



2016 Utah Mormon Cricket and Grasshopper Report

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2016 Grasshopper Situation Report

COOPERATION

Utah Department of Agriculture and Food, Utah State Extension Service, and USDA APHIS PPQ cooperate to conduct grasshopper and Mormon cricket surveys. Each entity qualifies projects for the “state cost share program”. In this program private landowners are reimbursed up to 50% of the cost for treating economically threatening grasshopper populations on their property when exceeding infestation levels of eight (8) insects per Sq. Yd. or greater. USDA APHIS PPQ is charged by congress to suppress high grasshopper population on federal lands. Each program works together to enable land owners and land managers to be good neighbors and stewards of the land.

COST SHARE PARTICIPATION

While grasshoppers are near their 20 year low, 2016 consisted of isolated populations of infestations in historical areas of concern. Historical areas of concern consist of areas in Sanpete, Sevier, Millard, Tooele, Duchesne and Beaver Counties. In 2016, UDAF received 11 cost share agreements total. 2956.31 acres total were treated through the 11 cost share agreements issued. Private landowners in the following counties were qualified to participate in the state cost share program: (2) Duchesne, (1) Garfield, (2) Tooele, (3) Beaver, (1) Millard and (2) Wayne.

AREAS OF CONCERN

1. Some farmers and ranchers experienced high (20-30 Per Sq. Yd.) grasshopper populations causing damage to cropland areas in the central portion of the state, where historically populations persist.
2. According to survey data Utah County experienced some of the highest (30-50 Per Sq. Yd.) grasshopper populations in 2016; however no information or contracts were received from Utah County.
3. USDA APHIS PPQ treated 60 acres for grasshoppers in Sanpete County using bait and ground treatment methods.

SURVEY

1. 2624 Surveys were taken throughout the State of Utah. (See Map Below)
2. Mormon cricket populations are extremely low and/or non-existent. During the 2016 survey season no Mormon crickets were found.



GRASSHOPPER BIOLOGY

According to USDA APHIS PPQ Biologist Greg Abbott, the predominant grasshopper species in 2016 were as follows: [Melanoplus confusus Scudder](#), [Camnula pellucida \(Scudder\)](#), [Aulocara ellioti \(Thomas\)](#), [Melanoplus packardii Scudder](#), [Melanoplus sanguinipes \(Fabricius\)](#).

