

Transactions of the Kansas State Board of Agriculture, 1873

Section 5, Pages 121 - 150

This annual report from the Kansas State Board of Agriculture includes information on livestock and other agricultural topics. Also covered are county statistics for population, acreages, productions, live stock, and assessed valuation of property. Information on the Ninth Annual State Fair and the Transactions of the Sixth Annual Meeting of the Academy of Science is also included.

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Table showing the product of each principal Crop—Continued.

NEMAHA.	Rock Creek.....	Washington.....	Nemaha.....	Clear Creek.....	Richmond.....	Cyprian.....	Valley.....	Home.....	Harrison.....	Granada.....	Red Vermilion.....	Neosho.....	Total.....
Acres. Winter wheat.....	623	96	79	41	451	347	181	419	92	654	332	26	3,341
Spring wheat.....	762	481	503	608	1177	446	592	1016	215	425	486	345	7,056
Rye.....	9	11	29	15	65	.....	12	113	35	40	66	14	409
Corn, on sod.....	79	43	116	205	23	8	64	95	32	6	.....	42	733
Corn, on old.....	3341	1131	2113	1451	2793	2047	1677	2588	1103	2472	1360	702	22,778
Barley.....	144	49	21	6	114	.....	43	99	22	52	12	121	683
Oats.....	919	279	374	302	839	663	586	1412	310	714	347	290	7,037
Buckwheat.....	10	4	17	34	9	36	70	162	85	13	6	35	481
Potatoes, Irish.....	67	32	44	75	98	21	81	99	76	58	22	45	718
Potatoes, sweet.....	.....	.....	.....	.....	10	.....	.....	1	.....	.....	.....	.....	12
Sorghum.....	6	13	14	12	18	1	26	17	17	8	10	18	160
Castor beans.....	.....	.....	.....	.....	.....	.....	1	37	.....	.....	.....	.....	38
Cotton.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.74
Flax.....	162	70	.....	.....	.....	.....	.....	2	.....	45	.....	.....	279.25
Hemp.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tobacco.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.75
Timothy, meadow.....	11	.....	11	5	4	14	5	19	.....	12	.....	1	82
Clover do.....	31	.....	4	3	6	4	3	9	.....	3	.....	6	69
Millet do.....	46	8	55	44	27	6	89	157	4	38	11	12	497
Hungarian do.....	.....	.....	.....	.....	.....	.....	1	23	.....	18	53	4	99
Prairie do.....	757	192	661	24	253	416	702	825	.....	337	14	.....	4,181
Blue-grass, pasture.....	.....	.....	14	.....	.....	.....	.....	.....	.....	30	.....	.....	44
Timothy do.....	.....	.....	4	.....	.....	.....	.....	.....	.....	2	.....	.....	6
Clover do.....	.....	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	9
Prairie incl'd, past.....	1116	70	765	97	230	3289	85	2847	.....	1112	30	.....	9,641
Total acreage for 1873.....	8083	2479	4833.75	2924.62	6107	7310	4219.12	9940.25	2011	6040	2749	1661	58,357.74

NEOSHO.	Centerville.....	Wadsworth.....	Stanhope.....	Lincoln.....	Big Creek.....	Troop.....	Grange.....	Canville.....	Ladore.....	Bite.....	Mason.....	Chadron.....	Total.....
Acres. Winter wheat.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	29
Spring wheat.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	32
Rye.....	469	81	213	291	146	148	132	213	565	96	79	205	2632
Corn, on old land.....	3355	3619	2432	3222	3856	2759	2812	2151	3424	4121	2272	1926	35949
Barley.....	.....	.....	.....	1	10	45	7	83	.....	32	6	4	188
Oats.....	888	1229	354	795	1847	888	908	623	875	862	1420	699	11388
Buckwheat.....	.....	.....	13	3	14	5	4	41	15	17	1	47	160
Potatoes, Irish.....	164	128	111	137	280	100	121	97	43	123	97	98	1499
Potatoes, sweet.....	12	2	3	.....	3	2	10	7	21	5	.....	.....	65
Sorghum.....	48	5	46	18	35	38	26	20	38	14	7	19	314
Castor beans.....	10	.....	20	15	10	98	.....	.....	.....	.....	1	17	171
Cotton.....	1.25	.....	.50	.....	22	1	4	2	.50	24	.....	.....	55.25
Flax.....	2	48	.....	3	52	21	.....	13	2	117	7	.....	265
Hemp.....	.....	.....	.....	27	10	.....	.....	.....	.....	.....	.....	.....	37
Tobacco.....	7.50	.....	.....	1	4	.....	.....	3	.50	2	.....	.....	18
Timothy in meadow.....	36	.....	.....	6	10	74	10	.....	8	15	77	30	266
Clover do.....	58	.....	8	8	9	40	1	8	69	18	95	25	339
Millet do.....	59	94	23	24	24	8	22	38	45	21	12	30	490
Hungarian do.....	23	.....	.....	64	64	90	19	90	66	15	7	.....	438
Prairie do.....	695	36	168	1251	7848	1848	25	438	1030	1140	2537	.....	17016
Blue-grass in pasture.....	3	.....	.....	.....	.....	120	.....	.....	.....	35	.....	25	183
Timothy do.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	.....	.....	8
Clover do.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6
Prairie incl, pasture.....	3815	3702	535	4879	3964	3100	2067	1437	3825	2583	4929	1586	36122
Total acreage for 1873.....	9642.75	8944	3926.50	10744	17905	9395	6170	5264	10027	9246	11547	4740	107551.25



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Tables showing the acreage of each principal Crop—Continued.

OTTAWA.	Burlington 1...	Burlington 2...	Centre...	Concord...	Osborne...	Puncheon...	Logan...	Osborne 1...	Osborne 2...	Total
No. acs. Winter wheat.....	119	179	207	274	50	22	139	75	95	1,160
Spring wheat	257	354	638	477	162	294	883	278	386	3,729
Rye	36	22	67	37	.....	16	46	1	14	239
Corn, on sod	167	116	200	113	15	145	626	100	102	1,584
Corn, on old land	253	369	878	526	326	358	1,303	383	311	4,707
Barley	27	21	26	36	12	1	184	2	28	357
Oats.....	107	178	311	164	66	28	315	162	156	1,487
Buckwheat.....	.....	.....	.....	15	.....	.....	.....	.....	.....	15
Potatoes, Irish.....	8	18	40	27	5	23	64	30	27	242
Potatoes, sweet.....	.....	.....	.....	1	.....	.....	2	.....	.....	3
Sorghum.....	.....	.....	10	.....	.....	15	10	.....	.....	40
Castor beans .....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Cotton .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Flax	25	.....	.....	.....	.....	.....	.....	.....	.....	25
Hemp.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tobacco .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Timothy in meadow.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clover do .....	.....	.....	.....	5	.....	.....	1	.....	3	9
Millet do .....	.....	.....	.....	34	.....	5	.....	.....	.....	39
Hungarian do	13	45	2	.....	.....	.....	6	89	76	231
Prairie do .....	.....	160	.....	.....	.....	.....	.....	270	.....	430
Blue-grass in pasture.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Timothy do .....	.....	.....	.....	.....	.....	.....	.....	.....	4	4
Clover do .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Prairie do	130	480	.....	20	.....	.....	111	268	88	1,097
Total acreage for 1873.....	1,117.25	1,942	2,379	1,732	636	907	3,690	1,658	1,293	15,354.25

OSAGE.	Junction.....	Osborne.....	Puncheon.....	Atwood.....	Agency.....	Valley Brook.....	Burlington.....	Dresden.....	Superior.....	Total
No. acs. Winter wheat.....	695	666	448	377	1,540	1,106	995	211	334	6,372
Spring wheat.....	27	93	151	329	301	57	172	106	9	1,245
Rye.....	64	55	11	14	286	.....	73	20	54	577
Corn, on sod	91	200	83	167	542	75	50	34	48	1,290
Corn, on old land.....	3,699	2,920	4,080	1,663	8,038	3,274	3,419	1,815	1,874	30,782
Barley .....	.....	10	89	.....	7	35	14	11	6	172
Oats.....	700	731	667	259	1,545	274	901	312	131	5,520
Buckwheat	6	100	95	.....	12	.....	24	8	2	247
Potatoes, Irish.....	116	168	153	70	304	.....	188	107	58	1,164
Potatoes, sweet.....	.....	3	2	.....	13	.....	.....	.....	.....	18
Sorghum	34	52	26	.....	95	.....	.....	6	.....	213
Castor beans.....	26	22	39	.....	37	.....	.....	.....	.....	130
Cotton.....	.....	.....	.....	.....	2	.....	.....	.....	6	2
Flax .....	.....	30	84	.....	19	.....	.....	.....	.....	133
Hemp.....	10	.....	.....	.....	.....	.....	.....	.....	.....	15
Tobacco	25	1	.....	8	19.75	.....	.....	5	.....	29
Timothy in meadow.....	19	5	22	2	37	6	53	44	.....	188
Clover do	12	11	2	13	53	.....	105	24	.....	221
Millet do	247	.....	61	.....	479	.....	82	232	.....	1,101
Hungarian do	45	6	87	.....	23	.....	180	42	.....	383
Prairie do	2,546	1,311	.....	1,580	11,002	.....	1,854	1,642	180	20,115
Blue-grass in pasture.....	.....	.....	.....	.....	1	.....	60	4	.....	65
Timothy do .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clover do .....	.....	12	30	.....	.....	.....	.....	2	.....	44
Prairie do	705	945	804	276	36,463	.....	245	340	2,235	42,013
Total acreage for 1873.....	9,042.25	7,341	6,934	4,758	60,808.75	4,827	8,416	4,965	4,937	112,029

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Table showing the acreage of each principal Crop—Continued.

	Post.....	Bedford.....	Sumner.....	Tulsa.....	Pennington.....	Carroll.....	Bloom.....	Wagoner.....	Kill Creek.....	Independence.....	Liberty.....	Total.....
OSBORNE.												
No. acres Winter wheat.....	14	165	6	37	100	205	6	25	28	30	113	738
Spring wheat.....	99	104	52	25	85	67	22	41	73	7	13	588
Rye.....	12	8	24	37	13	28			2	5		129
Corn, on sod.....	106	593	165	65	403	214	204	104	80	107	154	2,195
Corn, on old land.....	708	825	364	469	1160	786	241	487	229	555	212	6,036
Barley.....	11	26	9		6	2			1			55
Oats.....	111	92	23	27	126	101	6	14	19	6	41	566
Buckwheat.....	5				16	1		1				23
Potatoes, Irish.....	23	40	12	10	31	32	10	9	6	10	7	190
Potatoes, sweet.....	1											3
Sorghum.....	35	29	12	2	25	28	5	17	4		2	159
Castor beans.....												
Cotton.....		.37				.37						.74
Flax.....						.13						.13
Hemp.....												
Tobacco.....	1											1
Timothy in meadow.....		3				1						4
Clover do.....						1				1		2
Millet do.....	22	53	58		55	8	157	225		36	34	648
Hungarian do.....	11	5			6	4						26
Prairie do.....	335	218	88			1478	840		170	280	838	4,247
Blue-grass in pasture.....												
Timothy do.....												
Clover do.....												
Prairie do.....		1377			95	93	91			210		1,866
Total acreage for 1873.....	1494	3538.37	813	672	2121	3049.50	1582	923	612	1256	1416	17,476.87

	St. George.....	Blue.....	Green.....	Shannon.....	Clear Creek.....	Rock Creek.....	Potomac.....	Mill Creek.....
POTTAWATOMIE.								
No. acres Winter wheat.....	369	779	67	270	117	82	419	435
Spring wheat.....	265	551	289	1,396	645	537	927	850
Rye.....			41	325	50	48	82	37
Corn, on sod.....	13	20	41	70	138	43	26	
Corn, on old land.....	825	1,906	812	1,965	1,065	1,158	2,269	2,095
Barley.....			6	87	152	92	31	158
Oats.....	259	427	177	545	723	499	1,116	669
Buckwheat.....			2	36	65		4	2
Potatoes, Irish.....		70	18	67	69	81	70	44
Potatoes, sweet.....				1			1	
Sorghum.....	9		12	34	28	3	9	6
Castor beans.....								
Cotton.....								
Flax.....								
Hemp.....					.25			
Tobacco.....					.37			.50
Timothy in meadow.....			1	7	1	6	13	
Clover do.....	7		3	7	4	1		4
Millet do.....		6	25	103	2	30	46	25
Hungarian do.....	17		46	15		29	54	110
Prairie do.....	119	769	741	395	40	136	34	12
Blue-grass in pasture.....				1				
Timothy do.....								
Clover do.....								
Prairie do.....	70	15	330	535	1,600	94	393	232
Total acreage for 1873.....	2,022	4,543	2,611	5,859	4,699.62	2,839	5,494	4,699.50



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Tables showing the acreage of each principal Crop—Continued.

