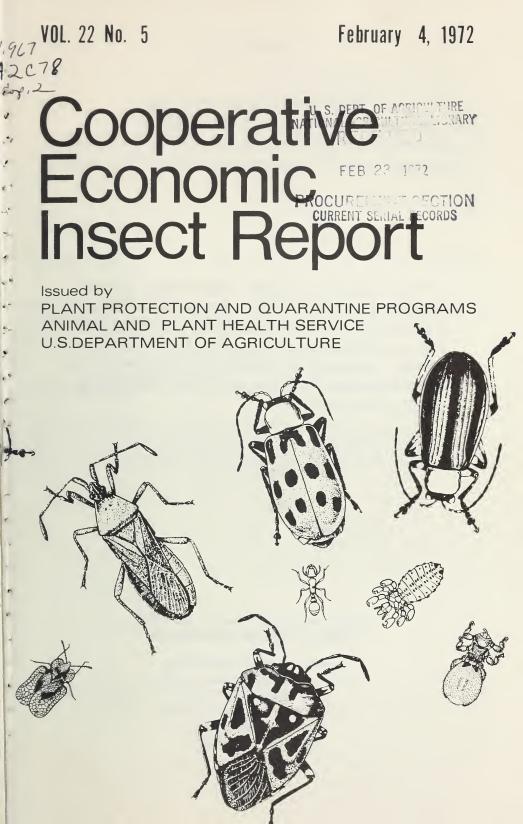
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ANIMAL AND PLANT HEALTH SERVICE PLANT PROTECTION AND QUARANTINE PROGRAMS ECONOMIC INSECT SURVEY AND DETECTION STAFF

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The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Service serves as a clearing house and does not assume responsibility for accuracy of the material.

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Economic Insect Survey and Detection Plant Protection and Quarantine Programs Animal and Plant Health Service United States Department of Agriculture Federal Center Building Hyattsville, Maryland 20782

Number 5

COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

Current Conditions

GREENBUG remains light in small grain in Oklahoma and New Mexico. (p. 19).

EUROPEAN CORN BORER mortality light in portions of North Carolina. (p. 19).

Special Report

EUROPEAN CORN BORER increased in 8 of 15 States reporting in 1971. Decreases were recorded in Maryland, Kansas, Minnesota, Ohio, South Dakota, and Michigan. The population in Illinois is 28 percent higher than the average for the past 10 years. (pp. 22-28).

Reports in this issue are for week ending January 28 unless otherwise indicated.

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WEATHER OF THE WEEK ENDING JANUARY 31

Reprinted from Weekly Weather and Crop Bulletin supplied by Environmental Data Service, NOAA.

HIGHLIGHTS: Arctic cold spread far southward during the week. Heavy local snows occurred in Oswego County, New York. The heaviest rains occurred in Kentucky and over the lower Mississippi River Valley.

PRECIPITATION: A large winter storm swung out of the central Rocky Mountains across the Great Plains and Great Lakes to 1 . southeastern Canada early in the week. It brought stormy weather to much of the Nation. Heavy snow fell from the northern Rocky Mountains to the nearby Great Plains accompanied by gale winds. -2 South of the Snow Belt, freezing rain glazed roads, trees, wires, and other outdoor objects. Several inches of new snow accumulated in the North Central States. Winds at Worthington, Minnesota, gusted to 63 m.p.h. Monday afternoon. Strong winds picked up fallen snow piled in deep drifts and in some places reduced the visibility to zero. Heavy rains soaked coastal sections of the Pacific Northwest and snow fell in the nearby hills and mountains. Cold air spilled over the Continental Divide and caused snow along the northern Pacific coast. Five inches accumulated at Quillayutte, Washington, in 6 hours late Monday and 6-12 inches fell in the Seattle area. The deep snow snarled the traffic west of the divide. The snow continued Tuesday and by Tuesday evening, Olympia, Washington, lay beneath 20 inches of snow and 12-18 inches covered Seattle. Paradise Ranger Station received 1.5 feet * of new snow, bringing the depth there to 22 feet. Meanwhile, heavy snow was falling in the Great Lakes area. At Duluth, Minnesota, 11 inches of snow fell accompanied by strong winds which piled the snow in drifts up to 4 feet deep. Snow also began falling in the Northeast where strong winds drifted the snow and cut visibility to zero. White Plains, New York, clocked wind gusts which peaked at 76 m.p.h. and at Syracuse, New York, the gusts reached 70 m.p.h. Strong winds and snow continued Wednesday in the Northwest and in 4.2 the southwestern deserts. Where there was no snow, winds filled the air with sand and dust. Boonville, New York, received a foot of new snow Tuesday afternoon with severe blowing and drifting. At Mt. Desert Rock, Maine, the gusts reached 93 m.p.h. Blizzards 4.

