Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

Table I shows the gains and losses in territory du

TABLE I.—*Total area*

State.
Texas.....
Louisiana.....
Oklahoma.....
Arkansas.....
Mississippi.....
Alabama.....
Florida.....
Tennessee.....
Georgia.....
South Carolina.....
New Mexico.....
North Carolina.....
Total.....

¹ This table does not include the ne

Table II gives a distinct idea of the importance of production throughout the country has been su distributed within each State between the infested a

TABLE II.—*Proportion of cotton*

State.
Texas.....
Louisiana.....
Florida.....
Arkansas.....
Oklahoma.....
Tennessee.....
Mississippi.....
Alabama.....
Georgia.....
South Carolina.....
North Carolina.....
Missouri.....
Arizona ¹
California.....
Virginia.....
All others.....
Total.....
Weighted average.....

¹ This table do

In Table II it is shown that only 8.5 per cent of per cent is produced outside the weevil line, and in shows practically complete infestation, as it produces only 14.8 per cent is produced in the uninfested section crop in that State. Considering the cotton-producing crop is produced in uninfested territory. This shows

We are indebted to Prof. Franklin Sherman and

UNITED STATES DEPARTMENT OF AGRICULTURE.
DEPARTMENT CIRCULAR 163.

Contribution from the Bureau of Entomology.

DISPERSION OF THE BOLL WEEVIL IN 1920.

By B. R. COAD and R. W. MORELAND.

The outstanding feature of the weevil movement during 1920 has been its retardation in the eastern portion of the cotton belt. For many years the most important movements took place east of the Mississippi River, but during 1920 there was comparatively little gain in that section. By far the most significant change is the dispersion in Oklahoma and Texas by which a large territory infested a number of years ago, but uninfested for the past five or six years, has been regained by the weevil.

In North Carolina eight new counties have been partially infested, making a total gain in the State of 2,500 square miles.

In South Carolina every county is now infested and the limit of cotton cultivation has been reached. The same situation applies to Georgia.

In Tennessee there was a slight recession in the Tennessee River valley, but this is more than offset by a slight gain in the central portion of the State, while from that point westward to the Mississippi River the line is much the same as in 1919.

Throughout Arkansas there was a general gain, although comparatively slight in extent.

In Oklahoma there was a gain of over 19,000 square miles. Practically this takes the weevil to the limit of cotton cultivation in the northern portion of the State and to the limit of continuous cotton cultivation in the western portion, although there are a number of isolated but fairly important cotton areas still west of the line.

In Texas a slight general movement westward is noted. The 1920 line passes from western Valverde County to Mertzon in Irion County. It then runs northward to Water Valley in Tom Green County, thence northeastward through Bronte in Coke County, passes through the northwestern corner of Runnels County, and continues in a northeasterly direction through Tye in Taylor County to Avoca in Jones County. It then crosses Haskell County to Seymour in Baylor County and goes directly northward to the border through Kingola in Wilbarger County.

In Oklahoma the line enters the State just south of Frederick in Tillman County. It then runs through Comanche County northward through Sickles in Caddo County, continuing northward through Watonga in Blaine County, and crosses the southeastern corner of Major County. It then turns in an easterly direction through Fairmont in Garfield County, continues north and east through Noble County, then through Ralston in Pawnee County, and crosses Osage County to Collinsville in Tulsa County, where it turns southward through Rogers County and passes through Wagoner in Wagoner County. It continues southeastward through the northeast corner of Muskogee County, enters Sequoyah County at the northwest corner, and extends through that county to the border at Moffett.

In Arkansas the line runs from Fort Smith in Sebastian County northeastward through the southern portion of Crawford County, thence across Franklin County, continuing northeastward through Catalpa in Johnson County. It then runs through Bass in Newton County to Zack in Searcy County, whence it declines southeastward through Fox in Stone County, passes through the northeastern corners of Cleburne, White, and Woodruff Counties, and runs through the southwestern corner of Cross County to Newcastle in Saint Francis County, whence it advances a little northward through the southeast corner of Cross County to Wildcat and Harvard in Crittenden County.

In Tennessee the line enters the State at Covington in Tipton County, passes through southern Haywood County and through Vildo and Toone in Hardeman County, runs northeasterly to Henderson in Chester County, and crosses the extreme northern portion of Hardin County to Clifton in Wayne County. It then runs to Marcella in Lawrence County, where it turns northeast to Columbia in Maury County, thence directly southeast through Lewisburg in Marshall County to Smithland in Lincoln County. It then runs through Winchester in Franklin County to Whitwell in Marion County, whence it declines almost directly southward across the southwest corner of Hamilton County to Rossville, Ga. It then turns northeastward through the extreme northern point of James County to Tabor in Meigs County, thence through Athens and Etowah in McMinn County and turns southward through Polk County to Tennega, Ga.