POTTAWATOMIE—Concluded.	Yuma	Centre	Louisville	Wamego	Bellevue	St. Mary's	Emmett	Total
No. acres Winter wheat.....	319	192	600	275	180	114	139	4,357
Spring wheat.....	558	482	561	272	370	267	120	8,090
Rye.....	18	11	15	16		18		661
Corn, on sod.....	72	58	2	3	98	47	40	671
Corn, on old land.....	1,174	1,575	1,912	1,058	921	537	1,009	20,281
Barley.....	7	110	18	11		57	20	749
Oats.....	606	585	758	240	294	157	188	7,253
Buckwheat.....		21	12	4		2		148
Potatoes, Irish.....	49	101	76	72	41	18	23	858
Potatoes, sweet.....		1		2				5
Sorghum.....	15	13	6	7	1	8	2	153
Castor beans.....		23						23
Cotton.....								
Flax.....		.25						.25
Hemp.....		.25		.25				.50
Tobacco.....					1			1.25
Timothy in meadow.....	11	.75						1.62
Clover do.....	7	4	6	1				48
Millet do.....			4				4	45
Hungarian do.....			18	15			8	278
Prairie do.....	293	237	68		17		35	393
Blue-grass in pasture.....		2	215	736		97	108	3,932
Timothy do.....								3
Clover do.....		2						
Prairie do.....	29	393	450	293		25	58	4,477
Total acreage for 1873.....	3,158	3,815.25	4,722	2,945.25	1,923	1,347	1,754	52,431.62

REPUBLIC.	Alton	Belleville	Big Bend	Cardland	Elk Creek	Farmington	Fairview	Freedom	Grant
No. acres Winter wheat.....	139	147	9	116	325	159	281	381	100
Spring wheat.....	561	588	326	289	799	717	589	484	648
Rye.....	26	7	85	76	109	62	80	32	49
Corn, on sod.....	279	432	203	467	255	212	238	214	440
Corn, on old land.....	626	1,213	644	789	890	572	786	1202	811
Barley.....	76	18	8	21	52	35	43	58	31
Oats.....	264	209	91	85	395	239	208	305	262
Buckwheat.....	7	7	1	1	3	3	4	5	4
Potatoes, Irish.....	37	58	25	33	56	37	30	23	40
Potatoes, sweet.....		2							1
Sorghum.....	10	20	14	26	13	13	12		11
Castor beans.....			1.50						
Cotton.....		.25							
Flax.....							.25		1
Hemp.....	.50						.13	2	
Tobacco.....		1							
Timothy in meadow.....		5		11		3	4	12	4
Clover do.....	4								
Millet do.....	24	13	5	4	5	56	18	25	52
Hungarian do.....		13				16		2	29
Prairie do.....	970	2,733	892	455	527	145	109	101	799
Blue-grass in pasture.....								4	
Timothy do.....									
Clover do.....									
Prairie do.....	44	258	330	18	80	30	276	90	6,105
Total acreage for 1873.....	3,071.50	5,726.25	2,634.50	2386	3510	2300	2,671.33	2945	9,390

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Tables showing the acreage of each principal Crop—Continued.

REPUBLIC—Concluded.	Jefferson	Lincoln	Liberty	Norway	Richland	Rose Creek	Scandia	Union	White Rock	Washington	Total
No. acs. Winter wheat.....	109	110	194	23	268	198	214	147	45	36	3,001
Spring wheat.....	591	601	380	399	623	523	619	539	421	305	9,943
Rye.....	13	14	102	15	83	78	91	60	94	22	1,098
Corn, on sod.....	298	261	445	565	350	360	414	140	123	551	6,249
Corn, on old land.....	901	1,001	839	729	815	799	801	1,399	1,039	721	16,477
Barley.....	21	9	92	25	41	80	40	8	16	59	683
Oats.....	311	314	458	85	317	319	296	265	143	158	4,724
Buckwheat.....	1	1	16	4	10	9	11		10	8	105
Potatoes, Irish.....	27	31	25	36	58	61	70	32	30	25	734
Potatoes, sweet.....	1	1							2		9
Sorghum.....	9	10	15	23	18	9	13	9	18	16	289
Castor beans.....											150
Cotton.....											150
Flax.....											2.63
Hemp.....			1								1
Tobacco.....					4	3		10			23
Timothy in meadow.....	3	5	13	3		1	2	10			80
Clover do.....	1	1	5	2						2	20
Millet do.....	13	11	8		5	4	3		25	15	286
Hungarian do.....				16							78
Prairie do.....	419	490		1,015		905	891				10,451
Blue-gr. in pasture.....											4
Timothy do.....											
Clover do.....											
Prairie do.....	109	307		300		201	307	82	191		8,723
Total acreage for 1873.....	2,827	3,167	2,543	3,240	2,592	3,500	3,772	2,701	2,157	1,918	63,051.63

RENO.	Clay	Heron	Castleton	Grand	Little River	Reno	Valley	Total
No. acres Winter wheat.....	10			17			54	81
Spring wheat.....	70	60		9		22	49	210
Rye.....	80						2	82
Corn, on sod.....	1,378	754	1,312	1,527	595	1,225	870	7,661
Corn, on old land.....	1,012	527		1,326	154	799	592	4,410
Barley.....		4						4
Oats.....	187	55		28	17	63	38	388
Buckwheat.....							8	8
Potatoes, Irish.....	46	22	23	42	24	39	33	229
Potatoes, sweet.....	3		1		2	4	1	11
Sorghum.....	17	1	4	25	5	11	10	73
Castor beans.....	5							5
Cotton.....								1
Flax.....	1							1
Hemp.....								
Tobacco.....								
Timothy in meadow.....							5	5
Clover do.....								
Millet do.....								
Hungarian do.....								
Prairie do.....								
Blue-grass in pasture.....								
Timothy do.....								
Clover do.....								
Prairie do.....				320				320
Total acreage for 1873.....	2,809	1,423	1,340.5	3,294	797	2,163	1,658	13,484.5



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Tables showing the product of each principal Crop—Continued.

RICE.		Spencer.....	Altamont.....	Sterling.....	Total.....
No. acres					
Winter wheat.....			9	20	29
Spring wheat.....		22	105	47	174
Rye.....			20	12	32
Corn, on sod.....		345	827	1,523	2,695
Corn, on old land.....		227	1,477	942	2,646
Barley.....		40	5	15	60
Oats.....			164	186	350
Buckwheat.....			1	3	4
Potatoes, Irish.....		20	74	83	177
Potatoes, sweet.....			1	5	6
Sorghum.....		3	14	25	42
Castor beans.....			.75		.75
Cotton.....			.25		.25
Flax.....					
Hemp.....					
Tobacco.....					
Timothy in meadow.....					
Clover do.....			1	7	8
Millet do.....			5	13	18
Hungarian do.....					
Prairie do.....					
Blue-grass in pasture.....					
Timothy do.....					
Clover do.....					
Prairie inclosed, pasture.....					
Total acreage for 1873.....		657	2,704	2,881	6,242

RILEY.		Monkton.....	Grant.....	Jackson.....	Mayfield.....	Bula.....	Zandale.....	Ashtland.....	Ogden.....	Naushon.....	Total.....
No. acres											
Winter wheat.....		108	272	280	542	12	490	211	558	39	2,512
Spring wheat.....		60	487	740	1,256	436	420	276	245	426	4,346
Rye.....		34	100	80	35	9	16	4	143	26	447
Corn, on sod.....			61	24		87	12	11	12	16	223
Corn, on old land.....		137	1,552	1,124	1,066	650	1,265	662	1,453	909	8,818
Barley.....		128	62	69	71	40	25		312	101	808
Oats.....		218	312	358	441	119	220	145	265	149	2,227
Buckwheat.....				3		4	6		10		23
Potatoes, Irish.....		8	76	46	46	35	52	40	112	37	452
Potatoes, sweet.....				10			15	4			29
Sorghum.....				20	9		5	10		6	59
Castor beans.....											3
Cotton.....			3								
Flax.....											
Hemp.....											
Tobacco.....											
Timothy in meadow.....											3
Clover do.....			3								
Millet do.....			39	107	6		46	44	80		322
Hungarian do.....			40	12			22	66	41	27	208
Prairie do.....		1,336	1,067	1,128			1,579	423	1,079	245	6,857
Blue-grass in pasture.....			40								40
Timothy do.....											
Clover do.....											
Prairie inclosed, pasture.....		275	173	1,315	800		162	125	354	294	3,198
Total acreage for 1873.....		2,310	4,301	5,305	3,963	1,401	4,335	2,021	4,664	2,275	30,575

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Tables showing the acreage of each principal Crop—Continued.

	Wichita	Greeley	Gypsum	Watson	Minneapolis	Ohio	Grand	Lincoln	Kearney	Park
SEDGWICK.										
No. acres Winter wheat.....	54	6	11	124	8	21	19	30	12	14
Spring wheat.....	61	25	28	183		51	56	70	101	120
Rye.....				5			2	8		
Corn, on sod.....	106	65	170	317	250	200	179	186	41	50
Corn, on old land.....	778	349	309	818	500	350	275	300	400	425
Barley.....	4									
Oats.....	334	43	22	88	10	34	37	100	164	170
Buckwheat.....			2	1			8		12	13
Potatoes, Irish.....	33	14	10	45	23	21	37	33	68	68
Potatoes, sweet.....	2			2	1		1		1	1
Sorghum.....			4	23		11	9	12		
Castor beans.....							7			
Cotton.....				2.25			.25		.5	1
Flax.....							1			
Hemp.....										
Tobacco.....						1.5				
Timothy in meadow.....	2			2		1.5				
Clover do.....	3			1		4				
Millet do.....										
Hungarian do.....				4						1
Prairie do.....	1,816			211						
Blue-grass in pasture.....						2				
Timothy do.....										
Clover do.....										
Prairie do.....	210			386						25
Total acreage for 1873.....	3,405	502	560	2,212.25	792	697	631.25	739	799.5	888

SEDGWICK—Concluded.

	Engle	Union	Minnehaha	Plymouth	Delmona	Total
No. acres Winter wheat.....	94	8	35	30	40	506
Spring wheat.....	105	112	101	90	100	1,203
Rye.....	1			1	2	19
Corn, on sod.....	260	155	80	80	190	2,329
Corn, on old land.....	400	340	611	500	70	6,425
Barley.....			1	1	2	12
Oats.....	130	75	233	180	200	1,821
Buckwheat.....						36
Potatoes, Irish.....	72	30	28	56	80	620
Potatoes, sweet.....	3			2	3	16
Sorghum.....			10	5	4	78
Castor beans.....				2	1	10
Cotton.....			1	.5	.5	6
Flax.....			.25			1.25
Hemp.....						
Tobacco.....						1.50
Timothy in meadow.....				1		6.50
Clover do.....				1		9
Millet do.....						4
Hungarian do.....			250			255
Prairie do.....						2,027
Blue-grass in pasture.....						2
Timothy do.....						
Clover do.....						
Prairie do.....						621
Total acreage for 1873.....	1,319	721	1,100.25	949.5	692.5	16,008.25



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Tables showing the acreage of each principal Crop—Continued.

