collected in a large number of vessels, and carefully examined to ascertain what loss or change of condition the plant food of the soil has undergone. The laboratory of the farm in which Dr. Gilbert's work has been performed, contains over 20,00 bottles of soils, vegetable and animal products, etc., carefully labeled with results of analysis.

The work which has been accomplished at this farm, at Rothamstead, very justly stands at the very head of all enterprises in experimental agriculture, and may well be a subject of national pride.

I cannot close this necessarily brief account without expressing my firm conviction, that in this extensive experimental work, from which the agriculturalists of Europe are realizing such incalculable good, there is much which we, here in Kansas, may study with great benefit.

Any proposition to introduce these German experimental stations into this country has heretofore been scoffed at as impracticable, because the methods of culture in the two countries are so wholly diverse.

Such an objection seems wholly uncalled for These experiment stations of Germany devote themselves to that work which the agriculture of Germany imperatively needs. But for an experiment station in Kansas, such work would be as wholly out of place, as the introduction into our midst of the complex and expensive methods of European tillage. A Kansas experiment station, when once established, must devote itself to solving questions which vitally concern the needs of Kansas agriculture. Such questions, usually involving some chemical consideration, are daily occurring; and if for their solution, such an experimental station could be established—naturally under the direction of the State Agricultural College, and in correspondenc with your own office—there need be little fear but that its work and influence would be heartily valued and appreciated throughout the State.

Respectfully,

WM. K. KEDZIE,
Chemist, State Board of Agriculture.

DEPARTMENT OF AGRICULTURE, VICTORIA, AUSTRALIA.

A letter was received by the Secretary of this Board, from the Secretary for Agriculture, Victoria, Australia, acknowledging the receipt of the Third Annual Report, and stating that this Board had been placed on their regular list for exchange of publications and products.

Subsequently two packages, one of blue gum and one of red gum seed, were received for popular distribution, accompanied by the following letter:

DEPARTMENT OF AGRICULTURE, VICTORIA,
MELBOURNE, August 24, 1875.

DEAR SIR:—I have the pleasure to inform you that I have transmitted by this opportunity, one packet each of blue gum and red gum seed, which I trust will reach you in good order.

The blue gum and red gum are both valuable timber trees, and they delight to grow in swampy land, the former is famous for possessing the property of dispersing fevers, and rendering fever-stricken districts healthy; and, unlike the red gum, will thrive in high lying as well as marshy land. The red gum produces a very valuable timber, which is unsurpassed for piles and railway sleepers, and is likewise proof against the ravages of the white ant.

I shall be glad to receive in return, any cereal and other agricultural seeds that you may be able to send me.

Yours truly, A. R. WALLIS,
Secretary for Agriculture.

ROCKY MOUNTAIN LOCUST INVASION.

The Report of this Board for 1874 gave a history of the locust invasion of that year, the destruction of crops, the consequent temporary destitution, and the action of the extra session of the Legislature to provide for the same. We continue the history for future reference.

Upon the assembling of the regular session of the Legislature in January, 1875, the Governor requested of this office a detailed statement concerning the extent of destitution caused by the destruction of crops by locusts, together with an estimate of amount and probable cost of rations and clothing, seed for spring planting, and

feed for work animals, which would have to be supplied to prevent suffering and to enable farm operations to progress. The estimates were made in detail, and transmitted to the Legislature by the Governor in the following message:

GOVERNOR'S MESSAGE.

REPORT OF STATE BOARD OF AGRICULTURE ON DESTITUTION.

STATE OF KANSAS, EXECUTIVE DEPARTMENT,
TOPEKA, January 26, 1875.

To the House of Representatives: I transmit, herewith, a detailed report of the Secretary of the State Board of Agriculture, showing the condition of the State as regards destitution, and the necessities of the people with reference to seed, forage, etc. As this statistical information has been gathered at the cost of much labor, and as it is peculiarly valuable at the present juncture, I suggest the propriety of printing a considerable number of copies of the report, in order that the numerous requests for precise information may be conveniently and fully responded to.

T. A. OSBORN.

OFFICE KANSAS STATE BOARD OF AGRICULTURE,
TOPEKA, January 23, 1875.

To the Governor—SIR: In compliance with your request for a synopsis of data returned to this office, relating to destitution, rations, clothing, seed for spring planting, and feed for work animals, I have to report, that late in December blanks, covering the subject matters of inquiry, were sent to members of the legislature elect, press of the State, chairman of boards of county commissioners, county clerks, secretaries of county agricultural organizations, and many other correspondents, with a request that the said blanks be carefully filled and returned to this office. Responses have been received from all organized counties except Comanche, Harper, Kingman and Ness. In several counties, boards of county commissioners called the township trustees together, which consumed considerable time, and which is one reason of this long delay. Reports thus obtained are official, and it has been deemed important to obtain as many as possible. The State has been divided into five parts or groups, according to the reported destitution, from the commencement of the grasshopper affliction until the present time, which classification will be found in the tables.

The following statements show by counties and groups: the cultivated or improved area in the first column; in the second, the area of winter wheat sown last fall; in the third, that of rye; in the fourth, that of meadow and pasture under fence; the sum of the three latter deducted from the first or aggregate improved area leaves the number of acres for spring planting. The cultivated area, including meadow and pasture, is compiled from assessors' returns on file in this office; that of wheat and rye from the reports of our correspondents in the several counties. In these tables there is no allowance for sod turned over since last spring. The increase in cultivated area on this account is inconsiderable in the eastern counties, but in the western and southwestern it is large—an allowance for which has been made in the computation in another place of seed required for spring planting.

FIRST GROUP.