In Georgia the line passes from Tennega, Murray County, to Ellijay in Gilmer County, thence across the southern portion of Fannin County and the northern portion of Lumpkin County to Cleveland in White County and through Cornelia in Habersham County. From here it runs northeastward to the border through Ayersville in Stephens County.

In South Carolina the line passes through Seneca in Oconee County and Easley in Pickens County to Greenville in Greenville County, thence southeastward to Switzer in Spartanburg County, across the northwestern corner of Union County, and crosses the southern end of Cherokee County to York and Rock Hill in York County, and thence to the border just north of Van Wyck.

In North Carolina the line runs eastward through Walkersville in Union County to Perkins in Anson County and across the extreme southern portion of Richmond and Scotland Counties, thence northeastward to Red Springs in Robeson County, crosses the northern portion of Bladen County, and then through Garland in Sampson County to Rosehill in Duplin County. From here it extends through Catharine Lake in Onslow County across the extreme southwestern corner of Carteret County to the coast.

In Florida the line passes through Ozona in Pinellas County, Tampa, Seffner, and Plant City in Hillsborough County, Fort Meade in Polk County, Kissimmee in Osceola County, and Indian River City in Brevard County.

In New Mexico the weevil has evidently failed to become established, as no positive records have been made of its occurrence in Eddy County since 1918.

In Arizona the weevil apparently has succeeded in transferring its attack from the wild cotton of the mountains to the cultivated cotton around Tucson. During September, 1920, weevil infestation was found in three fields of cultivated cotton along the Rillito River between the mouth of Sabino Canyon and the Oracle road. State authorities have undertaken a clean-up campaign for the eradication of this infestation, and have proclaimed all territory north of the line of Congress Street in Tucson a noncotton zone until further notice.

Altogether 42,621 square miles of new territory were invaded by the weevil during 1920 and only 752 square miles were lost, so that the net gain was 41,869 square miles. The loss occurred in Tennessee. Only about 73,000 square miles of cotton-producing territory now remain uninfested.

Use ring 1920, by States:

Appr, in square miles, infested by the boll weevil in 1920.¹

Pure

	Year first infested.	Area infested in 1919.	Gain in 1920.	Loss in 1920.	Area infested in 1920.
		<i>Sq. miles.</i>	<i>Sq. miles.</i>	<i>Sq. miles.</i>	<i>Sq. miles.</i>
1892	1892	174,250	7,749	0	181,999
1903	1903	40,800			40,800
1906	1906	20,450	19,695	0	40,145
1906	1906	33,700	4,567	0	38,267
1907	1907	46,340			46,340
1910	1910	51,300			51,300
1911	1911	35,000			35,000
1914	1914	7,900	869	0	8,769
1915	1915	56,500	1,603	0	58,103
1917	1917	23,900	3,266	0	27,166
1918	1918	0		0	0
1919	1919	2,100	4,120	0	6,220
		492,240	41,869		534,109

applicawly infested area in Arizona, as the extent of this is still problematical.

Start of the uninfested territory from the standpoint of cotton production. The distribution summarized for the 10-year period 1909-1918, inclusive, and this production has been and uninfested areas as shown by the 1920 dispersion line.

Keep control in crop produced by States in area now free from the boll weevil.

	Average cotton production for 10-year period 1909-1918, inclusive. ¹		
	Average annual bales per State.	Crop produced in area now uninfested (1920).	
		Average annual bales.	Percentage of total crop of State.
Alabama	3,602,105	308,306	8.5
Arkansas	416,372	0	0
California	54,561	0	0
Florida	926,618	267,776	28.8
Georgia	861,304	243,358	28.2
Illinois	332,391	223,965	67.3
Indiana	1,104,950	0	0
Iowa	1,139,702	0	0
Kansas	2,088,695	3,864	.1
Louisiana	1,287,845	190,863	14.8
Michigan	784,125	702,025	89.4
Minnesota	63,982	63,982	100.0
Mississippi	7,734	7,734	100.0
Missouri	24,718	24,718	100.0
Montana	21,450	21,450	100.0
Nebraska	12,018	12,018	100.0
Nevada			
New Mexico			
New York	12,728,576	2,070,065	16.2
North Carolina			
North Dakota			
Ohio			
Oklahoma			
Oregon			
South Carolina			
South Dakota			
Tennessee			
Texas			
Vermont			
Virginia			
Washington			
West Virginia			
Wisconsin			
Wyoming			

es not include newly infested territory in Arizona.