SHAWNEE.	Stear Lake.....	Soldier	Topoka	Tecumseh.....	Monmouth.....	Williamport.....	Auburn	Dover	Mission.....	Rossville	Total
No. acs. Winter wheat	571	498	153	323	274	336	531	299	152	377	3,514
Spring wheat	237	66	43	92	155	101	258	67	59	445	1,543
Rye.....	254	87	22	64	84	15	43	35	48	700	1,352
Corn, on sod	110	147	52	56	118	62	35	159	129	81	949
Corn, on old land ...	6,633	4,220	2,839	3,364	4,487	3,402	2,602	1,786	1,809	3,663	34,809
Barley.....	11	23	153	20	.....	20	10	37	.....	144	418
Oats	834	1,097	572	921	936	561	442	220	385	478	6,446
Buckwheat.....	47	40	.....	33	15	20	10	1	38	11	215
Potatoes, Irish.....	250	209	185	146	137	113	75	70	96	91	1,370
Potatoes, sweet	9	5	7	6	4	3	.....	.....	1	.....	35
Sorghum.....	3	6	.....	7	32	5	1	6	4	1	65
Castor beans.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cotton.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Flax.....	2	378	37	.....	22	.....	.....	.....	5	.....	444
Hemp.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Tobacco.....	.....	.....	2	.....	1	.....	.....	.....	1	.....	4
Timothy in meadow	27	26	50	36	52	90	2	1	.....	17	301
Clover do	67	98	239	52	20	15	13	1	3	1	509
Millet do	56	.....	13	121	6	7	6	35	36	32	312
Hungarian do	99	106	80	21	30	10	90	6	15	.....	457
Prairie do	668	882	1,797	1,380	1,738	1,765	.....	877	2,041	120	11,268
Blue-grass in past're	.....	63	51	10	45	.....	2	.....	2	.....	173
Timothy do .....	.....	3	8	.....	.....	5	.....	.....	.....	.....	16
Clover do .....	.....	4	10	.....	.....	.....	.....	35	.....	.....	49
Prairie do	501	230	325	1,727	745	1,145	10	110	455	633	5,881
Total acreage for 1873 ...	10,399	8,184	6,632	8,389	8,902	7,675	4,132	3,745	5,279	6,794	70,131

SALINE.	Wahat.	Liberty.....	Pleasant Valley.....	Elm Creek.....	Spring Creek.....	Burke.....	Salomon.....	Total
No. acres Winter wheat.....	403	483	72	709	70	378	240	2,355
Spring wheat	955	1,213	228	737	72	368	998	4,571
Rye.....	126	132	69	176	7	29	13	552
Corn, on sod.....	170	379	174	236	119	290	134	1,502
Corn, on old land	905	1,023	548	802	121	454	1,048	4,901
Barley.....	58	6	7	125	5	104	63	368
Oats	395	498	169	323	20	170	402	1,977
Buckwheat.....	.....	.....	.....	.....	.....	.....	7	7
Potatoes, Irish.....	72	48	46	70	52	47	109	444
Potatoes, sweet.....	.....	.....	.....	8	3	3	2	16
Sorghum.....	4	9	.....	6	.....	5	4	28
Castor beans .....	.....	.....	.....	25	.....	.....	.....	.25
Cotton.....	.....	.....	.....	.....	.....	.....	.....	.25
Flax.....	.....	.....	.....	.....	.....	.....	.....	.....
Hemp.....	.....	.....	.....	.....	.....	.....	.....	.....
Tobacco.....	.....	13	.....	.....	.....	.....	.....	.13
Timothy in meadow	.....	.....	.....	.....	.....	.....	.....	.....
Clover do .....	.....	.....	.....	3	.....	1	.....	4
Millet do .....	.....	.....	.....	30	.....	10	.....	4
Hungarian do .....	.....	.....	.....	49	.....	.....	44	74
Prairie do	739	70	.....	188	3,856	2,165	1,652	8,170
Blue-grass in pasture	.....	.....	.....	.....	.....	.....	.....	.....
Timothy do .....	.....	.....	.....	.....	.....	.....	.....	.....
Clover do .....	.....	.....	.....	.....	.....	.....	.....	.....
Prairie do	141	391	34	593	.....	800	754	2,713
Total acreage for 1873.....	3,968.13	4,257.25	1,489	4,028.25	3,825	4,823	5,515	27,905.63

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Tables showing the product of each principal Crop—Concluded.

SMITH.		Kingman.....	Bad River.....	Houston.....	Harvey.....	Centre.....	Oak Creek.....	Total.....
No. acres	Winter wheat.....	36	6	99	63	3	52	259
	Spring wheat.....	56	96	68	182	60	124	586
	Rye.....			14	2			16
	Corn, on sod.....	571	316	188	603	605	414	2,697
	Corn, on old land.....	522	401	664	1,497	567	825	4,476
	Barley.....		1	4	12			17
	Oats.....	45	22	68	164	82	17	396
	Buckwheat.....				1	3		4
	Potatoes, Irish.....	26	12	14	22	15	10	99
	Potatoes, sweet.....							
	Sorghum.....	17	13	12	32	4		78
	Castor beans.....							
	Cotton.....							
	Flax.....							
	Hemp.....							
	Tobacco.....							
	Timothy in meadow.....				2			2
	do.....				1			1
	Millet.....			6	6	8	3	23
	Hungarian do.....			9	3			12
	Prairie do.....					6	1,866	1,872
	Blue-grass in pasture.....					1		1
	Timothy do.....							
	do.....							
	Clover do.....							
	Prairie inclosed, pasture.....	30			15		71	116
Total acreage for 1873.....		1,303	867	1,146	2,605	1,354	3,382	10,657

SUMNER.		Gro.....	Belle Plaine.....	Pulaski.....	London.....	Sumner.....	Wellington.....	Aron.....	Oxford.....	Walton.....	South Haven.....	Falls.....	Outwell.....	Shelburne.....	Total.....
Acres	Winter wheat.....	20	129	39	6		32	81	68	58		40	30		503
	Spring wheat.....	59	127		27	8	36	11	22	39		29	1		359
	Rye.....	5	8	73											86
	Corn, on sod.....	177	162	325	311	248	1299	338	115	908		137	468	149	4657
	Corn, on old land.....	449	1859	1540	1008	344	877	968	1149	534		503	476	148	9855
	Barley.....			1											1
	Oats.....	34	102	120	54	25	66	71	81	21		11	4		581
	Buckwheat.....			5											5
	Potatoes, Irish.....	11	62	57	46	22	67	34	26	24		16	30	6	401
	Potatoes, sweet.....			1				1	2				4	1	9
	Sorghum.....	4	27	27	25		2	17	6	20		15	21		164
	Castor beans.....		51		6		6		61						124
	Cotton.....	15	115	63	6		12	1.25	1						213.25
	Flax.....														
	Hemp.....				.25										.25
	Tobacco.....				.25		4	1							5.25
	Timothy in meadow.....			1				10							11
	do.....			2											2
	Millet.....							2							3
	Hungarian do.....	30													30
	Prairie do.....			130					757	50					937
	Blue-grass in pasture.....														
	Timothy do.....														
	do.....														
	Clover do.....														
	Prairie incl'd, pasture.....		541	30			60	47	6				53		737
Total acreage for 1873....		804	2642	2925	1519.50	647	2461	1582.25	1537	2361	50	751	1088	304	18671.75

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Tables showing the product of each principal Crop—Continued.

	Cattle.....	Oxen.....	Horses.....	Colts.....	Stions.....	Duck Creek.....	Norfolk.....	Newark.....	Prairie.....	Fall River.....	Vermont.....	Ontario.....	Town.....
WILSON.													
Acres Winter wheat.....	774	885	239	934	95	568	287	452	960	411	101	5706	
Spring wheat.....	2	42		61						7		112	
Rye.....	60	20	17		59	65	22	12	40	89	6	390	
Corn, on sod.....	166	41	49	217	41	19	137	136	117	107	45	1075	
Corn, on old land.....	2567	1392	1117	1897	1267	1156	1642	1070	1598	1544	612	15862	
Barley.....				13		15		9				37	
Oats.....	749		379	338	262	253	371	296	503	427	135	3713	
Buckwheat.....	4		12	5	2			5	2	4	9	43	
Potatoes, Irish.....	86	38	41	52	37	33	90	69	40	75	16	577	
Potatoes, sweet.....	8	1	1		1			2	3	1		17	
Sorghum.....	33	19	17	14	16			10	38	19	13	7	186
Castor beans.....	.75		11		1			12					24.75
Cotton.....		4.25	2.25	7	2			9	8				32.50
Flax.....					3								8
Hemp.....													
Tobacco.....		2.25	1		.25				1				6.50
Timothy in meadow.....	17	13		4		2	5	10	42	18	3	114	
Clover do.....	11	25	3	5	10		5	1	6	10		76	
Millet do.....	11	16	33	76	34	11			63			244	
Hungarian do.....	11				10	99			3			133	
Prairie do.....	150	782	7409	920	10	326	1526	1009	275	100	395	12902	
Blue-grass in pasture.....									11	20		31	
Timothy do.....													
Clover do.....										4		4	
Prairie incl'd, pasture.....	2767	943	135	990	324	684	516	110	74	160	171	6874	
Total acreage for 1873.....	7417.75	4223.50	9466.25	5534	2174.25	3142	4722	3228	3765	2990	1500	48162.75	

No. acres	Winter wheat	518	482	466	435	222	302	524	318	917	4184
	Spring wheat	21	31	4	11	3	5			5	80
	Rye	59	40	107	17	23	21	23		41	332
	Corn, on sod	67	118	87	76	80	48	141	12	55	684
	Corn, on old land	1568	1,914	1929	861	1,218	975	1,139	1,167	1,086	11857
	Barley	8	3					7		3	21
	Oats	693	582	544	359	437	554	521	556	845	5091
	Buckwheat	19	25	15	10	1	15	5	2	2	92
	Potatoes, Irish	72	106	82	29	60	64	97	80	50	640
	Potatoes, sweet	11	1		1	2	1	3			19
	Sorghum	19	59	19	18	31	22	39	15	10	232
	Castor beans		6		5			5	5		16
	Cotton		.5			2.25		1	10	.5	14.25
	Flax	2.5	10					.25	1.25		14
	Hemp	1									1
	Tobacco	1.5	4		3	4		2	50		12
	Timothy in meadow	84	42	1	16	3	8	4	5	3	193
	Clover do	16		2	1					19	38
	Millet do	9	3	8	6			36	51	5	126
	Hungarian do		8			16			2		26
	Prairie do	1138	1,427	160	205	423	1535	930		2,474	8292
	Blue-grass in pasture	6	1							4	11
	Timothy do	5									5
	Clover do		13								13
	Prairie do	683	230		107	247	8	3,306	158	299	5037
Total acreage for 1873		5001	5,105.5	3431	2134	2,796.25	3543	6,791.25	2,389.75	5,838.5	37090.25

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Tables showing the acreage of each principal Crop—Continued.

WASHINGTON.	Hunter.....	Holbrook.....	Washington.....	Union.....	Mill Creek.....	Strawberry.....	Clyton.....	Sherman.....	Lincoln.....	Little Blue.....	Total.....
No. acres Winter wheat.....	790	175	849	90	177	354	670	400	71	.....	3,576
Spring wheat.....	800	516	879	103	220	417	811	550	352	.....	4,648
Rye.....	200	314	320	.....	.....	368	114	100	37	.....	1,453
Corn, on sod.....	170	74	164	30	71	576	180	160	54	.....	1,479
Corn, on old land.....	1400	1,006	1,279	125	270	50	1620	1500	504	.....	7,754
Barley.....	60	57	55	.....	.....	.....	17	15	45	.....	249
Oats.....	800	421	737	93	211	203	589	420	125	.....	3,599
Buckwheat.....	.....	.....	8	.....	.....	.....	.....	.....	5	.....	13
Potatoes, Irish.....	65	42	57	11	19	38	87	76	20	.....	415
Potatoes, sweet.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	2
Sorghum.....	.....	21	7	.....	.....	12	14	15	5	.....	74
Castor beans.....	.....	.25	.....	.....	.....	.....	.....	.....	.....	.....	.25
Cotton.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.33
Flax.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hemp.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tobacco.....	.....	7	50	.....	.....	.....	.....	.....	.....	8	15.50
Timothy in meadow.....	.....	1	.....	.....	.....	.....	4	.....	.....	.....	5
Clover do.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	3
Millet do.....	15	6	23	.....	.....	.....	23	.....	22	.....	89
Hungarian do.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	3
Prairie do.....	1500	.....	1,685	.....	.....	3815	.....	.....	72	.....	7,072
Blue-grass in pasture.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Timothy do.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clover do.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Prairie do.....	1250	.....	1,351	.....	1190	246	710	.....	125	.....	4,872
Total acreage for 1873.....	7050	2,640.25	7,415.50	452	2158	6080	4,845.25	3236	1218	227	35,322.08

WYANDOTTE.	Delaware.....	Shawnee.....	Wyandotte.....	Quindaro.....	Prairie.....	Wyandotte City.....	Total.....
No. acres Winter wheat.....	154	436	674	463	289	18	2,034
Spring wheat.....	13	120	15	8	27	.....	183
Rye.....	134	58	51	3	34	.....	280
Corn, on sod.....	286	71	.....	25	46	.....	428
Corn, on old land.....	3,181	2,089	3,606	2,766	3,676	183	15,501
Barley.....	.....	12	.....	2	49	.....	63
Oats.....	475	448	651	469	666	33	2,742
Buckwheat.....	.....	11	1	.....	4	.....	16
Potatoes, Irish.....	144	313	331	251	215	10	1,264
Potatoes, sweet.....	5	4	3	22	7	.....	41
Sorghum.....	5	10	12	5	4	.....	36
Castor beans.....	.....	.....	.....	.5	.....	.....	.50
Cotton.....	.....	.....	.25	.....	.....	.....	.25
Flax.....	.....	5	.....	.....	.....	.....	5
Hemp.....	7	.....	58.50	172	19	.....	256.50
Tobacco.....	11	22	2	10	.75	.....	45.75
Timothy in meadow.....	152	74	146	31	163	25	591
Clover do.....	68	74	178	290	31	22	663
Millet do.....	150	68	23	27	57	6	331
Hungarian do.....	15	.....	15	7	9	1	47
Prairie do.....	1,359	.....	.....	20	457	.....	1,836
Blue-grass in pasture.....	626	187	358	108	120	43	1,442
Timothy do.....	15	.....	2	1	.....	.....	18
Clover do.....	33	41	37	104	58	10	283
Prairie do.....	1,143	70	1,736	2,949
Total acreage for 1873.....	7,976	3,972	6,304.75	4,784.5	7,667.75	351	31,056



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Tables showing the acreage of each principal Crop—Concluded.