Weather of the week continued on page 21.

SPECIAL INSECTS OF REGIONAL SIGNIFICANCE

GREENBUG (Schizaphis graminum) - NEW MEXICO - Ranged 1-4 per linear foot on barley in Chaves County. (Mathews). OKLAHOMA -Light in Cotton County wheat. None in fields checked in Texas County. (Okla. Coop. Sur.). ARKANSAS - Survey in small grain negative in northwest, northeast, and east-central areas. (Boyer et al.).

SPOTTED ALFALFA APHID (Therioaphis maculata) - NEW MEXICO - Light on new alfalfa at Roswell, Chaves County. (Mathews).

CORN, SORGHUM, SUGARCANE

EUROPEAN CORN BORER (Ostrinia nubilalis) - NORTH CAROLINA -Surveys show light winter mortality in 110 fields with standing stalks in Wake, Johnston, and Harnett Counties. (Hunt).

SMALL GRAINS

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ENGLISH GRAIN APHID (Macrosiphum avenae) - ARKANSAS - Very light on small grain, occasional aphid found in northwest and northeast areas. (Boyer, Kimbrough).

FORAGE LEGUMES

ALFALFA WEEVIL (Hypera postica) - MISSOURI - Egg count per square foot by county: Wright 553.4, Barton 48.4, and Cedar 65.8. Counts above economic levels in southern area. (Munson). ARKANSAS - Survey still negative in northwest areas. (Boyer). KENTUCKY - Eggs averaged 126 per square foot in Fayette County fields, 56 per square foot in Nelson County field. (Barnett).

PEA APHID (Acyrthosiphon pisum) - NEW MEXICO - Light in alfalfa at Roswell, Chaves County. (Mathews).

POTATOES, TOMATOES, PEPPERS

GREEN PEACH APHID (Myzus persicae) - FLORIDA - Still problem on sweet peppers in eastern Palm Beach County. (Genung).

COLE CROPS

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SOUTHERN GREEN STINK BUG (<u>Nezara</u> viridula) - FLORIDA - Increased to moderate populations, damaged Chinese cabbage past 14 days at Belle Glade, Palm Beach County. (Janes).

GENERAL VEGETABLES

GREEN PEACH APHID (Myzus persicae) - MARYLAND - Overwintering populations ranged 1-10 per row yard in 600 acres of spinach near Vienna, Dorchester County. (U. Md., Ent. Dept.).

MAN AND ANIMALS

SCREWWORM (Cochliomyia hominivorax) - Total of 4 cases reported in U.S. January 23-29, in TEXAS: Brewster 3 and Webb 1. Total of 101 laboratory-confirmed cases reported in portion of Barrier Zone in Republic of Mexico January 16-22 as follows: Sonora 32, Chihuahua 2, Coahuila 3, Nuevo Leon 2, Tamaulipas 62. Total of 9 cases reported in Mexico south of Barrier Zone. Barrier Zone is area where eradication operation underway to prevent establishment of self-sustaining population in U.S. Sterile screwworm flies released: Texas 7,608,000; Mexico 85,560,000. (Anim. Health).