of the Texas crop is produced beyond the weevil-infested area. In Oklahoma 28.8 Arkansas and Tennessee the percentages are 28.8 and 67.3, respectively. Georgia only one-tenth of 1 per cent of its crop beyond the weevil line. In South Carolina n, while in North Carolina the infested area produces only about 10 per cent of the States as a whole, it is seen that a general average of 16.2 per cent of the total cotton the small amount of territory which is still possibly subject to weevil infestation. ssistants of the North Carolina Department of Agriculture for assistance in deter-

Table I shows the gains and losses in territory during 1920, by States:

TABLE I.—*Total area, in square miles, infested by the boll weevil in 1920.*¹

State.	Year first infested.	Area infested in 1919.	Gain in 1920.	Loss in 1920.	Area infested in 1920.
		<i>Sq. m. les.</i>	<i>Sq. miles.</i>	<i>Sq. miles.</i>	<i>Sq. miles.</i>
Texas.....	1892	174,250	7,749	0	181,999
Louisiana.....	1903	40,800			40,800
Oklahoma.....	1906	20,450	19,695	0	40,145
Arkansas.....	1906	33,700	4,567	0	38,267
Mississippi.....	1907	46,340			46,340
Alabama.....	1910	51,300			51,300
Florida.....	1911	35,000			35,000
Tennessee.....	1914	7,900	869	0	8,769
Georgia.....	1915	56,500	1,603	0	58,103
South Carolina.....	1917	23,900	3,266	0	27,166
New Mexico.....	1918	0		0	0
North Carolina.....	1919	2,100	4,120	0	6,220
Total.....		492,240	41,869		534,109

¹ This table does not include the newly infested area in Arizona, as the extent of this is still problematical.

Table II gives a distinct idea of the importance of the uninfested territory from the standpoint of cotton production. The distribution of production throughout the country has been summarized for the 10-year period 1909–1918, inclusive, and this production has been distributed within each State between the infested and uninfested areas as shown by the 1920 dispersion line.

TABLE II.—*Proportion of cotton crop produced by States in area now free from the boll weevil.*

State.	Average cotton production for 10-year period 1909–1918, inclusive. ¹			
	Average annual bales per State.	Crop produced in area now uninfested (1920).		
		Average annual bales.	Percentage of total crop of State.	
Texas.....	3,602,105	308,306	8.5	
Louisiana.....	416,372	0	.0	
Florida.....	54,561	0	.0	
Arkansas.....	926,618	267,776	28.8	
Oklahoma.....	861,304	243,358	28.2	
Tennessee.....	332,391	223,965	67.3	
Mississippi.....	1,104,950	0	.0	
Alabama.....	1,139,702	0	.0	
Georgia.....	2,088,695	3,864	.1	
South Carolina.....	1,287,845	190,863	14.8	
North Carolina.....	784,125	702,025	89.4	
Missouri.....	63,982	63,982	100.0	
Arizona ¹	7,734	7,734	100.0	
California.....	24,718	24,718	100.0	
Virginia.....	21,450	21,450	100.0	
All others.....	12,018	12,018	100.0	
Total.....	12,728,576	2,070,065		
Weighted average for country.....			16.2	

¹ This table does not include newly infested territory in Arizona.

In Table II it is shown that only 8.5 per cent of the Texas crop is produced beyond the weevil-infested area. In Oklahoma 28.8 per cent is produced outside the weevil line, and in Arkansas and Tennessee the percentages are 28.8 and 67.3, respectively. Georgia shows practically complete infestation, as it produces only one-tenth of 1 per cent of its crop beyond the weevil line. In South Carolina only 14.8 per cent is produced in the uninfested section, while in North Carolina the infested area produces only about 10 per cent of the crop in that State. Considering the cotton-producing States as a whole, it is seen that a general average of 16.2 per cent of the total cotton crop is produced in uninfested territory. This shows the small amount of territory which is still possibly subject to weevil infestation.

We are indebted to Prof. Franklin Sherman and assistants, of the North Carolina Department of Agriculture, for assistance in determining the advance of the weevil. Most of the work was done by the following agents: E. S. Tucker, F. F. Bondy, W. B. Williams, and R. W. Moreland.

ADDITIONAL COPIES
OF THIS PUBLICATION MAY BE PROCURED FROM
THE SUPERINTENDENT OF DOCUMENTS
GOVERNMENT PRINTING OFFICE
WASHINGTON, D. C.
AT
5 CENTS PER COPY