WABAUNSEE.		Alma.....	Winnington.....	Wabunsee.....	Newbury.....	Marion Creek.....	Hill.....	Mill.....	Rock Creek.....	Total.....
No. acres	Winter wheat.....	416	442	651	278	131	10	23	52	2,003
	Spring wheat.....	966	420	583	383	94	72	195	122	2,835
	Rye.....	70	75	60	8	17	48	6	46	330
	Corn, on sod.....	140	30	39	97	237	8	42	593	
	Corn, on old land.....	1,916	2,519	1,682	1,233	2,186	1,024	447	393	11,400
	Barley.....	56	7	107	68	115	49	402		
	Oats.....	430	952	512	221	283	114	69	71	2,652
	Buckwheat.....	2	11	18	40	29	8	2		110
	Potatoes, Irish.....	119	118	262	69	103	26	8	19	724
	Potatoes, sweet.....	13	13	3	1	1				31
	Sorghum.....	21	22	22	15	32		1	5	119
	Castor beans.....						3.50			3.50
	Cotton.....									
	Flax.....									
	Hemp.....						.50			.50
	Tobacco.....									
	Timothy in meadow.....					1	2			3
	Clover do.....			18		2	15			17
	Millet do.....	420		18		78	6	58		580
	Hungarian do.....	63		22	8	21				114
	Prairie do.....	461	40	1,975		128	83			2,087
	Blue-grass in pasture.....	4		6						10
	Timothy do.....					3				3
	Clover do.....									
	Prairie do.....	502	50	245	58	633	540		117	2,148
Total acreage for 1873.....		5,586	4,669	5,502	2,462	3,907	2,191	932	916	26,165

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WHEAT.

By reference to the foregoing tables of agricultural products, it will be observed that, while winter wheat is a successful crop throughout the State, spring wheat does much better in western than eastern counties. In the older portions of the State spring wheat is gradually giving place to winter wheat, for the reasons that it induces the chinch-bug more than any other crop, yields less per acre, and is not worth as much per bushel as its rival.

The following comparative tables, collated from annual reports of the Commissioner of Agriculture, indicates the capability of Kansas to produce this important cereal:

Average yield of Wheat in the Western States named.

	Kentucky.	Ohio.....	Illinois...	Missouri.	Iowa.....	Nebraska.	Kansas...
1864.....	10.2	10.2	14.3	14.2	12.2	14	15
1865.....	7.2	9.5	11	11.7	14.6	18	15.2
1866.....	6.5	4.5	13	16.5	16	26	21.4
1867.....	8.2	11.6	11.4	12.4	12.7	15	14
1868.....	8.5	13	11.5	14	14.5	15.5	15.6
1869.....	11	15	11	14	13		18
1870.....	10	13.8	12	13	12.5	14.4	16
1871.....	6.1	13.9	12.3	13.4	10.8	10.3	15.9
1872.....	12	11.7	12.1	8.8	12.6	12.2	11.6
Average yield.....	8.8	11.4	12	13.1	13.2	13.6	15.7

In Kansas, if the estimate were based upon winter wheat alone, the average yield per acre would be about twenty-five per cent. higher than indicated by the foregoing table.

While the State has been remarkably free (compared with many of our sister States) from the depredations of noxious insects, during the year, reports from different counties mostly concur in crediting spring wheat with inducing that unsavory rascal, the *chinch bug*. However much the farmers may have regretted the copious and continuous rains of last spring and early summer, the loss to the corn crop in consequence was a gain to many other crops in destroying this villainous pest. While his raids have been destructive in only a few localities, and these mostly south of the Kansas river, the following extracts from Prof. C. V. Riley's second annual report to the State Board of Agriculture of Missouri will be a sufficient warning to the farmers of the State against holding out any very flattering inducements for their migration hither:

"He subsists by sucking, with his short, pointed beak, the juices of our cereals, thereby causing them to shrink and wither, and not by gnawing or biting their substance, as many persons suppose. Insignificant as is the minute puncture of a single individual, yet these insects often appear in such countless numbers as to bleed to death whole fields of grain by their myriad beaks.

"He is undoubtedly the meanest bug out of the whole crowd of multifarious insect-foes of the grain-growing farmer. He is not satisfied with taking a field here and a field there, and sparing the remainder; but when his time comes—and in mercy to the Western farmer, we are not cursed every year with this little savage—he sweeps the whole country with the besom of destruction. The wheat midge, the Hessian fly, and the grain plant

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louse, destructive as they are to small grain, yet spare our corn. If they take the good, white wheaten bread out of our mouths, they yet leave us a good supply of corn dodgers. But the chinch bug makes a clean sweep whenever he gets the upper hand of us. He 'goes the entire hog.' Nothing in the way of grain comes amiss to him. He is not dainty. Not he! Whenever he gets a chance to spread himself, he first of all, at one fell swoop, destroys the small grain, and then fastens his liquorish beak upon the corn, and takes that also.

"There are two peculiarities in the habits of the chinch bug, namely, first, its continuing to take food from the day of its birth to the day of its death; and, secondly, its being either two-brooded, or many-brooded, that renders it so destructive and so difficult to combat."

After describing how the chinch bug is thinned out by unfavorable autumns and insect-devouring animals during the winter, Prof. Riley adds:

"But no matter how closely they may thin out the chinch bugs, or how generally these insects may have been starved out by autumnal droughts, there will always be a few left for seed next year. Suppose there are only 2,000 chinch bugs remaining in the spring in a certain field, and that each female of the 2,000, as vegetation starts, raises a family of only 200, which is a low calculation. Then, allowing the sexes to be equal in number, whereas in reality the females are always far more numerous than the males, the first or spring brood will consist of 200,000, of which number 100,000 will be females. Here, if the species were single-brooded, the process would stop for the current year; and 200,000 chinch bugs in one field would be thought nothing of by the Western farmer. But the species is not single-brooded, and the process does not stop here. Each successive brood increases in numbers in geometrical progression, unless there is something to check their increase, until the second brood amounts to 20,000,000, and the third brood to two thousand millions. We may form some idea of the meaning of two thousand millions of chinch bugs when it is stated that this number of them placed in a straight line, head and tail together, would just about reach from the surface of the earth to its central point, a distance of four thousand miles."

Prof. Riley quotes the following paragraph from a paper by Dr. Henry Skinner, of Illinois, which was published in the proceedings of the Academy of Natural Science of Philadelphia, for May, 1867:

"May 16, 1865, was a delightful, mild, bright, sunny, summer-like day; and I again, for the last time, observed the same highly interesting phenomena, which I have noticed above as occurring after the harvest of 1864—the atmosphere swarming with chinch bugs on the wing. This is their spring; that was their autumnal nuptial season—their season of love. These remarkable little creatures prefer to conduct their courtships under the searching gaze of a noonday sun, instead of at the midnight hour. They were so numerous, alighting on the pavement in the village, that scarcely a step could be taken without crushing many of them under foot. In a few days they had all disappeared; their breeding grounds were chosen, where they could be found in great numbers, often in pairs. I first noticed this disposition of the chinch bug to take wing under the promptings of the love passion, about six years ago, in their autumnal love season. At no other time save their love seasons, twice a year, have I ever seen one chinch bug flying. It is quite remarkable that this winged insect, under no other circumstances will ever attempt to use its ample wings. No threatening danger, however imminent, whether being driven over by grain reapers, wagons, or of being trodden under foot, etc., will prompt it to use its wings to escape. I have tried all imaginable ways to induce them to fly, as by thrashing among them with bundles of rods or grass, by gathering them up and letting them fall from a height, etc., but they invariably refuse entirely to attempt to use their wings in escaping from danger. The love emotion alone makes them conscious that they are in possession of wings."

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Prof. Riley agrees with Dr. Skinner as to the facts mentioned in this paragraph, but not as to the conclusions which he deduces. He says:

"It is a notorious fact that chinch bugs do not all mature at once, and if they took wing only when making their courtships, some of them would be flying during a period of several weeks; and, as will be shown presently, there exists a dimorphous, short-winged form of the chinch bug, which cannot possibly take any such aerial love trips. It seems more agreeable to analogy that they take wing only when they have become so unduly numerous that they are instinctively aware that they must either emigrate or starve. Be this, however, as it may, the fact of their being, as a general rule, unwilling to use their wings is well known to every practical farmer."

Prof. Riley, in the same report, relates the following, which shows how they *have been* "out-flanked, headed off and conquered:"

"The thing has been effectually done during the past season, by Mr. Davis, Supervisor of the town of Scott, Ogle county, Ill. This gentleman had a corn field of a hundred acres, growing along side of an extensive field of small grain. The bugs had finished up the latter, and were preparing to attack the former, when the owner, being of an ingenious turn, hit upon a happy plan for circumventing them. He surrounded the corn with a barrier of pine boards, set up edgewise, and partly buried in the ground to keep them in position. Outside of this fence deep holes were dug, about ten feet apart. The upper edge of the board was kept constantly moist with a coat of coal tar, which was renewed every day. The bugs, according to their regular tactics, advanced to the assault in solid columns, swarming by millions, and hiding the ground. They easily ascended the boards, but were unable to cross the belt of the coal tar. Sometimes they crowded upon one another so as to bridge over the barrier, but such places were immediately covered with a new coating. The invaders were in a worse quandary than that of Butler and Weitzel, at Fort Fisher, and in that state of mind crept backward and forward until they tumbled into the deep holes aforesaid. They were soon filled, and the swarming myriads were shoveled out of them literally by wagon-loads, at the rate of thirty or forty bushels a day, and buried up in other holes, dug for the purpose, as required.

"This may seem incredible to persons unacquainted with the little pests; but no one who has seen the countless myriads which cover the earth as harvest approaches, will feel inclined to dispute the statement. It is an unimpeachable fact. The process was repeated till only three or four bushels could be shoveled out of the holes, when it was abandoned. The crop was completely protected, and yielded bountifully."

The burning of the prairie grass in the fall, in the vicinity of their operations, is said by those who have tried it to be an effectual mode of destroying myriads of them.

RYE.

Comparative statement showing the yield of Rye in the Western States named, and the average yield for nine years.

Year.	Kentucky.	Ohio.....	Illinois	Missouri.....	Iowa.....	Nebraska.....	Kansas.....
Report of 1864.....	13.2	12.2	15	15.6	15	16	17
Report of 1865.....	9	12.5	16.6	16.6	18.6	18	23
Report of 1866.....	9.3	10.8	15.6	19.8	19.3	26	26.4
Report of 1867.....	10.7	13.4	15	16.2	19.4	25.2	20.3
Report of 1868.....	11.5	13.6	16.2	18.5	19	18.3	20.3
Report of 1869.....	11.2	14.8	14.4	16.9	16.1	19.4	25.8
Report of 1870.....	12.1	13.8	16.4	15.6	17.6	23.7	20.8
Report of 1871.....	9.4	14.5	17.8	17.1	19.9	18	19
Report of 1872.....	15.1	11.2	18.1	16	19.5	15.5	17.5
Average yield for nine years.....	11.2	12.9	16.1	16.9	18.2	20	21.1

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The number of bushels of rye produced in Kansas in 1860 was 3,833; in 1870, 85,207 bushels; in 1873, 301,957 bushels.*

CORN.

The returns of 1872 show the aggregate number of bushels to have been 45,667,451, one of the largest, most alarming, and yet most beneficial results ever known in the State; *alarming*, because corn was crowned "king," and was well-nigh the ruination of the average farmer; *beneficial*, because when farmers found the supply so far exceeded the demand for home consumption, that in some parts of the State it could only be utilized for fuel, and would not bear transportation to a distant market, they realized as they could not have realized in any other way—through their purse strings—the absolute necessity of turning their attention to a more diversified industry. This they have done with most beneficial results, as will be seen under the head of "Castor Beans, Cotton, Flax, Hemp and Tobacco."

Owing to the excessive rains in the spring of 1873, which prevented proper tillage, and which was followed by a severe drought during the formation of the ears, the reduction in the State, as compared with the crop of last year, is from 20 to 50 per cent., an average of about 35 per cent. This reduces the corn crop of 1873 to about 29,683,843 bushels; but the old crop of 1872 on hand amounts to 7,769,475 bushels, subdivided among the counties as follows:

Statement showing the number of bushels of old Corn on hand on the 1st day of March, 1873.