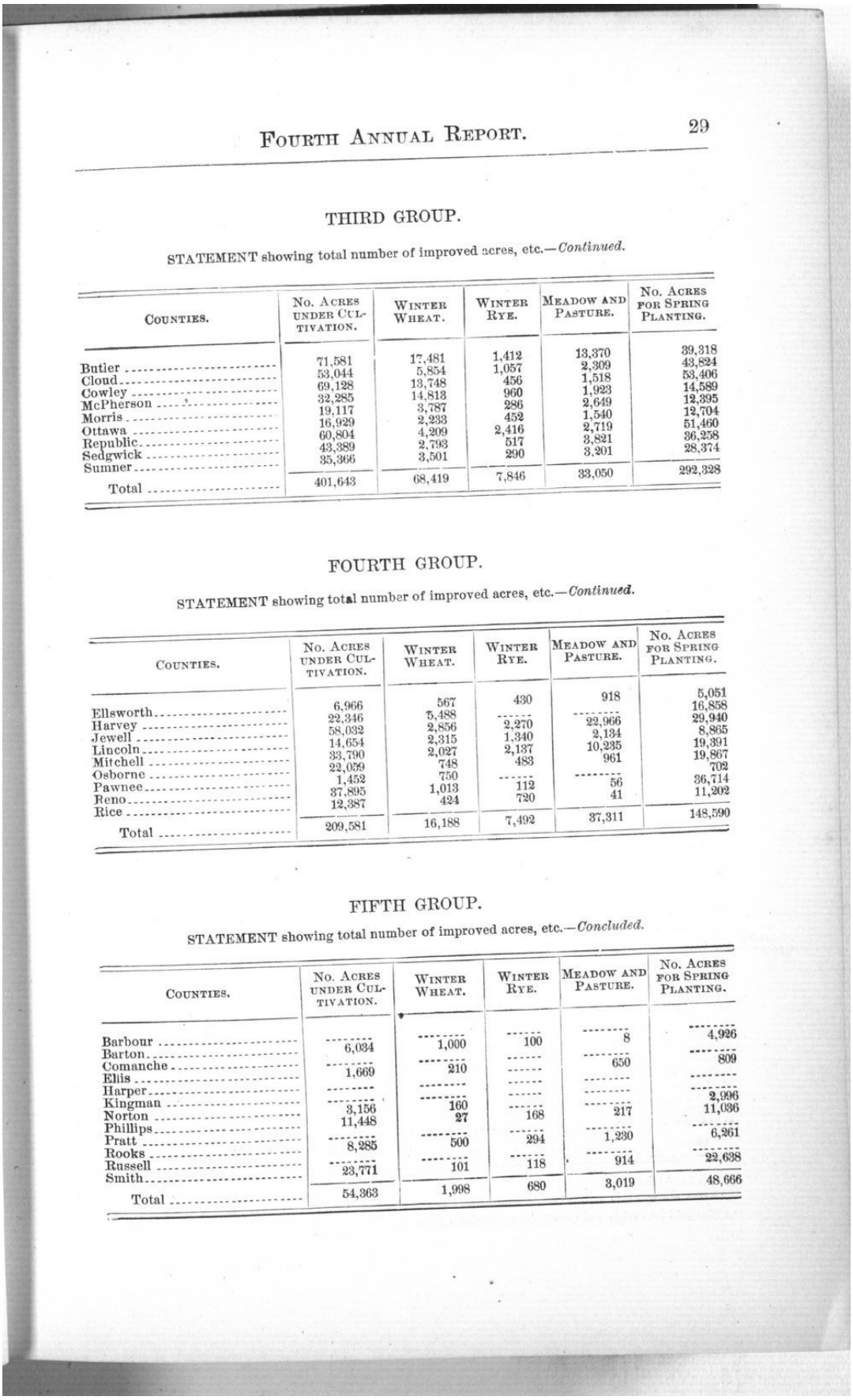
STATEMENT showing total number of improved acres, and the number sown to Winter Wheat and Rye in the fall of 1874, the number in Meadow and Pasture, and the number remaining for Spring Planting in the spring of 1875, for the counties named.

COUNTIES.	No. ACRES UNDER CULTIVATION.	WINTER WHEAT.	WINTER RYE.	MEADOW AND PASTURE.	No. ACRES FOR SPRING PLANTING.
Atchison	95,301	16,223	1,222	27,312	50,544
Bourbon	99,514	5,732	509	27,762	65,511
Brown	123,340	24,039	1,496	26,781	71,024
Cherokee	99,438	25,746	138	24,165	49,389
Coffey	60,817	6,110	387	17,482	36,838
Crawford	87,194	14,684	566	23,822	48 122
Doniphan	94,017	23,587	509	8,451	61,470
Ford	95	-------	------	-------	95
Franklin	65,443	1,457	215	20,491	43,280
Greenwood	43,716	6,672	298	11,436	25,310
Johnson	129,271	15,854	832	36,690	75,885
Labette	113,521	40,502	262	30,854	41,903
Leavenworth	116,946	9,792	603	31,817	74,734
Linn	94,906	3,978	602	27,552	62,774
Lyon	63,044	12,253	589	20,568	29,634
Miami	141,724	4,794	321	54 264	82,345
Montgomery	91,568	14,796	177	32,586	44.009
Neosho	70.674	12,192	406	25,499	32,577
Shawnee	83,920	7,884	978	18,788	56,270
Wallace	-------	-------	------	-------	-------
Wilson	88,392	14,327	1,204	39,239	33,622
Woodson	42,103	2,217	390	19,797	19,699
Wyandotte	29,460	5,934	256	5,209	18,061
Total	1,834,404	268,783	11,960	530,565	1,023,096

SECOND GROUP.