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CATTLE LICE (Haematopinus spp.) - OKLAHOMA - Mainly Haematopinus eurysternus (shortnosed cattle louse) common on cattle in most areas, moderate to heavy in Pontotoc, Marshall, Hughes, Cotton, and Texas Counties. (Okla. Coop. Sur.).

COMMON CATTLE GRUB (<u>Hypoderma lineatum</u>) - OKLAHOMA - Heavy on cattle in Marshall County. Moderate in Hughes County. (Okla. Coop. Sur.).

WINTER TICK (Dermacentor albipictus) - OKLAHOMA - Moderate on cattle in Marshall County. (Okla. Coop. Sur.).

STORED PRODUCTS

CONFUSED FLOUR BEETLE (Tribolium confusum) - KENTUCKY - Adults averaged 171 per bushel of oats in Nelson County. (Barnett).

SAWTOOTHED GRAIN BEETLE (Oryzaephilus surinamensis) - KENTUCKY - Adults averaged 1,600 per bushel of oats in Nelson County. (Barnett).

HAWAII INSECT REPORT

Corn - CORN EARWORM (<u>Heliothis zea</u>) infestation trace in 1.5 acres of sweet corn at Waianae, Oahu. (Kawamura).

<u>General Vegetables</u> - Adults of LEAF MINER FLIES (Liriomyza spp.) averaged 2 per leaf in 0.5 acre of cucumber seedlings at Waianae, Oahu. Larval mines moderate on first 2 older leaves of seedlings; light on younger leaves. Trace in adjacent 0.25 acre of mature lettuce; adults averaged 6 per head. Mixed populations of BEET ARMYWORM (Spodoptera exigua) and Liriomyza spp. were light to moderate in most green onion fields at Waianae, Oahu. Trace in isolated one acre planting in same area. (Kawamura).

Fruits and Nuts - Mixed populations of AN ARMORED SCALE (Phenacaspis cockerelli) and FLORIDA RED SCALE (Chrysomphalus aonidum) light to moderate on 200+ coconut trees at Lahaina, Maui; about 5-10 scales on pinnae of older fronds. (Ah Sam). FULLER ROSE BEETLE (Pantomorus cervinus) damage moderate to heavy to young avocado and citrus trees at Kokomo and Makawao, Maui. (Miyahira).

Forest and Shade Trees - AN ADELGID (Pineus pini) reinfested Pinus spp. plants at Kula and Makawao, Maui; chemically treated several times. (Ah Sam, Miyahira).

CORRECTIONS

CEIR 22(1-4):5, 6 - A CECIDOMYIID (Olesicoccus coccididora) -FLORIDA - ... should read ... A CECIDOMYIID (Olesicoccus coccidivora) - FLORIDA.(PP).

LIGHT TRAP COLLECTIONS

FLORIDA - Gainesville, 1/21-27, BL - Black cutworm (Agrotis ipsilon) 1, granulate cutworm (Feltia subterranea) 2, yellowstriped armyworm (Spodoptera ornithogalli) 1. MISSISSIPPI -Stoneville, 1/13-27, Temp. 12-79°F., precip. 0.18, BL - Black cutworm 3, granulate cutworm 17, variegated cutworm (Peridroma saucia) 3, armyworm (Pseudaletia unipuncta) 11, yellowstriped armyworm 24.

Weather of the week continued from page 18.

continued over the central Great Plains and Great Lakes Wednesday and spread eastward Thursday. Freezing rain iced an area south of the Snow Belt with glaze. In some areas it accumulated at about 0.1 inch per hour. At midnight Thursday, the glaze was affecting a wide belt from the middle Mississippi River Valley to the Ohio River Valley and northeastward to southern New England. Very heavy snow squalls occurred locally in Oswego County, New York, Wednesday to Friday and on Sunday. Some localities received 50-70 inches in the first period and 30 additional inches on Sunday. Rain fell from Alabama to Virginia. The precipitation slackened somewhat over the Pacific Northwest over the weekend, but light snow continued from the northern Rocky Mountains to New England and generous rains fell in the Deep South from eastern Texas to the Carolinas. Wide areas from southern California to New Mexico received no rain during the week.