County.	No. Bush. on hand.	County.	No. Bush. on hand.	County.	No. Bush. on hand.
Allen	68,716	Greenwood	74,532	Ottawa	89,760
Anderson	92,551	* Harper		* Pawnee	
Atchison	291,611	* Harvey		* Phillips	
* Barbour		Howard	81,271	Pottawatomie	326,260
Barton	125	Jackson	369,783	Reno	1,628
* Billings		Jefferson	296,055	Republic	106,230
Bourbon	301,673	Jewell	7,578	Rice	3,302
Brown	511,419	Johnson	471,301	Riley	112,940
Butler	62,766	Labette	148,969	* Rooks	
* Comanche		Leavenworth	182,871	* Russell	
Chase	23,618	Lincoln	3,297	Saline	58,570
Cherokee	2,610	Linn	404,146	Sedgwick	29,715
Clay	83,810	Lyon	102,667	Shawnee	417,622
Cloud	42,103	Marion	5,768	Smith	1,300
Coffey	116,123	Marshall	286,720	Sumner	11,235
Cowley	59,074	McPherson	25,979	Wabasha	112,343
Crawford	123,094	Miami	437,527	* Wallace	
Davis	53,193	Mitchell	8,975	Washington	86,435
Dickinson	21,454	Montgomery	73,338	Wilson	88,644
Doniphan	443,575	Morris	44,807	Woodson	47,057
Douglas	34,625	Nemaha	246,242	Wyandotte	72,218
* Ellis		Neosho	157,464		
Ellsworth	5,614	* Ness		Total	7,769,475
* Ford		Osage	219,896		
Franklin	213,530	Osborne	3,795		

* No report.

While the supply has been so far reduced as to bring remunerative prices to the farmer, it will still be ample until the harvest of 1874.

The lessons of the last few years have been pointed, severe, and easy of comprehension. There has been too much corn for the amount of stock. There should never be a bushel of corn exported except in the condensed form of beef and pork. Then the fertility of the soil will be maintained,

* Returns of 1873 are estimated from assessors' returns of crop sowed in 1872 and harvested in 1873. The rest are compiled from reports of Commissioner of Agriculture, Washington, D. C.

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the product bear transportation to a distant market, and the problem whether farming will pay in Kansas, solved in the affirmative.

The following table, compiled from the report of the Commissioner of Agriculture, Washington, D. C., gives the comparative yield of corn in Western States named, and average for nine years:

	Kentucky	Ohio	Illinois	Missouri	Iowa	Nebraska	Kansas
Report of 1864.....	28.5	31.5	33	26.8	36.6	28.5	25
Report of 1865.....	34	41.5	35.2	39.6	42	46.5	41.2
Report of 1866.....	31.8	38	31.6	30.8	31.5	29.3	34.2
Report of 1867.....	24.7	28.7	23.8	27.2	33.8	36	38.6
Report of 1868.....	32.7	34	34.2	30.3	37	22.9	18
Report of 1869.....	25	30.1	23.2	30.6	33.2	42.2	48.4
Report of 1870.....	32.1	39	35.2	31.4	32	29.9	28
Report of 1871.....	27.3	38.5	38.3	38	42.5	41.5	40
Report of 1872.....	24.7	28.7	23.8	27.2	33.8	36	38.6
Average yield.....	28.9	34.4	30.9	31.3	36.7	34.7	34.6

With the luxuriant growth of native nutritious grasses, so abundant in Kansas; with timothy, clover and blue-grass taking kindly wherever they have been tried; with the power to grow an abundance of corn, the question of profitable stock raising in Kansas is in no manner problematical.

OATS, BARLEY AND BUCKWHEAT.

The following table shows the number of bushels of oats, barley and buckwheat for 1870 and 1873:

	Oats.	Barley.	Buckwheat.
For the year 1870.....	4,097,925	98,405	27,826
For the year 1873.....	9,337,581	508,002	76,929
Gain from 1870 to 1873.....	5,239,656	409,597	49,103

CASTOR BEANS, COTTON, FLAX SEED, HEMP AND TOBACCO.

As has been previously stated, the corn crop of Kansas for 1872 aggregated the enormous sum of 45,667,451 bushels. Ever since the settlement of Kansas, corn has been the great staple, without sufficient stock to consume it. Even if railroads would transport it free of cost, it would not bear transportation twenty miles to them. The average market price in 1872 was from twenty to twenty-five cents per bushel along the line of railroads, barely covering the cost of production; the cost of hauling and marketing a dead loss. While public attention has been called to the relation of capital and labor, to public wrongs, official malfeasance, to railroad, bank, and other monopolies, the spirit of inquiry which is abroad in the land has taken a very wide range, and has resulted in very efficient farmers' organizations, where social and economic questions, affecting the industrial interests of the State, are freely discussed. These organizations are to farmers what boards of trade are to the mercantile community. Among the *business reforms* already inaugurated is that in favor of a more diversified industry, as will be seen from an examination of the following table, or comparative statement, showing the product of castor beans, cotton, flax seed, hemp and tobacco, for the years 1870, 1872 and 1873:



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COMPARATIVE STATEMENT, SHOWING PRODUCT OF CASTOR BEANS, COTTON

County.	1870.					1872.				
	Bush.	Pounds.	Bush.	Pounds.		Bush.	Pounds.	Bush.	Pounds.	
	Castor Beans	Cotton	Flax Seed	Hemp	Tobacco	Castor Beans	Cotton	Flax Seed	Hemp	Tobacco
Allen					1,370	25	653			4,113
Anderson					225	25				15,645
Atchison		6,000			3,665	360	120	20	205,200	10,450
Bourbon					2,100	100			39,662	3,891
Brown						4	725			3,330
Barton										
Chase					130					320
Cherokee		800			4,776		225	5		535
Clay					295	5	144			800
Cloud		2,000	35		120	240		10		600
Coffey								120		484
Cowley			100				300			625
Crawford				8,000	5,405	25	450		450	10,032
Comanche										
Davis			4				100			275
Dickinson										600
Doniphan				20,000	575			260	390,800	2,000
Douglas			316	14,000	1,282	80	52	70	134,276	1,540
Ellis										
Ellsworth						8,475				10,000
Franklin			50							
Ford							540	3		520
Greenwood										
Harvey						40	5,200			12,600
Howard						8		260	10,800	4,840
Jackson						45	1,400	90	52,200	7,260
Jefferson										
Jewell										
Johnson			349		510	3,160		2,310	46,904	12,000
Labette					836	3,720	996	10		2,000
Leavenworth			667		3,052			140	121,500	7,350
Lincoln										
*Linn						320				23,184
Lyon					200	5	1,500			2,093
Marion										
Marshall					1,140	855	90	290		4,050
McPherson										
Miami			22		125				9,000	5,712
Mitchell						460	550			3,900
Montgomery										125
Morris										
Nemaha				4,000	240		2,800	120	4,050	1,275
Neosho					560	980	456	5	4,500	15,425
Ness										
Osage						280	120	72	22,500	8,064
Osborne							50			125
Ottawa										
†Pawnee										
Pottawatomie					655					2,334
Republic							1,880	10		1,050
Reno										
Rice										
Riley					80					500
Rooks										
Russell										
Saline										62
Sedgwick										562
Shawnee										2,093
Smith										
Sumner							2,800			65
Wabaunsee										
Wallace										
Washington								6		131
Wilson					180	80	1,158	3		7,400
Woodson					250	80	386	80		1,850
Wyandotte				18,000	1,275	40			208,886	8,400
Total		2,800	1,553	76,000	29,047	19,352	22,772	3,834	1,222,078	201,040

* Seven townships. † No ground broken in 1872.

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FLAX SEED, HEMP AND TOBACCO, FOR THE YEARS 1870, 1872 AND 1873.

Counties.	1873.				
	Bush.	Pounds.	Bush.	Pounds.	Pounds.
	Quaker Beans	Oats	Flax Seed	Hemp	Tobacco
Allen.....	340	653	15		4,227
Anderson.....	2,930	1,800	2,710	1,389	17,366
Atchison.....	70	6,400	15,790	167,400	1,650
Bourbon.....	2,120	500	470		79,600
Brown.....	86		8,750	5,630	2,56
Butler.....	134	4,544	35		6,827
Barton.....					
Chase.....					
Cherokee.....		400	195		615
Clay.....	576	36	20		800
Cloud.....	200		42		4,200
Coffey.....		321	2,487		4,650
Cowley.....		4,875		1,125	9,500
Crawford.....	2,125	31,200	925		10,032
Comanche.....					
Davis.....	10				1,100
Dickinson.....		1,800	10		
Doniphan.....	15			236,500	6,000
Douglas.....	575		2,570	292,648	16,170
Ellis.....					
Ellsworth.....	60		100		
Franklin.....	22,310	7,000	3,250	19,800	4,500
Ford.....					
Greenwood.....	68	405	35		1,950
Harvey.....					
Howard.....	860	37,200			18,200
Jackson.....	16	124	2,000	16,200	6,050
Jefferson.....	30	275	1,580	21,400	19,780
Jewell.....			30		
Johnson.....	3,160		7,770	150,634	36,800
Labette.....	3,120	35,690	415		4,70
Leavenworth.....	480		410	90,900	9,450
Lincoln.....	25				
Linn.....		2,800	12		2,070
Lyon.....	1,080				
Marion.....	260			450	250
Marshall.....	420			9,900	2,700
McPherson.....				225	
Miami.....	380	145	282	9,000	8,160
Mitchell.....		130	80	18,450	1,000
Montgomery.....	7,000	23,300	1,690	3,600	27,950
Morris.....		200			250
Nemaha.....	760	150	2,790		3,612
Neosho.....	3,420	41,800	2,650	33,300	11,106
Ness.....					
Osage.....	2,610	400	1,336	13,500	25,984
Osborne.....		133			500
Ottawa.....					
Pawnee.....					
Pottawatomie.....	450		5	1,125	2,334
Republic.....	30	360	25	900	8,138
Reno.....	100	200	10		250
Rice.....	20	75			
Riley.....		600			
Rooks.....					
Russell.....					
Saline.....	8	89			62
Sedgwick.....	200	1,200	13		843
Shawnee.....			4,440	900	7,440
Smith.....					
Sumner.....	2,480	42,600		250	1,300
Wabaunsee.....	117			450	
Wallace.....					
Washington.....	25		3		1,055
Wilson.....	380	6,272	30		2,405
Woodson.....	320	2,702	140	900	4,070
Wyandotte.....	70	50	50	122,428	16,100
Total.....	59,435	251,222	63,478	1,410,304	393,352

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A summary of the foregoing table is very encouraging. In 1870 no castor beans are reported; in 1872, 19,352 bushels; in 1873, 59,435 bushels, or a gain of 207.12 per cent. in one year, from 1872 to 1873. In 1870, 2,800 pounds of cotton were reported; in 1872, 22,772 pounds; 1873, 251,222 pounds, a gain of 228,450 pounds, or 1,003.21 per cent. in one year, from 1872 to 1873. In 1870 the flax seed product was 1,553 bushels; in 1872, 3,834; in 1873, 63,478, a gain from 1872 to 1873 of 59,644 bushels, or 1,555.65 per cent. In 1870 there were 76,000 pounds of hemp fibre; in 1872, 1,222,098; in 1873, 1,410,304, a gain of 188,226 pounds, or 15.40 per cent. from 1872 to 1873. In 1870 the tobacco product amounted to 29,047 pounds; in 1872, to 201,040 pounds; in 1873, to 393,352, a gain of 192,312 pounds from 1872 to 1873, or 95.65 per cent.

SILK CULTURE.

Prof. C. V. Riley, of St. Louis, in a recent lecture in that city, said:

"If to-night I should, in my prevision of what America is to accomplish in the silk trade, paint a prophetic picture of that industry in this country hence, you would no doubt call me a dreamer, too. I fully believe that in 1873, and perhaps long before, the Southern Atlantic States and the Southwestern States will abound in silk-reeling establishments, and silk factories supplied with cocoons reared on all lands round about them, or brought at reasonable rates from the Pacific coast. There is no reason why we may not produce silk as cheap as any. There are few parts of the United States better adapted to silk culture than the southern counties in Missouri. The abundant supply of Osage orange renders this industry especially adapted to that section, since it has been demonstrated by actual experiment that the Osage orange is almost equal to mulberry in the way of providing food."