STATEMENT showing the number of improved acres, etc.—*Continued.*

COUNTIES.	No. ACRES UNDER CULTIVATION.	WINTER WHEAT.	WINTER RYE.	MEADOW AND PASTURE.	No. ACRES FOR SPRING PLANTING.
Allen	68,498	3,308	202	28,655	36,333
Anderson	47,778	1,760	301	14,329	31,388
Chase	24,123	3,827	160	9,013	11,123
Clay	48,137	8,477	1,496	5,882	32,282
Davis	22,805	3,651	525	6,279	12,350
Dickinson	51,887	18,787	678	8,489	23,933
Douglas	109,144	10 575	1,290	46,546	50,733
Howard	87,604	10,714	225	25,532	51,133
Jackson	87,753	11,392	818	28,587	46,956
Jefferson	119,190	10,136	645	32,543	75,866
Marion	24,680	12,903	740	2,212	8,825
Marshall	72,202	9,916	917	8,782	52,587
Nemaha	60,784	4,656	1,032	12,523	42,573
Osage	87,531	15,584	818	29,968	41,161
Pottawatomie	63,252	4,709	123	13,020	45,400
Riley	38,542	3,264	321	10,307	24,650
Saline	54,740	18,054	2,148	3,983	30,555
Wabaunsee	35,033	3,955	546	8,613	21,919
Washington	66,105	11,234	1,913	11,478	41,480
Total	1,069,788	166,902	14,898	306,741	181,247



THIRD GROUP.

STATEMENT showing total number of improved acres, etc.—*Continued.*

COUNTIES.	No. ACRES UNDER CULTIVATION.	WINTER WHEAT.	WINTER RYE.	MEADOW AND PASTURE.	No. ACRES FOR SPRING PLANTING.
Butler	71,581	17,481	1,412	13,370	39,318
Cloud	53,044	5,854	1,057	2,309	43,824
Cowley	69,128	13,748	456	1,518	53,406
McPherson	32,285	14,813	960	1,923	14,589
Morris	19,117	3,787	286	2,649	12,395
Ottawa	16,929	2,233	452	1,540	12,704
Republic	60,804	4,209	2,416	2,719	51,460
Sedgwick	43,389	2,793	517	3,821	36,258
Sumner	35,366	3,501	290	3,201	28,374
Total	401,643	68,419	7,846	33,050	292,328

FOURTH GROUP.

STATEMENT showing total number of improved acres, etc.—*Continued.*

COUNTIES.	No. ACRES UNDER CULTIVATION.	WINTER WHEAT.	WINTER RYE.	MEADOW AND PASTURE.	No. ACRES FOR SPRING PLANTING.
Ellsworth	6,966	567	430	918	5,051
Harvey	22,346	5,488	------	------	16,858
Jewell	58,032	2,856	2,270	22,966	29,940
Lincoln	14,654	2,315	1,340	2,134	8,865
Mitchell	33,790	2,027	2,137	10,235	19,391
Osborne	22,059	748	483	961	19,867
Pawnee	1,452	750	------	------	702
Reno	37,895	1,013	112	56	36,714
Rice	12,387	424	720	41	11,202
Total	209,581	16,188	7,492	37,311	148,590

FIFTH GROUP.

STATEMENT showing total number of improved acres, etc.—*Concluded.*

COUNTIES.	No. ACRES UNDER CULTIVATION.	WINTER WHEAT.	WINTER RYE.	MEADOW AND PASTURE.	No. ACRES FOR SPRING PLANTING.
Barbour	------	------	------	------	------
Barton	6,034	1,000	100	8	4,926
Comanche	------	------	------	------	------
Ellis	1,669	210	------	650	809
Harper	------	------	------	------	------
Kingman	------	------	------	------	------
Norton	3,156	160	------	------	2,996
Phillips	11,448	27	168	217	11,036
Pratt	------	------	------	------	------
Rooks	8,285	500	294	1,230	6,261
Russell	------	------	------	------	------
Smith	23,771	101	118	914	22,638
Total	54,363	1,998	680	3,019	48,666

SUMMARY.

NUMBER OF GROUP.	NO. ACRES UNDER CULTIVATION.	WINTER WHEAT.	WINTER RYE.	MEADOW AND PASTURE.	NO. ACRES FOR SPRING PLANTING.
First	1,834,404	268,783	11,960	530,565	1,022,606
Second	1,179,788	166,902	14,898	306,741	684,247
Third	401,643	68,419	7,846	33,050	292,318
Fourth	209,581	16,188	7,492	37,311	148,590
Fifth	54,363	1,998	680	3,019	48,676
Total	3,679,779	522,290	42,876	910,686	2,196,437

DESTITUTION.

The following tables show, by counties and by groups, the population on the first of March, 1874, as returned by the county assessors, except where otherwise noted, and indicate the number of persons requiring rations, men's clothing, women's clothing, and children's clothing, respectively. The marginal notes indicate the counties that claim to be self-supporting, etc. All that relate to destitution is taken from data received up to date, and is an impartial compilation, preference having been given to official reports.

FIRST GROUP.

STATEMENT of population and estimated destitution to date for the counties named.

COUNTIES.	POPULATION.	NO. PERSONS NEEDING RATIONS.	NO. NEEDING MEN'S CLOTHING.	NO. NEEDING WOMEN'S CLOTHING.	NO. NEEDING CHILDREN'S CLOTHING.	REMARKS.
Atchison	18,234	------	------	------	------	Self-supporting.
Bourbon	17,231	------	------	------	------	Self-supporting.
Brown	8,418	------	------	------	------	Self-supporting.
Cherokee	10,980	------	------	------	------	Self-supporting.
Coffey	6,818	------	------	------	------	Self-supporting.
Crawford	8,318	------	------	------	------	Self-supporting.
Doniphan	13,370	------	------	------	------	Self-supporting.
Ford	333	------	------	------	------	Self-supporting.
Franklin	11,646	------	------	------	------	Self-supporting.
Greenwood	6,339	------	------	------	------	Self-supporting.
Johnson	13,478	------	------	------	------	Self-supporting.
Labette	13,265	------	------	------	------	Self-supporting.
Leavenworth	27,935	------	------	------	------	Self-supporting.
Linn	10,859	------	------	------	------	Self-supporting.
Lyon*	12,340	930	100	100	329	Rep't B'd Co. Com'rs.
Miami	12,370	------	------	------	------	Self-supporting.
Montgomery	10,946	------	------	------	------	Self-supporting.
Neosho	11,324	550	200	200	400	Self-supporting.
Shawnee*	20,916	------	------	------	------	Self-supporting.
Wallace*	600	------	------	------	------	Self-supporting.
Wilson	9,372	------	------	------	------	Self-supporting.
Woodson	4,861	325	------	------	------	No estimate of clothing.
Wyandotte	11,551	------	------	------	------	Self-supporting.
Total	261,534	1,805	300	300	729	

*Census of 1873.