GRASSHOPPER RESOURCES

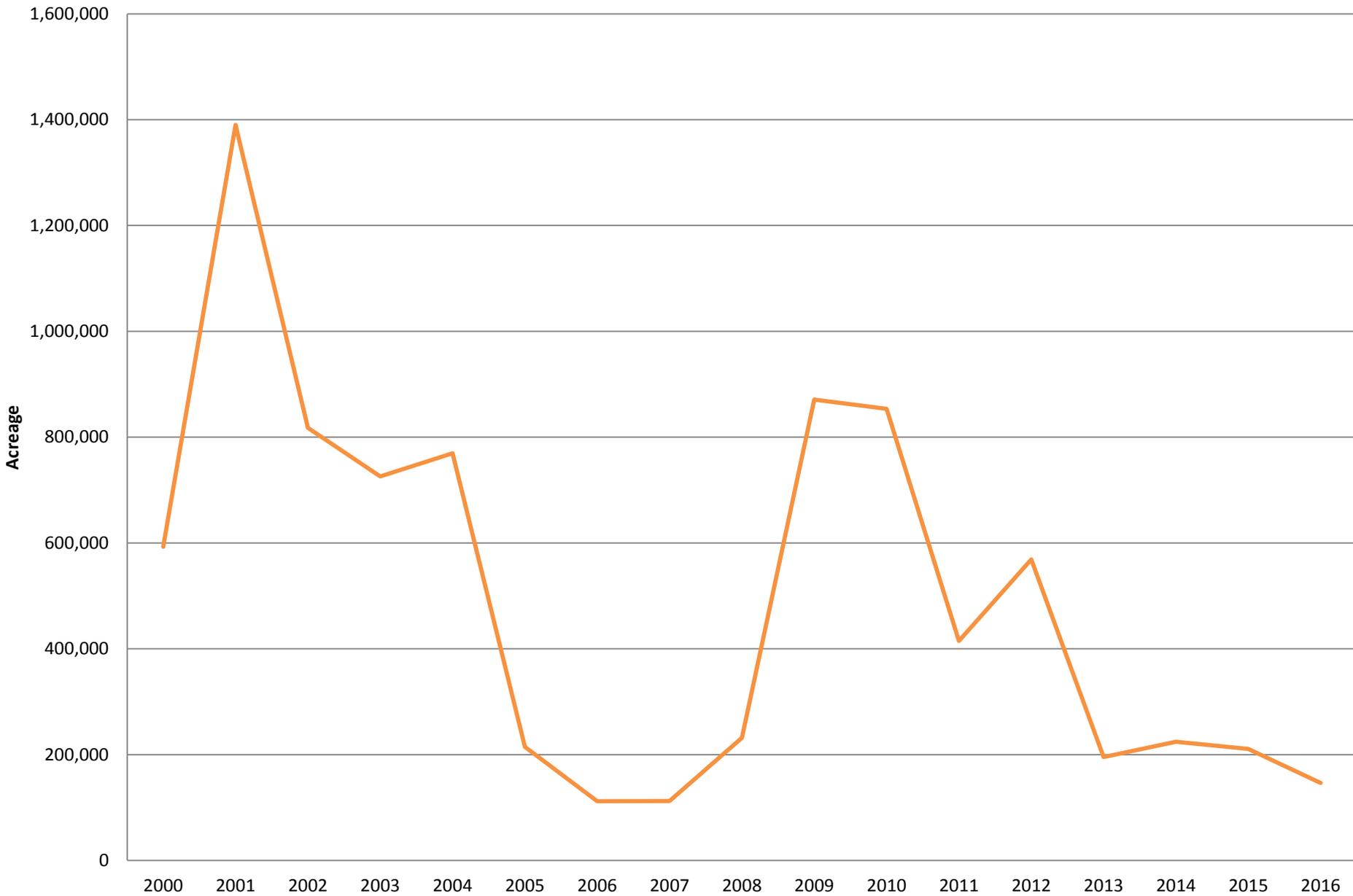
Field Guide To Common Western Grasshoppers:
http://www.sidney.ars.usda.gov/grasshopper/ID_Tools/F_Guide/index.htm

Utah State University Plant Pest Diagnostics:
<http://utahpests.usu.edu/IPM/htm/vegetables/vegetable-insect-disease/grasshopper-control/>