In 1871, Prof. Riley visited the establishment of Mons. E. V. Boissiere, in Franklin county, this State, and made a report thereof, which is published in the Fourth Annual Entomological Report of Missouri, and of which the following is an extract:

"About three years ago, Mons. E. V. Boissiere, a French philanthropist of considerable means, came to this country from Bordeaux, for the express purpose of purchasing a large tract of land for general agricultural purposes, but primarily for the cultivation of mulberry trees and the raising of silk. He finally settled in Franklin county, Kansas, about eighteen miles southwest of Ottawa, ten miles west of Princeton station, on the Leavenworth, Lawrence and Galveston Railroad, and three miles south of the little town of Williamsburg. Here, in 1869, he purchased 3,500 acres of undulating prairie land, and at once commenced operations by erecting a three-story frame building, 50x30 feet, for his operatives. The land is rich and clayey, with limestone subsoil, and of good elevation. He has already fenced in 360 acres, and broken about 150; and contracts are let for the fencing with stone walls of 160 acres, intended for pasture. The place has been christened 'Silkville.' He does not contemplate the cultivation of this entire tract, but intends to devote the greater portion of it to the raising of cattle, for which he wishes to have sufficient range on his own land. Only the more valuable portions will be devoted to the silk interest. Already there is a good stable, a few sheds for rearing the worms, and a stone factory, 83x28, for working the silk. If the silk business succeeds, the reeling of the cocoons and the manufacture of velvet trimmings will furnish occupation through the winter; but the hope of success now entertained by M. Boissiere cannot be realized for at least two years, which will be required to establish the possibility of

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profitably raising the worms, and to await the growth of the trees. Meanwhile, to avoid any chance of failure, he intends to embark in several industries which have received no attention in that part of the country, and which will give employment to the operatives, and may be carried on entirely from the products of the farm. Of such industries, he mentions more especially broom-making; the preservation of meat in tin cans; the manufacture and refining of sorghum syrup, of castor oil, potato starch, morocco leather, and dark-headed matches, which have nothing poisonous about them, and cannot be ignited except on the box containing them.

"There are already planted 8,000 mulberry trees, which have made a wonderful growth, and there are 2,500 fine young trees in nursery to be set out. There is also a young orchard of 900 apple trees and 2,000 peach trees, and 1,000 Concord grape vines; and belts of black locust, black walnut and ailantus will be planted the coming spring.

"The fore part of last November, I paid M. Boissiere a visit, as I was interested in this novel enterprise just started in a neighboring State. I found him sitting at an immense table with all the operatives, partaking in common of a plain but substantial meal. He is a bachelor of some sixty years of age; a philanthropic, intelligent man—a man of plain habits, and with such broad democratic views that he originally came to this country in sheer disgust of Napoleon III. He is fully imbued with the fact that there should be no conflict between capital and labor, and intends to make the colony self-supporting, but to form eventually a co-operative society, with an equitable distribution of profits, mutual guarantees, association of families, integral education and unity of interests—something after the plan proposed by Mr. E. T. Grant, in a work on co-operation, issued from the office of the New York *Tribune*. So soon as the organization is effected, he intends to donate to the association all the capital invested by himself up to that time, reserving only the right of as many votes as the capital will represent."

The following is the statement of Mons. Boissiere to Mr. Allen, the assessor of Williamsburg township, the current year:

"Since my report to A. M. Blair, Esq., dated Oct. 26th last, and published in the *Kansas Agricultural Report* for 1872, page 221, I have continued the manufacture of silk velvet ribbons about in the same manner as therein stated. I have now three looms in good working order, but since the addition of the third loom, I have not increased the working force, namely, two men, three women, and a part of the time a young girl. I have not yet succeeded in effecting sales of the finished fabrics without increasing expenses nearly equal to the profits.

"My experience in rearing silk worms the present season, I report as follows: Early in March last I received from the Agricultural Bureau, at Washington, a parcel consisting of three cards of Japanese eggs, and some time later, a second parcel, of three similar cards. Both parcels were laid away in a cellar as soon as received, where they were kept until the proper season for hatching. The eggs which came last were, however, partly hatched when received, and when they were put to hatch (May 14th), all that then hatched died immediately, and one-third of them never hatched at all. This parcel of eggs therefore proved a total failure. The parcel of eggs first received passed through the process of hatching from the 16th to the 19th of May, but two-thirds of them failed to hatch, so that I had Japanese worms only from the remaining third, which I estimated at about one-third of an ounce. The earliest hatched completed their first moulting May 23, at 1 A. M., and those hatched later, at 6 P. M., of the same day, after about eighteen hours sleep in each case. They appeared sound and healthy from the first. They were fed with the young leaves of the white mulberry, cut fine with a sharp knife, and the quantity was graduated with a view to equalize, as far as possible, the growth of the different parcels of worms. The second moulting followed three days after the first, the worms all passing through it at nearly the same time. The third moulting was completed

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May 30th, and the fourth and last, June 4th, the worms still appearing in good condition. Leaves for feeding were not cut up after the first meal following the third moulting, except for the meal next preceding and that next following the fourth moulting. Previously to the third moulting, the worms were fed six times a day. They began spinning June 10th, and were all spinning June 11th; the result was twelve pounds of cocoons, much smaller than those produced by French worms, but apparently of excellent quality.

"The eggs were hatched in a wooden box, warmed by heated bricks to a temperature varying from 64° to 80° Fahrenheit, then put around a stove, and kept at a temperature from 76° to 80°. Artificial heat was discontinued two days after the second moulting, and the worms were kept in a room varying between 62° in the morning, to 80° at 2 P. M. Thunder showers, which are supposed to affect growing silk worms injuriously, were frequent during this period. From the first to the last the eggs and worms were in charge of an experienced French silk grower. I was even less successful than last year with three varieties of French worms, subjected to the same treatment as these Japanese worms. Some of the latter happened to get mixed with the French worms, and became, like them, diseased, as if by contagion, a fact which indicates that the failure of the French worms is due to some inherited malady, and not to any peculiarity of the Kansas climate.

"Yours respectfully,

E. V. BOISSIERE."

LIVE STOCK.

The following table shows the number and value of farm animals, by counties, estimated from assessors' returns, monthly reports, and other reliable sources; also the aggregate in 1870-3, with actual and per cent. gain in three years:

Counties.	No. of Horses.	Mules & Asses.	No. of Cattle.	No. of Sheep.	No. of Swine.	Value of Horses.	Value of Mules & Asses.	Value of Cattle.	Val. of Sheep.	Value of Swine.
Allen.....	2,440	250	10,725	389	7,219	\$143,960	\$19,175	\$225,225	\$ 910	\$39,704
Anderson.....	3,013	238	12,488	1,688	5,330	177,767	18,207	262,248	3,903	29,315
Atchison.....	4,938	825	29,637	558	13,102	291,342	63,112	622,377	1,306	72,061
Bourbon.....	6,758	751	24,330	1,268	12,976	398,722	57,452	510,930	2,967	71,368
Brown.....	4,998	394	15,294	1,675	18,428	294,882	30,141	321,174	3,920	101,354
Butler.....	2,228	326	8,978	354	3,024	131,452	24,939	188,538	828	16,632
Barton.....	95	14	325	.....	32	5,605	1,071	6,825	.....	176
Chase.....	2,029	125	7,590	1,038	891	119,711	9,562	159,390	2,429	4,901
Cherokee.....	4,246	509	12,689	248	2,851	250,514	38,939	266,469	580	15,681
Clay.....	1,864	128	6,151	240	3,125	109,976	9,792	129,171	562	17,187
Cloud.....	1,931	341	6,875	324	2,707	113,929	26,086	144,575	758	14,888
Coffey.....	3,375	278	9,801	2,076	5,590	210,925	21,267	205,821	4,858	30,745
Cowley.....	3,704	561	12,650	766	4,512	218,536	42,917	265,650	1,792	24,816
Crawford.....	3,349	372	13,961	1,008	9,044	197,591	28,458	293,181	3,359	49,742
Comanche.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Davis.....	1,497	80	6,810	66	1,062	88,323	6,120	143,010	154	5,841
Dickinson.....	3,230	162	7,643	739	2,306	190,570	12,393	160,503	1,729	12,683
Doniphan.....	4,324	854	11,671	1,172	24,465	255,116	65,331	245,091	2,742	134,557
Douglas.....	6,874	411	19,153	647	20,690	405,566	31,442	402,213	1,514	113,795
Ellis.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ellsworth.....	848	143	3,458	.....	941	50,032	10,940	72,618	.....	5,176
Franklin.....	4,527	299	15,560	1,980	15,014	267,093	22,873	326,760	4,633	82,577
Ford.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Greenwood.....	2,929	172	16,205	866	4,180	172,811	13,158	340,305	2,026	22,990
Harvey.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Howard.....	3,538	531	15,686	2,623	10,156	208,742	40,622	329,406	6,138	55,858
Jackson.....	3,849	327	12,275	752	6,587	227,091	25,015	257,775	1,760	36,228
Jefferson.....	6,544	632	18,218	1,411	29,741	386,096	48,348	382,578	3,302	114,076
Jewell.....	1,328	174	9,977	509	1,659	78,352	13,311	209,517	1,191	9,124
Johnson.....	5,471	865	16,563	577	21,995	322,789	66,172	347,823	1,350	120,973
Labette.....	3,838	464	13,753	865	11,479	225,442	35,496	288,818	2,024	63,134
Leavenworth.....	4,337	799	14,046	1,310	26,586	255,883	61,123	294,956	3,065	118,223
Lincoln.....	450	40	4,125	981	327	26,560	3,060	86,625	2,295	1,798
Linn.....	6,575	574	16,250	.....	.....	387,925	43,911	341,250	.....	.....
Lyon.....	5,570	200	20,789	1,303	5,163	328,630	15,300	436,569	3,049	28,396
Marion.....	1,893	104	4,833	264	1,033	82,187	7,956	101,493	618	5,681
Marshall.....	2,788	175	10,042	1,366	6,644	164,492	13,388	210,882	3,196	36,542

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Valuation of Farm Animals—Concluded.

Counties.	No. of Horses.	Mules & Asses.	No. of Cattle.	No. of Sheep.	No. of Swine.	Value of Horses.	Value of Mules & Asses.	Value of Cattle.	Val. of Sheep.	Value of Swine.
McPherson.....	605	54	3,835	220	853	\$35,695	\$4,131	\$80,535	\$515	\$4,691
Miami.....	5,899	544	19,549	2,319	18,881	347,451	41,616	410,529	5,426	103,681
Mitchell.....	1,354	204	5,772	227	1,115	79,886	15,606	121,212	531	6,133
Montgomery.....	3,581	546	13,721	1,042	13,758	211,279	41,769	288,141	2,438	75,669
Morris.....	1,325	155	5,716	741	1,956	78,175	11,858	120,036	1,734	10,758
Nemaha.....	4,086	140	13,952	1,969	7,153	241,074	10,710	292,992	4,607	39,341
Neosho.....	4,315	464	15,465	623	1,492	254,585	35,496	344,765	1,458	8,206
Ness.....	4,993	225	19,402	624	10,798	291,587	17,212	407,442	1,460	59,389
Osage.....	799	153	2,583	169	480	47,141	11,704	54,243	395	2,640
Osborne.....	1,500	248	10,572	48	2,133	88,500	18,972	222,012	112	11,731
Ottawa.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pawnee.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Phillips.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pottawatomie.....	5,040	214	17,182	3,312	7,082	297,360	16,371	860,822	7,750	38,951
Republic.....	2,322	237	4,682	72	8,336	136,998	18,130	98,322	168	18,348
Reno.....	553	114	1,306	5	378	32,627	8,721	27,425	12	2,079
Rice.....	219	35	405	.....	220	12,921	2,678	8,505	.....	1,210
Riley.....	2,994	195	10,231	1,630	3,783	176,646	14,918	214,914	3,814	20,806
Rooks.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Russell.....	878	14	1,428	2,700	74	22,302	1,971	29,988	6,318	497
Saline.....	2,185	187	8,672	137	2,320	128,915	14,305	182,112	320	12,760
Sedgwick.....	639	196	3,791	.....	1,178	37,701	14,994	79,611	.....	6,479
Shawnee.....	5,802	445	24,665	141	13,002	342,318	34,042	517,965	330	71,511
Smith.....	695	97	1,230	.....	536	41,005	7,420	25,830	.....	2,948
Sumner.....	1,333	288	3,054	39	1,654	78,647	22,032	64,134	91	9,097
Wabunsee.....	2,534	114	10,166	.....	3,339	149,506	8,721	213,486	.....	18,365
Wallace.....	375	.....	1,125	.....	235	22,125	.....	23,625	.....	1,293
Washington.....	1,157	117	3,262	157	2,896	68,263	8,950	68,502	367	13,178
Wichita.....	2,546	223	10,316	1,606	6,187	150,214	17,059	216,636	3,758	34,028
Woodson.....	2,004	147	8,193	4,006	2,765	118,236	11,245	172,053	9,374	15,207
Wyandotte.....	1,860	342	5,192	336	9,768	109,740	26,163	109,032	786	53,724

Recapitulation.

	Horses.		Mules and Asses.		Cattle.		Sheep.		Swine.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Total in 1873	176,161	\$10,393,499	17,816	\$1,362,971	634,021	\$13,314,441	51,166	\$119,728	380,701	\$2,093,852
Total in 1870	117,786	8,634,891	11,786	1,014,125	373,967	10,227,997	109,088	230,174	206,587	1,456,438
Gain in 3 yrs.	58,375	\$1,758,608	6,030	\$348,846	260,054	\$3,086,444	.....	.....	174,114	\$637,414
Decrease.....	.....	.....	.....	.....	.....	.....	57,922	\$110,446	.....	.....
P. cent. gain.	49.56	20.3	51	34.3	69.5	30.1	Dec. 53	D. 47.98	84.2	43.7

CONDITION OF FARM ANIMALS.