NOTE.—Reports received since compiling the foregoing table indicate that 200 will cover all that is necessary to supply with rations in Woodson county.

Reports of the Kansas State Board of Agriculture

SECOND GROUP.

STATEMENT of population and estimated destitution, etc.—*Continued.*

COUNTIES.	POPULATION.	NO. PERSONS NEEDING RATIONS.	NO. NEEDING MEN'S CLOTHING.	NO. NEEDING WOMEN'S CLOTHING	NO. NEEDING CHILDREN'S CLOTHING.	REMARKS.
Allen	6,953	300	------	50	250	
Anderson	6,213	800	107	81	138	
Chase	2,903	50	------	------	------	No report; clothing needed.
Clay	4,689	70	30	30	50	Some destitution; they think of voting bonds.
Davis	5,079	375	100	100	300	
Dickinson	6,407	200	100	100	250	No estimate of clothing.
Douglas	23,262	800	------	------	------	
Howard	13,872	600	300	600	600	Self-supporting.
Jackson	6,583	------	------	------	------	Chairman Co. Comm'rs.
Jefferson	12,498	675	500	500	1,000	Self-supporting.
Marion	4,066	200	50	75	150	Self-supporting.
Marshall	10,122	------	------	------	------	
Nemaha	8,041	250	250	250	500	
Osage	10,837	875	150	500	700	
Pottawatomie	10,054	982	114	206	665	
Riley	6,737	150	100	100	150	
Saline*	8,742	------	50	50	100	
Wabaunsee	4,663	1,000	150	175	250	
Washington	7,860	600	200	400	1,000	
Total	159,481	7,927	2,201	3,217	6,103	

THIRD GROUP.

STATEMENT of population and estimated destitution, etc.—*Continued.*

COUNTIES.	POPULATION.	NO. PERSONS NEEDING RATIONS.	NO. NEEDING MEN'S CLOTHING.	NO. NEEDING WOMEN'S CLOTHING.	NO. NEEDING CHILDREN'S CLOTHING.
Butler	90.76	1,000	45	55	90
Cloud	7,165	775	400	500	500
Cowley	9,584	475	400	500	500
McPherson	4,837	600	175	175	325
Morris	4,306	1,090	294	296	443
Ottawa*	4,070	400	150	150	250
Republic	8,020	1,000	600	600	1,000
Sedgwick	7,429	1,175	800	1,000	1,200
Sumner	5,602	1,500	300	700	1,000
Total	60,089	8,015	3,164	3,976	5,308

FOURTH GROUP.

STATEMENT of population and estimated destitution, etc.—*Continued.*

COUNTIES.	POPULATION.	NO. PERSONS NEEDING RATIONS.	NO. NEEDING MEN'S CLOTHING.	NO. NEEDING WOMEN'S CLOTHING.	NO. NEEDING CHILDREN'S CROTHING.
Ellsworth	3,273	325	200	300	300
Harvey*	3,600	1,109	140	142	380
Jewell†	7,674	1,500	------	------	------
Lincoln	2,220	750	200	200	200

*Census of 1873. †No estimate for clothing.

FOURTH GROUP—Statement of population and estimated destitution, etc.—*Continued.*

COUNTIES.	POPULATION.	NO. PERSONS NEEDING RATIONS.	NO. NEEDING MEN'S CLOTHING.	NO. NEEDING WOMEN'S CLOTHING.	NO. NEEDING CHILDREN'S CLOTHING.
Mitchell	5,473	1,000	500	300	1,000
Osborne	3,890	1,425	350	250	600
Pawnee	710	180	.....	50	50
Reno	6,467	1,862	300	300	600
Rice	2,396	875	200	100	300
Total	35,703	9,026	1,890	1,642	3,430

FIFTH GROUP.

STATEMENT of population and estimated destitution, etc.—*Concluded.*

COUNTIES.	POPULATION.	NO. PERSONS NEEDING RATIONS.	NO. NEEDING MEN'S CLOTHING.	NO. NEEDING WOMEN'S CLOTHING.	CHILDREN'S CLOTHING.	REMARKS.
Barbour*	608	262	100	50	100	
Barton†	860	1,000	.....	.....	.....	Reasonably supplied with clothing.
Comanche‡	250	.....	.....	.....	.....	No report.
Ellis and unorganized cos. Ness and Rush	1,325	512	.....	.....	.....	No estimate of clothing.
Harper§	300	.....	.....	.....	.....	No report.
Kingman‡	300	.....	.....	.....	.....	No report.
Norton	844	600	.....	.....	.....	No estimate of clothing.
Phillips	2,409	1,100	.....	.....	.....	No estimate of clothing.
Pratt‡	300	100	.....	.....	.....	
Rooks	567	517	142	73	102	
Russell	815	250	80	100	150	
Smith	4,460	1,500	200	400	550	
Total	13,038	5,841	522	623	902	

* Census of 1873.
† Barton county is said to contain a population of 2,000.
‡ Estimated on the 1st of March, 1874.
§ Contains not more than 100 population.

SUMMARY.

NUMBER OF GROUP.	POPULATION.	NO. PERSONS NEEDING RATIONS.	NO. NEEDING MEN'S CLOTHING.	NO. NEEDING WOMEN'S CLOTHING.	NO. NEEDING CHILDREN'S CLOTHING.
First	261,534	1,805	300	300	729
Second	159,481	7,927	2,201	3,217	6,103
Third	60,089	8,015	3,164	3,976	5,308
Fourth	35,703	9,026	1,890	1,642	3,430
Fifth	13,038	5,841	522	623	902
Total	529,845	32,614	8,077	9,758	16,472

The cost of furnishing rations to those reported destitute, from the first of February until the first of June, inclusive, is computed as follows: A ration, or daily allowance of food for one person, is one pound and six ounces of flour, or one

pound and four ounces of meal; one pound and four ounces of salt or fresh beef, twelve ounces of pork or bacon; and to every one hundred rations, fifteen pounds of beans or peas; ten pounds of green coffee, fifteen pounds of sugar, three pounds and twelve ounces of salt, four ounces of pepper, and one quart of molasses. A few unimportant and inexpensive items are omitted.