TEMPERATURE: A heat wave continued in Texas early in the week, with afternoon temperatures mostly in the 70's and 80's. Bitter cold plunged southward behind a storm system which moved from the central Rocky Mountains to the Great Lakes and into Canada. Tuesday afternoon, maximum temperatures ranged from -20° at Devils Lake, North Dakota, to 84° at Fort Myers and Palm Beach, Florida. With a deep low over southeastern Canada and a large high over western Canada, the bitter cold moved from Montana, the Dakotas, Minnesota, and Wisconsin southward to the central Great Plains. Most of Kansas remained below freezing Wednesday afternoon and on Thursday most of Oklahoma continued below freezing. A sharp contrast existed between northern and southern Texas Thursday, when Abilene registered 29° and Austin 83° . Cold air spilled over the Continental Divide into the Great Basin. Subzero weather occurred in northeastern Oregon Thursday morning. Temperatures Wednesday ranged from -40° at International Falls to 84° at Fort Myers, Florida. Most of the Nation continued cold over the weekend. The main exception was the eastern portion of the gulf coast and the Florida Peninsula. The maximums along the gulf Sunday afternoon ranged from the 40's in Texas to the 70's and 80's in Florida. Typical afternoon temperatures Sunday were; Houston, Texas 42°, New Orleans, Louisiana 59°, Pensacola, Florida 66°, Tampa, Florida 78°. Temperatures averaged above normal over the southern Rocky Mountains and Rio Grande Valley along the Gulf of Mexico and the middle and southern Atlantic Coast. Most of the other areas averaged colder than normal. Most of the area from the northern Rocky Mountains to the Great Lakes averaged $10^\circ - 20^\circ$ or more colder than normal.

Status of the European Corn Borer in 1971 $^{1/2}$

<u>Introduction</u>: Surveys to determine the abundance of European <u>corn borer (Ostrinia nubilalis</u> (Hubner)) in the fall of 1971 were conducted by cooperating agencies in 15 States. All survey data, summaries, or records of field observations were processed by the Economic Insect Survey and Detection Staff in Hyattsville, Maryland. Personnel of Entomology Research Division, Agricultural Research Service, kindly reviewed the material after completion.

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The 1971 European corn borer survey was conducted during late summer and early fall. The survey is designed to measure the fall populations of European corn borer larvae and is conducted during a favorable time to include a high percentage of late instars, wherever possible. Except for some minor differences in compiling data, the accepted survey methods were followed in all cases. The survey was continued on a district basis whenever possible in 1971. A district is usually a group of counties within a State, in most cases based on Crop Reporting Districts.

New Distribution: European corn borer was reported for the first time from thirteen counties during 1971; however, the counties were in the States already known to be infested. This was eight more than reported the previous year. There were three new counties in Alabama, one county in Nebraska, and five from Kansas. South Dakota reports distribution now statewide.

Abundance: Fall populations of European corn borer increased in 8 of 15 States reporting in the survey. Decreases were recorded in Maryland, Kansas, Minnesota, Ohio, South Dakota, and Michigan. Kentucky reported abundance for the first time this year. The average number of borers per hundred plants increased in Indiana, attributed to the increase in early planted corn. Second generation populations were the heaviest since 1957 and reflect in part the ample free water available to females at the critical egg laying period. In Illinois, populations were 50 percent higher this year than last. Only 1 of 9 districts had a lower population than 1970; this was the west district. The 1971 population is 28 percent higher than the average for the past 10 years. Counts were the heaviest in the southern portion of Illinois. Populations increased in all the 5 major corn producing counties in southeastern North Dakota. In 1970, the average borers per 100 plants was 57, compared with 130 for 1971. Surveys in Iowa indicated the percent infestations were lower than last year in the southern district; elsewhere increased.