The winter of 1872-3 was the most severe ever known in the State. There were many cases of criminal negligence, which caused considerable loss of cattle on the plains, in the western part of the State. Herds of Texas cattle were exposed to the severity of the winter, and left to shift for themselves. Streams were frozen, and the poor creatures probably suffered more for want of water than anything else. This is what some call "stock raising" in Western Kansas, and they measure the adaptability of the State for raising stock by their own failures. Another class of "stock growers" place sole reliance upon Short-horn bulls and mowing machines. Nearly all the losses reported are the result of neglect and exposure—starvation and thirst. The idea that farm animals can thrive upon the plains, without care and protection, is an error. In a few sheltered localities, where water can be procured, they may do so; but they are exceptional cases. For legitimate stock raising, there is no better State than Kansas, the very best evidence of which

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is the story of the foregoing table. No other State can make a more hopeful exhibit. The condition of farm animals has been good throughout the State. Mortality from disease has been very light.

SHEEP HUSBANDRY.

According to the census of 1870, the number of sheep in the State was 109,088. The estimate from the assessors' returns of 1873 is 51,116, a decrease of 57,922 in three years, or 53 per cent. These figures will astonish most sheep-raisers in the State. Assessors have in many counties neglected to "list" most of the flocks. Thus, in Sumner county only thirty-nine head of sheep are enumerated. An intelligent farmer of that county reports over 600, in small flocks of from thirty to fifty each. That there has been a depletion of large flocks through wanton neglect and exposure, and a merciless abandonment to be the prey of wolves and vagabond dogs, there is no doubt. Neither pecuniary considerations nor the instincts of humanity have been sufficient to induce careful and humane treatment. Of all domestic animals in the State, cattle and sheep have suffered the most.

Letters have been addressed to gentlemen in various parts of the State who are largely engaged in this important industry, and of answers received the following are samples:

JEFFERSON COUNTY, KANSAS, Dec. 22, 1873.

ALFRED GRAY, Esq.—*Dear Sir*: I am in receipt of yours of the 15th inst., and contents noted. I am well pleased that you take such an interest in the improvement of sheep husbandry in this State. I wish to inform you that from my own experience since I came to the State, I have come to the conclusion that sheep raising in Kansas will not pay, and the decrease can be very easily accounted for. In the first place, I am bound in honor to state that there is no other State in the Union more adapted to the raising of all kinds of sheep than this, and I doubt there being any stock raised in the State that will pay as large a percentage. You seem to be doubtful of the decrease. I am not, in the least. The principal cause of this lamentable fact is their destruction by wolves and dogs. If the Legislature would enact a law offering a good bounty for killing wolves, and placing a heavy tax on dogs, wolves would soon disappear, and Kansas would become the best sheep-raising State in the West. More taxes would be raised from sheep than would be paid for the destruction of wolves after the first year.

I imported in 1869 one hundred and fifty of the best long-wool sheep, Cotswold and Leicester breeds. I am thus far well pleased with the climate and health of sheep, but with the best of care they are now reduced in number by wolves and dogs to seventy. They come even to my yards and stables and attack them. If I had not brought my sheep dogs from Canada to stay by them at night, I would not have any left. Rather a poor prospect for an investment of twenty-five hundred dollars in gold. I would suggest to the honorable Board of Agriculture to recommend to the State Legislature a bill providing for a bounty, payable in taxes at the county offices, for killing such animals. If such a bill was passed, every citizen could have the benefit of cheap mutton, and then the wool to make clothing. You request me to ascertain, if possible, the number of sheep in the county. That I am unable to do correctly, but in all this section of Douglas and Leavenworth counties seemingly all had to go out of sheep-raising for the reasons above stated.

I am, sir, your obedient servant,

JAS. O'NEILL.

NEWBURG, WABAUNSEE COUNTY, KANSAS, December 26, 1873.

ALFRED GRAY, Esq., *Secretary of State Board of Agriculture*: Your letter of Decem-

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ber 15th is before me, and I will most respectfully give you all the information I can about sheep husbandry. I have been in the business about twenty years. My experience has been confined to the Merinoes, Cotswolds and Bakewell Leicesters. I have bred them pure; I have also crossed the Merino ewe with the Cotswold ram, with the best results. The cross retains the large frame of the Cotswold, and will mature early, and shear a heavy fleece. My average has been about eleven pounds, of a very desirable class of wool, for which I have always found a ready sale at the highest market price, since coming to this State—never less than fifty cents per pound. I find them a strong, healthy sheep, and well adapted to the State of Kansas. With ordinary care we need not lose more than five per cent. of the lambs when young, as they are very strong and full of vitality. My lambs at six months old will weigh about one hundred pounds. The lambs are dropped about the beginning of March; this gives me a chance to wean them about the first of August, and gives the ewes a chance to flesh up to go through the coming winter. I would sooner take care of one lamb in the spring than a small lamb and a weak ewe through a long winter, which is apt to be the case where lambs are not dropped until the month of May.

Kansas as a State is well adapted to sheep husbandry, and in Wabaunsee county I can raise wool and mutton for fifty per cent. less than I can in the State of Ohio; but, as in other localities, we need protection from the worthless curs. In my four years' experience in Wabaunsee county, I have not had a sheep killed by dogs or wolves. As near as I can inform you, we have about 1,500 sheep in this county, and if the number has not increased since 1870, the grade has been greatly improved. Yours, truly,

RICHARD J. STEPHENSON.

WAKEFIELD, CLAY COUNTY, KANSAS, December 24, 1873.

ALFRED GRAY, Esq.—*Dear Sir*: In reply to yours of last week, I beg respectfully to state that, to the best of our knowledge, the number of sheep in Clay county is between thirteen and fourteen hundred. *The majority of them are natives, but as we have four or five classes of imported sheep, the breeds are in a good way of being improved. Sheep are decidedly the best paying part of stock, and farmers generally are anxious to get some. We are not all ready for them, however, in these parts, as we need fenced pastures, tame grasses, good shade and water, which are very desirable to thrive well upon. Remaining, dear sir, yours, respectfully,

WILLIAM ALSOP.

VICTORIA, ELLIS COUNTY, KANSAS, Dec. 28, 1873.

ALFRED GRAY, Esq., *Secretary of the State Board of Agriculture*—*Dear Sir*: Sheep husbandry, under favorable circumstances and proper management, is the most lucrative pursuit a farmer can engage in. It gives a quicker return for money invested than the cattle trade, and can be conducted with very little hired labor—an overwhelming item to the arable farmer, especially in a virgin State like Kansas, where that article is both scarce and dear at the time it is most required. An impression that this State is not peculiarly adapted for sheep has been rapidly gaining ground of late years among a certain class of men who have watched the dispersion of several small flocks by experimenters, without investigating the causes of their attempt at sheep-craft proving a partial, and in some instances a total failure.

I have probed this matter thoroughly in the western part of the State, and found that in every unsuccessful effort at sheep raising, the fault lay in negligent and injudicious management. The sheep were allowed to roam unrestrainedly over the prairie, and only collected and counted once a fortnight, or when an unusually large number were observed to be missing; and I have known one part of a flock to be found forty miles west and the other part twenty miles east of their grazing grounds. A fence-board corral, open on all sides, and without any covering over-head, has generally been the only shelter erected to

*The assessor's returns show 86 fine-wools and 154 long-wools.

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protect them from wolves and the inclemency of the weather. Under such circumstances even the most sanguine flockmaster could not anticipate satisfactory results.

Statistical returns report a large decrease in the numbers since 1870, but these returns can hardly have been accurately collected, as there has been a considerable influx into the western part of the State, and only an infinitesimal number sold out of it. Any intelligent and practical farmer, experienced in this industry, can only pronounce one verdict on Western Kansas as a sheep-raising territory, and that a most favorable one. The short, succulent buffalo grass as a summer pasture is unsurpassed, and the blue-joint, when cut early and made into hay, is equally beneficial as winter forage in cases of emergency. While corn, at its present price, will pay better to feed to the wethers and be converted into mutton and wool, than hauled to the nearest market town and there traded, in lieu of cash, for articles charged in many instances twenty-five per cent. over cash prices. If a few acres of millet or Hungarian grass are grown, and distributed amongst the poorest and oldest broken-mouthed ewes in spring, before an early bite of grass comes, a number of lives will be saved, milk secreted, and the crop of lambs will come healthy and strong, instead of the puny, weakly offspring that mothers too often leave to die when and where they were dropped.

The flock of sheep under my care is owned by George Grant, Esq., of Victoria, Ellis county, Kansas, and consists of two thousand head of Missouri ewes, purchased this summer in various lots, including, as is generally the case in founding a flock of that size, a considerable number of broken-mouthed ones, a flock of pure-bred Cotswold ewes, and two small lots of Lincoln and Leicester ewes. The rams, consisting of over fifty head of Cotswolds, Lincolns, Oxford Downs and Leicesters, were all imported, and were purchased out of flocks possessing the purest strain of blood in their respective breeds that England can produce. As a guarantee that there is no falsity in this assertion, I may mention that the Cotswold rams, the breed of sheep that has hitherto received the greatest share of patronage of all long-wools, were purchased of Messrs. Russell Swanwick, of the Royal Agriculture College of England farm, Barton of Fyfield, Gillett of Kilkenny, Lane of Broadfield, and other breeders whose names are all familiar to the "ramocracy" of the world. The Oxford Downs were imported from Mr. Charles Hobbs, Maisey Ampton, Ewencester, a noted breeder of this class; and the Lincolns are from the famous Biscathorpe flock. The avocation of ram-craft is a science at Biscathorpe, and has been conducted with great success for many years. At the annual sale this last season, after a number of rams had been selected, the remaining seventy realized, under the auctioneer's hammer, the handsome average of £35.18, or close upon \$200 each—a high average, even in these days of sensational prices for blooded stock, and a fair test of the estimation in which this improved breed of Lincoln sheep is held. This strain of blood is distributed all over the pasture grounds of Australia, Africa, America, and the known world, wherever improved flocks of sheep exist.

The selection of blooded sires was a *sine qua non* with Mr. Grant in laying the foundation of this flock, and to obtain this object he spent his money unsparingly. The aim he had in view in using rams of undoubted excellence was to progress rapidly in wool, impart to the meat a finer texture, and obtain a greater quantity of fat in the tissues of the animal.

It may be interesting to know how the imported rams have become acclimated on the plains, and the mode of treatment they have received. I left Cardiff with them on the 4th of April last, and only reached Victoria on the 26th of May. They were immediately turned loose on the range, and subsisted entirely on buffalo grass all summer. Six of them were exhibited at the Kansas City Exposition and the Kansas State Fair, without having received any artificial food, and carried off the premiums against all comers, both fine and long-wools, and were in a condition justifying the assertion that buffalo grass is rich, natural food, and well adapted for sheep. The Cotswold sheep stands unrivaled in

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the opinion of many flock owners, as the most valuable long-wooled sheep, either for crossing purposes or used as a pure-bred, possessing true form and quality, with fleeces heavy enough to satisfy any glutton for wool.

The Oxford Down, a breed of comparatively recent origin, is now attracting much attention, and promises soon to become deservedly and increasingly popular. By careful physiological observation, and judicious crossing, it has acquired a distinct type and uniform character, inheriting to a high degree the many sterling qualities of its primogenitors, *i. e.*, the Cotswold and Southdown. Mr. Grant exhibited two rams of this breed at the above-named fairs, and the committee were for a time undecided about awarding one of them the blue ribbon as the best ram exhibited. He is a grand-looking shearling of decided merit, possessing a beautiful uniformly tinted head with a good top-knot, a straight back with well-sprung ribs, is good through the heart, with oblique shoulders, and good loins. His legs are clean and well apart, showing off to advantage whether walking or standing, his handsome proportions, full of symmetry and quality. This breed of sheep is rapidly gaining favor, and becoming more widely spread and highly prized. Possessing a hardy constitution, they are suitable for a large and varied range of soils, and can bear close folding remarkably well. The ewes are good mothers and very prolific, producing 40 per cent. of doubles. The staple of wool is fine and close, and it is no uncommon event for a flock of Oxford Downs to shear from 6 to 8 pounds a fleece.