The Kansas Central Relief Committee are purchasing supplies at the following prices, to wit:

Flour	$1.75 to $2.00 per 100 lbs.
Corn meal	1.60 per 100 lbs.
Beans	1.87 per bushel.
Salt pork	7.50 per 100 lbs.
Salt beef	$4.00 to 4.50 per 100 lbs.

The beans are purchased in Chicago, but as railroads transport supplies free, these are the prices at the distributing points.

The market prices of the other articles named are as follows: sugar, 8c.; coffee, 26c.; salt, $2.50 per bbl.; molasses, 60c.

At the foregoing prices, a daily ration will cost:

For beef	.055	For salt	.00066
For flour	.027	For pepper	.00075
For beans	.018	For syrup	.00060
For coffee	.026		
For sugar	.012	Total	140.01

From the foregoing, the following table of cost of supporting the destitute may be of some interest:

GROUPS.	NO. OF DESTITUTE.	COST OF MEAT, FLOUR & BEANS, AT 10C. PER RATION, FOR 120 DAYS.	COST OF COFFEE, SUGAR, SALT, PEPPER & SYRUP, AT 4C. PER RATION, FOR 120 DAYS.	TOTAL COST AT 14C. PER RATION, FOR 120 DAYS.
First group	1,805	$21,660	$ 8,664 00	$ 30,324 00
Second group	7,927	95,124	38,049 60	133,173 60
Third group	8,015	96,180	38,472 00	134,652 00
Fourth group	9,026	108,312	43,324 80	150,636 80
Fifth group	5,841	70,092	28,036 80	99,128 80
Total	32,614	$391,368	$156,547 20	$547,915 20

The number reported destitute are now, or very soon will be, compelled to depend upon charity. By comparing the statements of destitution of the various counties with those previously made, a noticeable increase is reported in some counties. This is as might have been expected. As sustenance is consumed, additions are constantly being made to the unfortunate list of those who must be aided.

The amount of destitution reported in some counties seems to be out of proportion to that reported in others. This difference in some cases is real, on account of local damage from chinch bugs and from other causes, but in a great measure

is owing to the various constructions which are placed upon the statutes, relating to the care of the poor, and the issuance of county warrants for that purpose. To explain this, it becomes necessary to refer to the statutes in question. Section 4, of chapter 79, of the General Laws of 1868, provides that "every county shall relieve and support all poor and indigent persons lawfully settled therein, whenever they shall stand in need thereof." Section 181, of chapter 25, General Laws of 1868, provides: "In counties where the taxable property is less than $5,000,000, the board of county commissioners shall not levy a tax for the current expenses of any one year of over one per cent. on the dollar of such valuation; and in counties where the taxable property is $5,000,000 and upwards, the tax for such purposes shall not exceed one-half of one per centum upon such valuation in any one year, unless by a direct vote of the electors of the county."

Section 1 of "An act to restrain the issuing of county warrants" (see page 295, general statutes of 1868), provides, among other things, that "it shall be unlawful for any board of county commissioners or county clerk to issue county warrants or orders, in any one year, to a greater amount than the amount of the county tax levied in the same year to defray county charges and expenses, less the amount levied for delinquencies." Some construe the "poor laws" strictly, and claim that they have power only to provide for *paupers;* while others, with more liberality, are inclined to help those who require aid temporarily. Then, too, by some it is claimed that the other provisions of law, above quoted, restrain them from the issuance of county warrants even in case of extraordinary destitution, whenever the tax levy is consumed in county charges, or when the current expenses have reached the one per cent. or one-half of one per cent., as the case may be, on the dollar of taxable property. It is also claimed that the restriction of the issuance of relief bonds to one-half of one per cent. on the assessed valuation, in the act of the special session, renders the act practically inoperative.

These tables of destitution should be considered in connection with the statutes in question, together with a statement compiled by Auditor Wilder, showing, by counties, amount of outstanding county warrants, amount of bonded indebtedness, total amount of taxable property, and total taxes for all purposes. (See p. 90 of auditor's report for 1874.)*

Because of this difference in the construction of the statutes; because the authorities in some counties resolutely determine to ask for nothing but seed, while those of others report all destitution of an extraordinary character, it is impossible to use the reported destitution as a basis of computation for an estimate for seed. Hence the system of classification adopted.

* Some counties reported self-sustaining have soliciting agents asking for outside aid. Some of the same counties, through local relief societies and others, are persistently asking for rations and clothing. Unless legal obstacles can be removed to the issuance of county bonds or warrants for the aid of those who are *temporarily destitute* in consequence of the extraordinary afflictions of the year, this declaration of "self-sustaining" is a farce, and must culminate in great suffering in the absence of outside benefactions.

SEED.

STATEMENT showing kinds, qualities and value of seeds required for spring planting.