Grasshopper Infested Acreage By Year

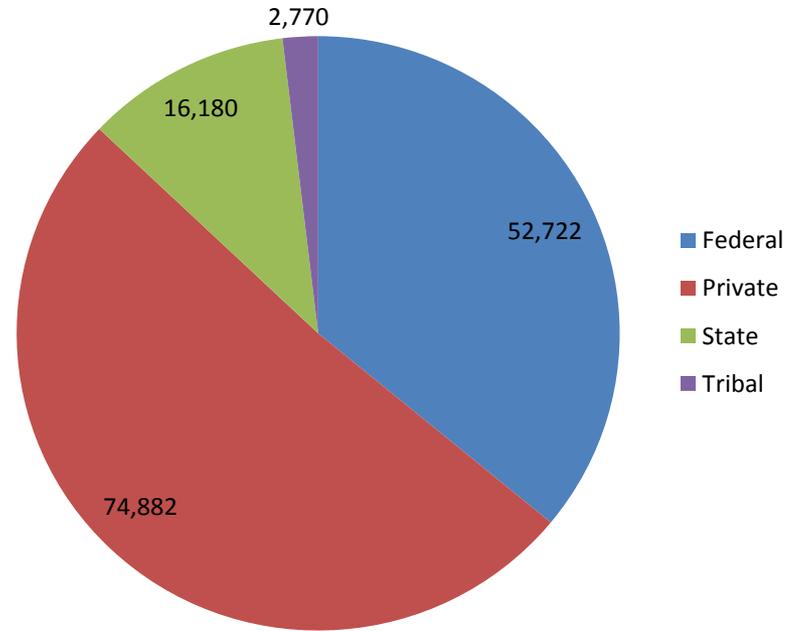
County	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Beaver	11,000	13,800	4,000	7,000	4,420	5,880	1,800	3,013	5,315	5,863		7,190	4,329	21,394	1498	1,555	1,280
Box Elder	55,000	120,400	120,000	94,710	6,570	15,200	15,270	13,644	18,918	62,151	118,727	43,334	49,139	30,882	14,773	19,200	21,560
Cache	19,000	64,500	17,000	2,200	26,380	2,170	10,490	10,616	3,856	22,442	47,869	14,393	16,246	3,840	5,489	6,283	2,560
Carbon	12,300	56,100	21,600		2,700		5,860	1,279		3,733	12,763	3,357	1,806	354	2,084		2,080
Daggett	600	4,900		8,530	7,750	1,900		7,769	1,280	1,568	2,714	2,560	6,128				
Davis				2,530		3,010					1,280	2,560			1,280	2,560	1,280
Duchesne	1,300	82,400	8,700	70,800	230,190		420	3,838	19,375	85,391	39,292	11,746	20,023	11,209	29,087	22,817	10,159
Emery	3,500	10,400	6,400		1,710	12,680	21,210	1,652	4,329	22,401	7,680	13,339			1,280	2,560	261
Garfield	6,800	10,900	4,200	52,560	13,780	24,450		2,216		2,474			3,343	5,665			
Grand									1,445	19,384	17,341	20,389			12,927	4,399	3,579
Iron	7,000	5,000	12,300	24,540	26,760	17,140	2,780	3,203	2,560	12,316	13,170	21,530	9,453	26,364	14,707	3,840	
Juab	33,000	174,000		21,030	8,060	2,250		4,670	28,754	121,893	131,575	53,968	91,827	5,974	4,746	19,489	9,794
Kane	10,300	1,300		16,710	13,680	7,570				1,280	1,280		1,279		4,259		
Millard	52,500	216,800	8,950	6,500	3,590		1,280	2,559	25,599	83,063	61,620	13,320	40,548	7,043	14,790	24,827	3,838
Morgan	19,000	63,100		2,530	25,710		5,530	6,989	136	2,770	8,955	2,560	14,149	2,560	1,280	1,280	
Piute	21,000	18,200	32,600	40,310	5,990	13,870	2,560	5,035	3,135	395	1,280	4,882	14,778	3,127	2,631	2,175	1,280
Rich		12,400		32,140	68,830	4,000				2,192	3,519	6,030	29,003	1,280	2,212	1,280	1,280
Salt Lake				2,530		2,530		2,479		8,265	6,400	1,280					3,840
San Juan	23,000	3,900	2,500					1,279	7,515	3,840	1,280	1,280				2,001	
Sanpete	157,000	183,500	268,400	142,680	118,920	56,470	3,840	3,838	28,749	129,329	181,346	71,663	69,321	34,870	18,476	32,614	21,669
Sevier	58,000	31,000	70,500	78,000	22,870	16,850	3,830	12,417	4,789	16,807	11,298	13,732	38,555	2,817	12,684	18,590	13,578
Summit	10,000	3,600	2,550	12,630	33,870		1,280	2,136	2,560	6,822	7,680		10,941		4,683	2,560	2,560
Tooele	5,700	74,600	161,800	39,000	2,550	16,020	6,170	3,838	9,444	90,900	49,938	49,965	46,254	8,522	37,175	14,080	17,233
Uintah	36,000	71,200	53,500	25,750	100,950	12,670	20,510	9,319	17,692	94,457	57,806	22,165	37,970	1,280	14,334	10,955	9,602
Utah	29,000	56,400	8,500	15,150	16,440		1,280	2,558	6,782	60,751	58,828	20,285	36,072	5,239	6,398	12,656	21,680
Wasatch	3,000	65,600	7,000	17,540	25,250			1,279		5,703	1,280	7,680	16,876	1,280	4,256	1,126	1,280
Washington		44,100	7,100	150	2,530		4,270	5,752	38,487	4,896	1,280	4,512	1,817	21,825	13,385		
Wayne	2,000	2,000		10,430													
Weber	17,000						3,690	1,119	1,144		7,461	1,280	9,162				
Total	593,000	1,390,100	817,600	725,950	769,500	214,660	112,070	112,497	231,864	871,086	853,662	415,000	569,019	195,523	224,434	210,687	146,553