Owing to inefficient fireguards along the Kansas Pacific Railway (a matter that is receiving the prompt attention of Mr. Dorrance, the highly esteemed superintendent of that section of the road), a prairie fire burned off a considerable tract of country, valuable for winterage, and destroyed a portion of hay that was partially secured. Under these circumstances, Mr. Grant considered it prudent to winter this season where a greater part of the ewes were purchased, some distance east of the future sheep range, and drive them west in the spring. On this account, the corrals I have erected are only temporary, and not so substantial as those to be erected at Victoria. Still, every individual sheep has ample room to rest under cover, without crowding, and are sheltered in all directions from storms. A never-failing supply of water runs through one of the corrals, and is of essential advantage to the flocks. This water issues from a spring immediately above the corral, at a temperature of fifty-six degrees, and has never been known to freeze over one-quarter of a mile below the fountain-head, during the hardest winter. We have at this date, the 27th of December, less than one per cent. of deaths since August, and, from their present appearance, I am in hopes of carrying them through the winter with not more than two per cent of loss. We have had only five natural deaths, having lost seven by overcrowding in a railway car and four by wolves before we had erected sufficient protection.

Sixty-four ewes have lambed, and fifty-two lambs are living, and look strong enough to withstand the rigor of winter. This lambing during the winter months is another great cause of failure among speculators who purchase a lot of run-down Missouri ewes in autumn, with the idea of farming them over one year, and without possessing the tenacity of holding on and building up a half and three parts bred flock from them. I kept the rams separate from the ewes until the 1st of December, so that the half-bred lambs will begin coming about the 25th of April; the greater part of them are likely to drop about the middle of May, after a young bite of grass has started.

In a variable climate, such as we experience in the western part of Kansas, the separation of the bucks from the ewes until the proper time arrives, is a most important detail in the management of a sheep flock, and one that deserves the strictest attention; and I can name one flockmaster who lost 700 lambs from inattention to this matter three years ago. I visited his ranche lately; he has profited by his experience, and has already made sheep husbandry on the plains a brilliant success.

Mr. Grant, during his present visit to Europe, intends purchasing and bringing out

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with him to Victoria in spring a number of Shropshire rams—another breed of sheep attracting much attention in England, and rapidly ranking as the most important coarse-wool breed of the present day. Messrs. Hoyt and Pierce, of California, selected 126 of them from the most eminent breeders last November, and imported them to that State—a meritorious step in the right direction.

Messrs. Brooks and Church have a well-appointed and well-managed sheep ranche on Wolf creek, about 25 miles northeast of Victoria. They are crossing Mexican ewes with pure-blooded Merino bucks, and now own about 4,000 sheep. The results have been highly satisfactory, and a visit to inspect their covered-on sheds and mode of management will amply repay any one intending to engage in sheep raising.

—I am convinced from this short experience that the whole western region lying alongside the Kansas Pacific railway, is one vast sheep range, and admirably suited for this industry in every respect, always providing that sufficient protection is erected to shelter the flock in severe weather. And the day is rapidly nearing when thousands of flocks will dot the surface of what has hitherto been the Great American Desert. Vast herds of Texas cattle have hitherto monopolized those rich grazing regions, but it only requires to prove to capitalists by one or two successful efforts that the golden ball is rolling at their feet in the shape of wool and mutton, and once this fact is proved beyond cavil, as Mr. George Grant is on the eve of doing, these moneyed men will throw their energies to catch it in the direction of this western territory. Should any reader of this imperfect account of Mr. Grant's start at sheep farming embolden them to engage in it in a cautious manner at first, I will be glad to show them our small winter ranche at Wakefield, Clay county, where we are wintering 600 native ewes and a bunch of the most level, compact and symmetrical Cotswold ewes America can boast of; and also lay before them the cost of corral, cost of feed, herding, etc., and allow them to form their own opinion of sheep-husbandry in Kansas. Mr. Grant has already made arrangements to increase his flock to gigantic proportions in spring and early summer. One party has already commenced with 600 ewes on Victoria, and other two gentlemen have determined to enter into the business here with 2,000 each. This augurs well for the future development of this industry in Ellis county. Their intention is to procure the best ewes that can be purchased, use only pure-blooded sires, erect sufficient shelter, and pay strict attention to the herding and management of their flocks in order to insure success.

J. D. SMITH,

Manager to George Grant, and Vice Pres. for the Wool Growers and Sheep Breeders Ass'n of Kansas.

There are, according to abstracts returned to the Auditor of State, 15,312,562 acres of *taxable* land in the State. The abstracts of assessors' returns, made to this office, show 2,982,599 acres of *improved* land. The minimum per cent. of cultivated to taxable acres is .54—Barton county; the maximum, 55.08 per cent.—Johnson county; the average for the entire State is 19.47 per cent.

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Table showing the number of taxable and cultivated Acres in Kansas by counties, and the per cent. of cultivated to taxable Acres.

Counties.	No. of Acres Taxable....	No. of Acres under Cultivation....	Per Cent. of cultivated to taxable Acres.	Counties.	No. of Acres Taxable....	No. of Acres under Cultivation....	Per Cent. of cultivated to taxable Acres.
Allen.....	294,036	63,197	21.50	Marion	477,510	16,800	3.52
Anderson.....	327,033	45,921	14.04	Marshall	415,906	42,430	10.20
Atchison.....	269,243	85,652	31.81	McPherson	116,352	8,968	7.70
Billings.....	800			Miami.....	363,501	135,109	37.16
Barton.....	180,139	986	.54	Mitchell.....	35,884	15,385	42.81
Bourbon.....	375,675	118,720	31.52	Montgomery.....	321,439	87,970	27.36
Brown.....	327,617	126,863	38.72	Morris.....	233,401	27,363	11.72
Butler.....	449,927	37,616	8.36	Nemaha.....	420,435	70,175	16.68
Chase.....	369,952	15,258	4.12	Neosho.....	360,384	111,436	30.92
Cherokee.....	367,498	22,819	6.20	Osage.....	383,191	85,573	22.33
Clay.....	140,768	28,140	12.88	Osborne.....	16,830	8,271	49.14
Cloud.....	80,263	28,936	36.05	Ottawa.....	158,809	16,792	10.51
Coffey.....	373,852	44,247	11.83	Pawnee.....	224,640		
Cowley.....	217,590	30,905	14.20	Phillips.....	3,680		
Crawford.....	353,427	76,316	21.31	Pottawatomie	241,737	73,878	30.56
Davis.....	105,647	18,710	17.72	Reno.....	294,718	8,503	2.92
Dickinson.....	179,345	31,355	17.48	Republic.....	79,782	39,282	49.23
Doniphan.....	235,133	110,770	47.11	Rice.....	172,327	4,311	2.50
Douglas.....	290,953	143,293	49.24	Riley.....	175,907	38,776	22.04
Ellis.....	29,537			Rooks.....	640		
Ellsworth.....	10,923	4,732	43.32	Russell.....	22,160	538	2.42
Franklin.....	342,560	103,135	30.11	Saline.....	292,035	24,330	8.61
Greenwood.....	501,045	35,669	7.12	Shawnee.....	264,782	82,304	31.08
Harvey.....	186,439			Sedgwick.....	270,817	7,011	2.58
Howard.....	248,761	56,507	22.71	Sumner.....	132,587	12,997	9.80
Jackson.....	271,553	63,957	23.55	Smith.....	8,795	5,823	66.21
Jefferson.....	350,488	116,626	33.26	Wabaunsee.....	242,289	30,930	12.76
Jewell.....	40,051	16,058	40.09	Washington.....	201,848	25,204	12.48
Johnson.....	258,654	142,476	55.08	Wilson.....	288,061	66,252	22.99
Labette.....	366,223	83,585	22.82	Woodson.....	234,146	57,867	24.71
Leavenworth.....	282,318	97,060	34.38	Wyandotte.....	90,201	34,719	38.49
Lincoln.....	135,358	5,406	3.99				
*Linn.....	370,880	53,791	14.50				
Lyon.....	431,350	64,218	14.88				
				Total	15,312,562	2,982,599	19.47

*Only seven townships reported.

Assuming the average size of cultivated farms in Kansas to be one hundred and sixty acres, and each farm to maintain from fifty to one hundred sheep—an average of seventy-five—we have 1,398,075 sheep that could be grown with a very trifling cost. What they would consume, both summer and winter, would mostly be lost without the sheep. They would pay taxes and clothe each family—no small consideration for the farmers of the State. But this industry must struggle at great disadvantage unless, by legislative enactment, a heavy tax is placed upon dogs and a liberal bounty offered for wolves.

DAIRY PRODUCTS OF KANSAS.

The table on the following page shows the dairy products of Kansas, by counties, for the year 1873:



Transactions of the Kansas State Board of Agriculture, 1873

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Counties.	Cheese Factories.				Cheese—Fam'y Manuf'e.			Butter—Family Manufacture		
	Capital Invested	Pounds Manu- factured	Price per Pound	Value of Prod- uct	No. of Pounds.	Average Price per Pound.	Value of Prod- uct.	No. of Pounds.	Average Price per Pound.	Value of Prod- uct.
Allen.....					2,180	.126	\$275	125,382	.156	\$19,559
Anderson.....					3,976	.175	783	160,866	.148	13,808
Atchison.....					3,318	.15	1,248	150,795	.19	28,651
Bourbon.....					8,740	.15	1,311	217,031	.20	43,406
Brown.....					1,305	.125	163	225,186	.14	31,528
Butler.....					1,575	.16	252	94,779	.22	20,851
Barbour.....										
Barton.....										
Billings.....										
Chase.....					275	.15	41	54,540	.21	11,453
Cherokee.....					1,200	.11	132	25,736	.19	4,189
Clay.....					2,398	.15	360	85,332	.15	12,799
Cloud.....					52	.20	10	153,771	.164	252,184
Crawford.....					750	.17	127	130,375	.17	22,164
Coffey.....					1,490	.15	224	132,953	.15	19,943
Cowley.....	\$325	3,558	.15	534	375	.15	56	71,993	.20	14,398
Comanche.....										
Davis.....					425	.15	21	58,773	.15	8,816
Dickinson.....					1,250	.21	283	41,924	.20	8,385
Doniphan.....					415	.125	52	346,552	.163	56,488
Douglas.....					2,563	.12	299	375,828	.169	63,515
Ellis.....										
Ellsworth.....								11,975	.25	2,994
Franklin.....					895	.15	134	168,249	.15	25,237
Ford.....										
Greenwood.....					1,454	.15	233	74,703	.18	13,447
Harper.....										
Harvey.....										
Howard.....					845	.175	148	117,978	.165	19,466
Jackson.....	600	500	.13	65	1,989	.13	258	206,269	.17	35,066
Jefferson.....					2,189	.12	263	118,222	.15	17,733
Jewell.....								33,847	.18	6,092
Johnson.....					19,250	.15	2,887	251,828	.165	31,552
Labette.....					1,503	.16	240	197,243	.23	45,366
Leavenworth.....					535	.20	107	219,803	.204	44,840
Lincoln.....					100	.18	18	19,880	.25	4,970
Linn.....								145,446	.13	18,908
Lyon.....	4,000	105,614		11,989	2,710	.105	285	179,568	.187	33,579
Marion.....					500	.125	63	14,860	.28	4,161
Marshall.....					10,630	.125	1,329	160,571	.125	2,071
McPherson.....					1,197	.15	179	26,647	.185	4,929
Miami.....	1,300	18,000	.125	2,250	1,965	.125		251,928	.14	3,629
Mitchell.....								36,718	.205	7,527
Montgomery.....					3,350	.10		174,371	.20	34,874
Morris.....	1,200	2,500	.16	400	250	.12	30	41,651	.215	8,955
Nemaha.....	625	4,800	.12	576	19,140	.12	2,297	162,766	.126	20,508
Neosho.....					1,335	.15	200	205,045	.15	30,757
Ness.....										
Osage.....					8,100	.125	1,012	274,225	.17	46,618
Osborne.....					300	.40	120	1,914	.23	440
Ottawa.....					300	.10	30	14,622	.21	3,071
Pawnee.....										
Phillips.....										
Pottawatomie.....					2,865	.142	407	139,369	.156	21,732
Reno.....								2,125	.25	531
Republic.....					80	.15	12	115,047	.17	19,558
Rice.....								1,846	.275	508
Riley.....					675	.15	101	99,090	.17	16,845
Rooks.....										
Russell.....										
Saline.....					30	.15	4	36,620	.225	8,240
Sedgwick.....								5,292	.26	1,376
Shawnee.....	1,900	7,300	.12	864	3,493	.12	419	360,438	.20	72,088
Smith.....								3,332	.24	799
Sumner.....								17,050	.285	4,859
Wabauaunsee.....					17,455	.123	2,147	109,562	.17	18,626
Wallace.....										
Washington.....					1,300	.155	202	66,258	.132	8,756
Wilson.....					1,615	.22	355	92,193	.25	23,048
Woodson.....					522	.125	65	104,355	.15	10,653
Wyandotte.....					63	.15	9	100,031	.25	25,008
Total.....	\$9,810	151,172		\$17,668	143,932		\$19,191	6,804,693		1,331,554