SEED.	FIRST GROUP.	SECOND GROUP.	THIRD GROUP.	FOURTH GROUP.	FIFTH GROUP.	TOTAL BUSH.	TOTAL VALUE.
Spring wheat...bu.	3,067	4,110	3,507	3,565	2,336	16,585	
val.	$2,453 60	$3,288 00	$2,805 60	$2,852 00	$1,868 80		$13,268 00
Corn.....bu.	2,556	3,421	2,923	2,972	1,947	13,819	
val.	$2,556 00	$3,421 00	$2,923 00	$2,972 00	$1,947 00		13,819 00
Barley.....bu.	511	684	584	594	389	2,762	
val.	$766 50	$1,026 00	$876 00	$891 00	$583 50		4,143 00
Oats.....bu.	6,391	8,553	7,300	7,427	4,867	34,538	
val.	$3,834 60	$5,131 80	$4,380 00	$4,456 20	$2,920 20		20,722 80
Irish potatoes...bu.	3,577	4,789	4,090	4,158	2,723	19,337	
val.	$3,577 00	$4,789 00	$4,090 00	$4,158 00	$2,723 00		19,337 00
Castor beans...bu.	8	11	9	9	6	43	
val.	$12 00	$16 50	$13 50	$13 50	$9 00		64 50
Flax.....bu.	511	171	146	594	97	1,519	
val.	$1,022 00	$342 00	$292 00	$1,188 00	$194 00		3,038 00
Broom corn ...bu.	8	11	9	9	6	43	
val.	$16 00	$22 00	$18 00	$18 00	$12 00		86 00
Millet & Hung'n bu.	383	513	438	1,782	292	3,408	
val.	$383 00	$513 00	$438 00	$1,782 00	$292 00		3,408 00
Buckwheat.....bu.	39	51	44	44	29	207	
val.	$57 75	$76 50	$66 00	$66 00	$43 50		309 75
Sorghum .....bu.	9	13	11	6	7	46	
val.	$18 00	$26 00	$22 00	$12 00	$14 00		92 00
Hemp .....bu.	31	43	36	36	23	169	
val.	$93 00	$129 00	$108 00	$108 00	$69 00		507 00
Total value	$14,789 45	$18,780 80	$16,032 10	$18,516 70	$10,676 00		$78,795 05

We have assumed, from all the data that we have, that outside aid will be required for .025 per cent. of the cultivated acreage in the first group; .05 per cent in the second; 10 per cent. in the third; 20 per cent. in the fourth; and 40 per cent. in the fifth, together with the unorganized counties. The following statement shows the per cent., which was planted of each of the principal crops in the spring of 1874, and the basis of computation for 1875.

CROPS.	PER CENT. SOWN IN 1874.	BASIS FOR 1875.
Spring wheat	.120	.080
Corn	.660	.700
Barley	.010	.010
Oats	.130	.100
Buckwheat	.003	.003
Potatoes	.020	.020
Sweet Potatoes	.001	----------
Sorghum	.006	.006
Castor beans	.003	.005
Flax	.007	.010
Hemp	.001	.001
Broom Corn	.003	.005
Millet and Hungarian	.020	.030
Crops not named	.016	.030
Total	1.000	1.000

By reference to the foregoing statement, it will be observed that the percentage of the different crops of 1874 has been changed a little in making the estimate for next spring. Thus, spring wheat has been reduced from .12 to .08 per cent.; corn has been increased from .66 to .70 per cent.: oats reduced from .13 to .10 per cent.; flax has been increased from .007 to .01 per cent.; broom corn increased from .003 to .005; millet and Hungarian from .02 to .03. This leaves for crops not named .03 per cent. These changes have been made in accordance with what are evidently the wants of the State. The wants of the several counties will vary somewhat, but a rule had to be adopted as a basis of calculation. Still other changes could be made. Buckwheat could be stricken from the list entirely, as it is not a paying crop in Kansas. As a matter of economy, corn could be increased, and oats and spring wheat diminished, in a like ratio. Seed corn is worth $1 per bushel, and one bushel will plant seven acres; oats are worth 60 cents per bushel, and require at least 2½ bushels per acre. In the one case, the cost of seed is 14 cents per acre, in the other, $1.50. Whenever it is practicable to do so, if seed could be obtained, flax could be increased with great benefit to the farmers of the State. Nearly all the flax sown in the State, thus far, has been practically mortgaged to oil mills beyond its limits. The following letter from the Collier White Lead Company, of St. Louis, will explain the manner of doing this:

ST. LOUIS, January 16, 1875.

Secretary State Board of Agriculture, Topeka, Kansas.

DEAR SIR: Yours of the 14th instant is at hand, and contents noted. We have stored in your State at—

Leavenworth, bushels of flax seed	1,500
Topeka, bushels of flax seed	1,000
Chanute, bushels of flax seed	1,000

Which will be loaned to farmers on condition of 1¼ bushels being returned for each bushel loaned, and the crop contracted to us at $1.25 per bushel, delivered at each loaning point. We have no more to spare, and do not know where any can be obtained.

Very truly yours,

ALEX. EUSTON, *Secretary.*

One condition of the proposition is that the crop must be "delivered at each loaning point." It matters not how many intervening stations there may be between the loaning point and where the crop is raised, the crop must be delivered at the loaning point, at the expense of the producer. Local freights being large, this is no small item. But the most objectionable condition is the sale of the product at a price below market rates, which necessarily sends it out of the State to be manufactured. While this policy prevails, capital will not seek investment in oil mills in our own State, and the profits of producers are greatly diminished. Another reason why the crop might be increased to an advantage, is the fact that the crop can be converted into money about three months after it is sown—a very important consideration the present year. A certain per cent. of early corn is desirable for early feeding. Seed obtained from New York will ripen in July.

The foregoing estimate does not include garden vegetable seeds. The Department of Agriculture has been requested, in the event of furnishing seeds, to include only such as are the earliest, and will produce the greatest amount of nutritious diet. The following we named, in the order of preference: early corn, peas, beans, beets, onions, turnips, cabbage, lettuce and cucumbers, and that they should be put up in packages of such size as to do the recipient some good. Such seed as asparagus,

celery, egg plant, parsley, salsify, spinach, etc., which will cost fully as much as the first named, can be omitted, and thereby furnish a much larger amount of the former.

The Department of Agriculture has also been requested that if seed for field planting be furnished, it be turned over in bulk, as the small packages of two quarts each of wheat, rye, oats, etc., would not do any good.

Efforts are being made to secure broom corn seed. Wherever planted in the State, it has given very satisfactory results. The seed per acre will cost a trifle, and could be increased with profit to the producer.