The European corn borer population in Kansas was about the same as in 1970, except for the increase in the east-central district. In Michigan, the population decreased from 142 borers per 100 plants in 1970 to 104 this year; heaviest counts were in the

^{1/} Survey data provided by State agricultural agencies. Data compiled and summarized by Economic Insect Survey and Detection Staff, Plant Protection Programs, Animal & Plant Health Service, United States Department of Agriculture.

southern areas. Second generation populations in Minnesota were not as heavy as last year. Populations in Missouri were similar to those of 1970, as were those in Nebraska and South Dakota. There was a slight decrease in abundance in Maryland and Ohio. In Delaware, there was an increase from 283 borers per 100 plants to 358.

		1970	••		1971	c	omparable	Comparable Districts or Counties	r Counties
States	: :No. of :Districts :Surveyed	:Average No. :of Borers : Per :100 Plants		:No. of Districts Surveyed	: Average No. No. of Not Borers Counties: No. of Sof Borers Surveyed:Surveyed :100 Plants	: Surveyed:Number:	: Surv : :Number:	Surveyed Both Years Borers Per 100 Plants er: 1970 1971	ars 100 Plants 1971
Eastern									
Delaware Maryland	- n	283 134	3 16	3 Г	358 102	3 16	3 1	283 134	358 102
Total	4		19						
Average <u>1</u> /								209	215
North Central	tral								
Illinois Indiana	7 12	76 47	39 92	6 K	128 100	46	7 12	76 47	128
Iowa	12	241	90	12	321	66	12	241	321
Kansas Minnesota		96 130	30 34	9 2	54 99	1	с, г-	96 130	54
Missouri		130	3 80	. 2	133	38	7	130	133
Nebraska		396	25	n U	401	25	n N	396	401
North Dakota		57 00	ວ ຄ ວ	u	130	3 n	- ư	75	130 73
South Dakota		23	35	c	204	34	9	214	204
Wisconsin		102	52	6	275	52	6	102	275
Total	74		482						
Average $\underline{1}$								145	170
Southern									
Kentucky		2/		I	35	œ			35
Other									
Michigan	1	148	14	5	104	22	I	148	104
$\frac{1}{2}$ / Weight	ed average cluded in t	Weighted average based on districts surveyed. Not included in the 1970 status report.	ricts surve) s report.	ved.					

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Table 1. Summary by States of European Corn Borer Abundance in Corn, Fall of 1971, Compared with Data for 1970 Table 2 - European Corn Borer Abundance in Corn Fall of 1971, Compared with Data for 1970