Arrangements have been made with J. F. Webber, Esq., Secretary of the St. Louis Tobacco Association, for tobacco seed. The following is the proposition of Mr. Webber:

ST. LOUIS, January 19, 1875.

Secretary State Board of Agriculture:

DEAR SIR: I am in receipt of your letter, and would say that I have for distribution the following tobacco seed: Yellow Pryor, Oronka and White Stem. I think the White Stem would suit your soil; it will make either a good shipper or manufacturer. I will furnish seed to any farmer that will write to me, or any names that you will send. We also have instructions on the culture, that I will send to you. I shall be glad to hear from you at any time, and shall be pleased to attend to any names you may send me. Respectfully,

J. F. WEBBER.

Castor beans have been a profitable crop in some parts of the State. As it is claimed that this product will poison stock, Prof. W. K. Kedzie, chemist of the Board, has undertaken to make an analysis of the seed. During the growing season, analyses will be made of the plant. The object is to discover where and what the poisonous properties are, and to point out an antidote.

A large demand for millet seed comes from the western counties. While cotton is not mentioned in the list, an increased area will be planted in the southern tier of counties. Notwithstanding this difference in the wants of the several counties, the basis of computation adopted gives a relative cash value of cost of seed for each county, according to the ratio of cultivated area, and per cent. of estimated want for outside aid. We have thus particularized, as it seems to be an auspicious time, in the event of State aid for seed, to give direction to some of these important industries.

FEED FOR WORK ANIMALS.

The number of rural population in the following statement is obtained by deducting the population of the principal towns of a given county from the entire population thereof; the number of families, by dividing the farm population by five east of the sixth principal meridian, and by four west of that line; the number of horses, by computing one team of two horses to each family: the corn by adopting the Government standard of twelve pounds for a day's ration; and the value by computing the cost at eighty cents per bushel. The period for which this computation is made is sixty days—the shortest time that a team can be fed and be expected to do spring work.

FIRST GROUP.

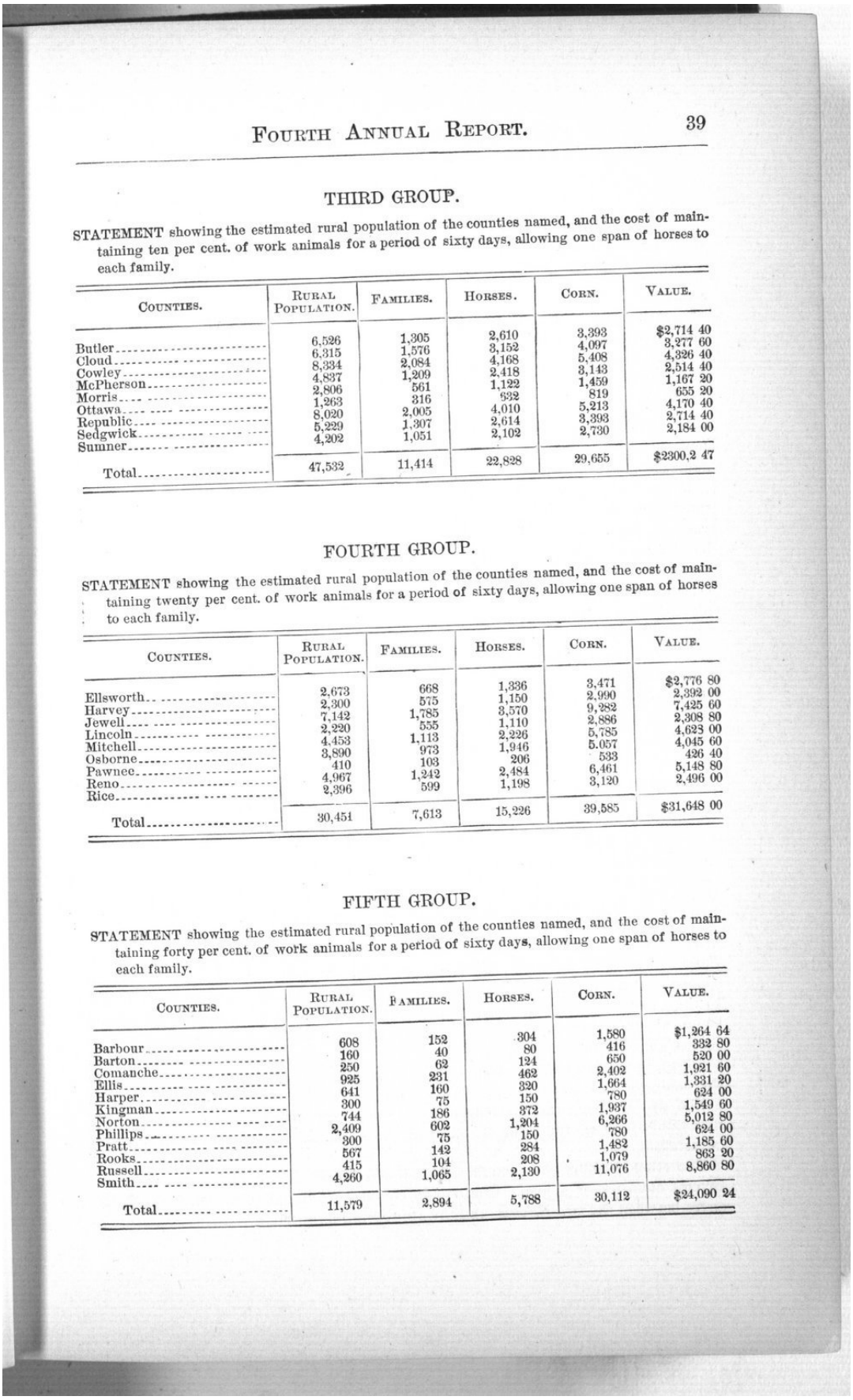
STATEMENT showing the estimated rural population of the counties named, and the cost of maintaining 2½ per cent. of work animals for a period of sixty days, allowing one span of horses to each family.

COUNTIES.	RURAL POPULATION.	FAMILIES.	HORSES.	CORN.	VALUE.
Atchison	8,916	1,783	3,566	1,159	$ 927 16
Bourbon	12,102	2,426	4,852	1,577	1,261 52
Brown	7,618	1,524	3,048	990	792 48
Cherokee	9,338	1,868	3,736	1,214	971 36
Coffey	4,418	884	1,768	574	459 68
Crawford	7,348	1,470	2,940	955	764 40
Doniphan	8,870	1,774	3,548	1,153	922 40
Ford	333	83	166	52	41 60
Franklin	8,096	1,619	3,238	1,053	842 40
Greenwood	5,639	1,128	2,256	728	582 40
Johnson	10,499	2,100	4,200	1,365	1,092 00
Labette	9,370	1,874	3,748	1,218	974 40
Leavenworth	11,467	2,293	4,586	1,490	1,192 00
Linn	8,159	1,632	3,264	1,061	848 80
Lyon	8,890	1,778	3,556	1,151	920 80
Miami	10,195	2,039	4,078	1,326	1,060 80
Montgomery	10,946	2,189	4,378	1,423	1,138 40
Neosho	8,474	1,695	3,390	1,102	881 60
Shawnee	12,916	2,583	5,166	1,677	1,341 60
Wallace	600	150	300	91	72 80
Wilson	7,272	1,454	2,908	949	759 20
Woodson	4,649	930	1,860	598	478 40
Wyandotte	7,434	1,487	2,974	962	769 60
Total	183,549	36,953	73,526	23,868	$19,095 80

SECOND GROUP

STATEMENT showing the estimated rural population of the counties named, and the cost of maintaining 5 per cent. of work animals for a period of sixty days, allowing one span of horses to each family.

COUNTIES.	RURAL POPULATION.	FAMILIES.	HORSES.	CORN.	VALUE.
Allen	5,323	1,065	2,130	1,384	$1,107 20
Anderson	5,013	1,003	2,006	1,304	1,043 20
Chase	2,403	481	962	625	500 00
Clay	3,859	778	1,556	1,011	808 80
Davis	2,929	586	1,172	762	609 60
Dickinson	4,907	981	1,962	1,275	1,020 00
Douglas	14,362	2,872	5,744	3,731	2,984 80
Howard	12,572	2,514	5,028	3,363	2,690 40
Jackson	5,533	1,108	2,216	1,440	1,152 00
Jefferson	10,598	2,120	4,240	2,756	2,204 80
Marion	2,960	592	1,184	770	616 00
Marshall	7,222	1,444	2,888	1,877	1,501 60
Nemaha	6,241	1,248	2,496	1,622	1,329 60
Osage	7,987	1,597	3,194	2,080	1,664 00
Pottawatomie	8,454	1,691	3,382	2,197	1,757 60
Riley	4,987	997	1,994	1,300	1,040 00
Saline	3,146	787	1,574	1,027	821 60
Wabaunsee	4,199	840	1,680	1,092	873 60
Washington	6,560	1,312	2,624	1,703	1,362 40
Total	119,255	24,016	48,032	31,319	$25,087 20



THIRD GROUP.

STATEMENT showing the estimated rural population of the counties named, and the cost of maintaining ten per cent. of work animals for a period of sixty days, allowing one span of horses to each family.

COUNTIES.	RURAL POPULATION.	FAMILIES.	HORSES.	CORN.	VALUE.
Butler	6,526	1,305	2,610	3,393	$2,714 40
Cloud	6,315	1,576	3,152	4,097	3,277 60
Cowley	8,334	2,084	4,168	5,408	4,326 40
McPherson	4,837	1,209	2,418	3,143	2,514 40
Morris	2,806	561	1,122	1,459	1,167 20
Ottawa	1,263	316	632	819	655 20
Republic	8,020	2,005	4,010	5,213	4,170 40
Sedgwick	5,229	1,307	2,614	3,393	2,714 40
Sumner	4,202	1,051	2,102	2,730	2,184 00
Total	47,532	11,414	22,828	29,655	$2300.2 47

FOURTH GROUP.

STATEMENT showing the estimated rural population of the counties named, and the cost of maintaining twenty per cent. of work animals for a period of sixty days, allowing one span of horses to each family.

COUNTIES.	RURAL POPULATION.	FAMILIES.	HORSES.	CORN.	VALUE.
Ellsworth	2,673	668	1,336	3,471	$2,776 80
Harvey	2,300	575	1,150	2,990	2,392 00
Jewell	7,142	1,785	3,570	9,282	7,425 60
Lincoln	2,220	555	1,110	2,886	2,308 80
Mitchell	4,453	1,113	2,226	5,785	4,623 00
Osborne	3,890	973	1,946	5,057	4,045 60
Pawnee	410	103	206	533	426 40
Reno	4,967	1,242	2,484	6,461	5,148 80
Rice	2,396	599	1,198	3,120	2,496 00
Total	30,451	7,613	15,226	39,585	$31,648 00

FIFTH GROUP.

STATEMENT showing the estimated rural population of the counties named, and the cost of maintaining forty per cent. of work animals for a period of sixty days, allowing one span of horses to each family.

COUNTIES.	RURAL POPULATION.	FAMILIES.	HORSES.	CORN.	VALUE.
Barbour	608	152	304	1,580	$1,264 64
Barton	160	40	80	416	332 80
Comanche	250	62	124	650	520 00
Ellis	925	231	462	2,402	1,921 60
Harper	641	160	320	1,664	1,331 20
Kingman	300	75	150	780	624 00
Norton	744	186	372	1,937	1,549 60
Phillips	2,409	602	1,204	6,266	5,012 80
Pratt	300	75	150	780	624 00
Rooks	567	142	284	1,482	1,185 60
Russell	415	104	208	1,079	863 20
Smith	4,260	1,065	2,130	11,076	8,860 80
Total	11,579	2,894	5,788	30,112	$24,090 24