State (Districts	Average Number: of Borers Per :		State (Districts		:Average Number :of Borers Per	
or Counties	100 Plants :		or Counties)	: 100 Pla		
	1970	1971:		:1970	1971	
Delaware			Iowa (Cont.)			
(Agr. Expt. Sta.)					130	
N. 0	0.5.5	355	District IV	346	413	
New Castle	$255 \\ 347$	$\frac{157}{427}$	District V	241	564	
Kent Sussex	347 248	427 489	District VI District VII	131 528	180 443	
BUSSEA	240	405	District VIII	94	443	
Average	283	358	District IX	79	340	
nieruge	200	000	District X	353	209	
Illinois			District XI	286	217	
(Natural History Survey			District XII	211	153	
Ext. Ser.)			Average	241	321	
			Average	241	521	
Northwest	87	169	Kansas			
Northeast	61	89	(Ins. Sur.)			
West	130	108				
Central	27	67	Northeast	100	70	
East	33	109	North Central	135	70	
West-southwest	105	112	East Central	52	111	
East-southeast	92	135	Central	$\frac{4}{4}$	32	
Southwest	$\frac{4}{4}$	178	Southeast	<u>4</u> /	34	
Southeast	4/	239	South Central		4	
Average	76 <u>1</u> /	128 <u>1</u> /	Average	96	54	
Indiana			Kentucky			
(Ext. Ser., Expt. Sta.)						
		7.0.0	Surveyed counties	-	35	
North-northwest	38	180	M 7			
North-northcentral	162	102	Maryland	0		
North-northeast	57	117	(Agr. Ext. Ser.; Ins.	Sur.)		
Northwest	12	106	The state of the state	140	104	
North Central	38	107	Eastern Shore	140	104	
Northeast	54	108	Southern	104	58	
Southwest	58	78	Central and Western	150	110	
South Central	13	88	areas	158	112	
Southeast	34 39	101 91	Au 200 0 0	141 2/	102 3	
South-southwest	24	91 74	Average	141 <u>3</u> /	$102 \frac{3}{2}$	
South-southcentral South-southeast			Michigan			
south-southeast	39		Michigan (Ins. Sur.)			
Average	47	100	(1115. 541.)			
morage		100	Surveyed counties	148 2/	104 2	
Iowa				-	-	
(State Dept. Agr.; Ext. Ser.; Ent. Dept., Iowa		2/ Averages based on field averages				
		rather than distric	t averages.			
State Univ.; ENT, ARS	5,					
USDA)			3/ Average based on av		16	
			counties rather tha	n district		
District I	306	319	averages.			
District II	181	436		1050		
District III	132	155	4/ Not included in the report.	1970 status	5	

surveyed in 1970 and 1971, rather than districts.

State (Districts or Counties)	Average N of Borers 100 Pla 1970	Per :	State (Districts or Counties)	:Average of Bore: 100 P 1970	rs Per
Minnesota (State Dept. Agr.)			South Dakota (Agr. Expt. Sta., Ext	. Ser.)	
Southwest South Central Southeast West Central Central East Central Northwest Average	246 222 131 105 57 89 57 130	$ \begin{array}{r} 102 \\ 171 \\ 95 \\ 179 \\ 61 \\ 40 \\ \underline{44} \\ 99 \\ 99 \end{array} $	North Central Northeast Central East Central Southeast South Central Average	$235 \\ 150 \\ 100 \\ 279 \\ 457 \\ 62 \\ 214$	171 189 67 221 342 232 204
Missouri (Ext. Ser., Ins. Sur.)			Wisconsin (State Dept. Agr.)		
District I District II District III District IV District V District VI District VII District IX	$ \begin{array}{r} 122 \\ 187 \\ 189 \\ 94 \\ 138 \\ \underline{4}/ \\ 93 \\ 88 \\ \hline \end{array} $	151 165 147 123 129 98 78 157	Northwest North Central West Central Central Southwest South Central Southeast East Central Northeast	104 110 187 102 118 125 77 58 35	$ 118 \\ 82 \\ 204 \\ 394 \\ 555 \\ 208 \\ 315 \\ 449 \\ 150 $
Average	130	133	Average	102	275
Nebraska (Agr. Expt. Sta.; Ext. Ser., Ins. Sur.) Northeast East Southeast Central South	600 522 336 260 <u>261</u>	215 459 297 527 509	 <u>4</u>/ Not included in th report. <u>5</u>/ Average based on c 		
Average	396	401			
North Dakota (State Dept. Agr.)					
Southeast	57	130			
Ohio (Ext. Ser.; ARS, USDA)					
Northwestern West Central Central Southwestern Northeastern	132 96 57 59 198	117 55 28 51 77			
Average	108 99 <u>5</u> /	67 73 <u>5</u> /			

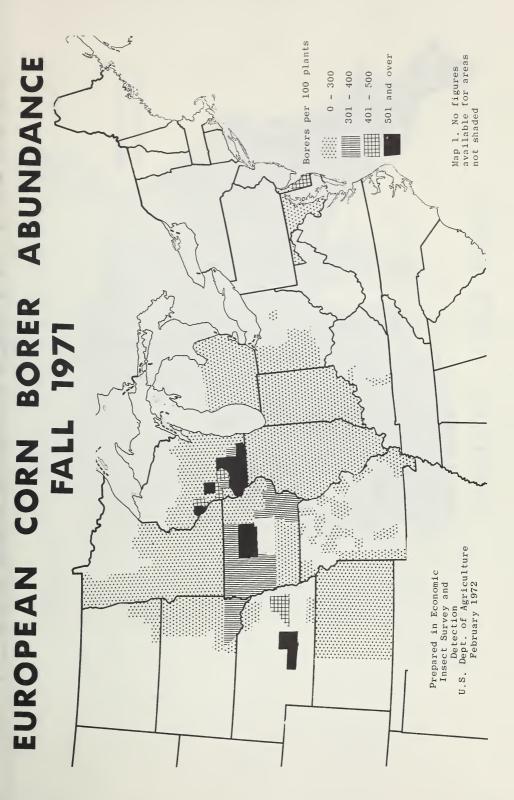
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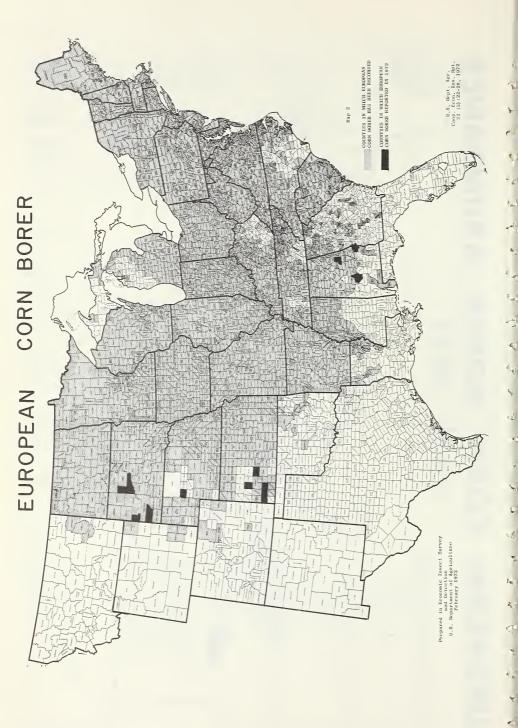
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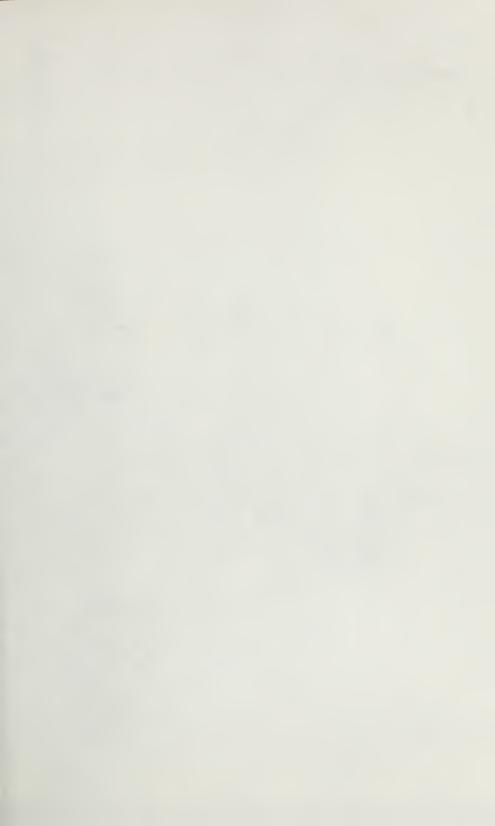
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