Grasshopper Infested Acreage By Year

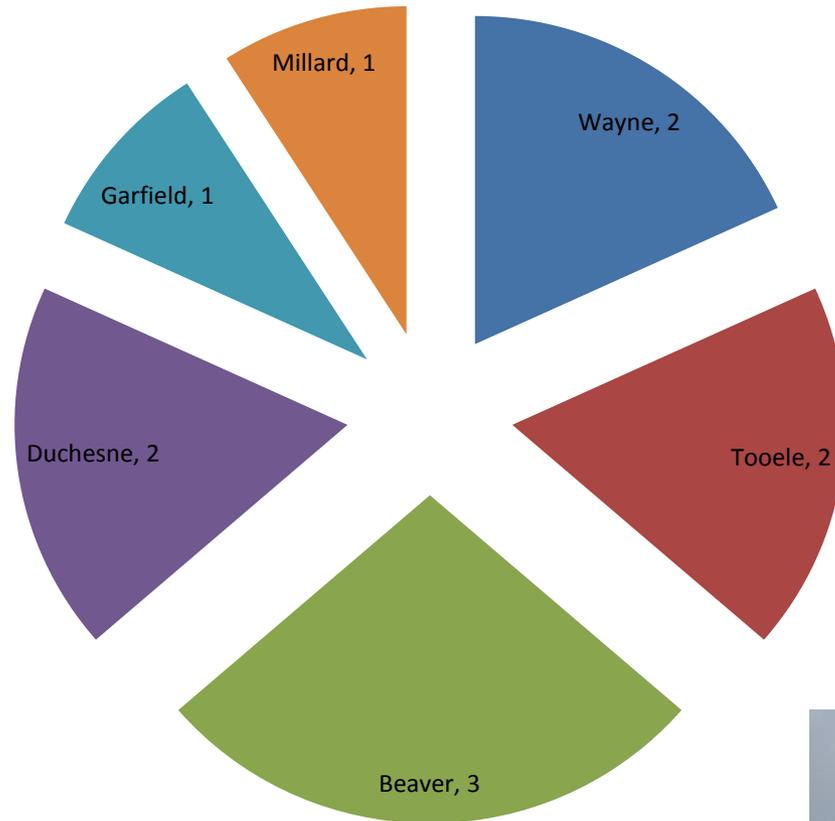


Grasshopper Infested Acreage By Land Ownership

County	Federal	Private	State	Tribal	Total
Beaver	1,024	256			1,280
Box Elder	3,679	17,615	266		21,560
Cache		2,559	1		2,560
Carbon	1,160	920			2,080
Davis			1,280		1,280
Duchesne	2,437	5,425	194	2,103	10,159
Emery	9	160	92		261
Grand	2,090	1,290	199		3,579
Juab	4,177	4,800	817		9,794
Millard	1,434	2,404			3,838
Piute	1,280				1,280
Rich	1,161		119		1,280
Sanpete	9,793	7,673	4,203		21,669
Sevier	6,335	5,305	1,938		13,578
Summit		2,560			2,560
Tooele	10,122	5,267	1,844		17,233
Uintah	4,592	2,366	1,978	667	9,603
Utah	2,149	16,282	3,249		21,680
Wasatch	1,280				1,280
Total	52,722	74,882	16,180	2,770	146,554



Number of Cost Share Participants



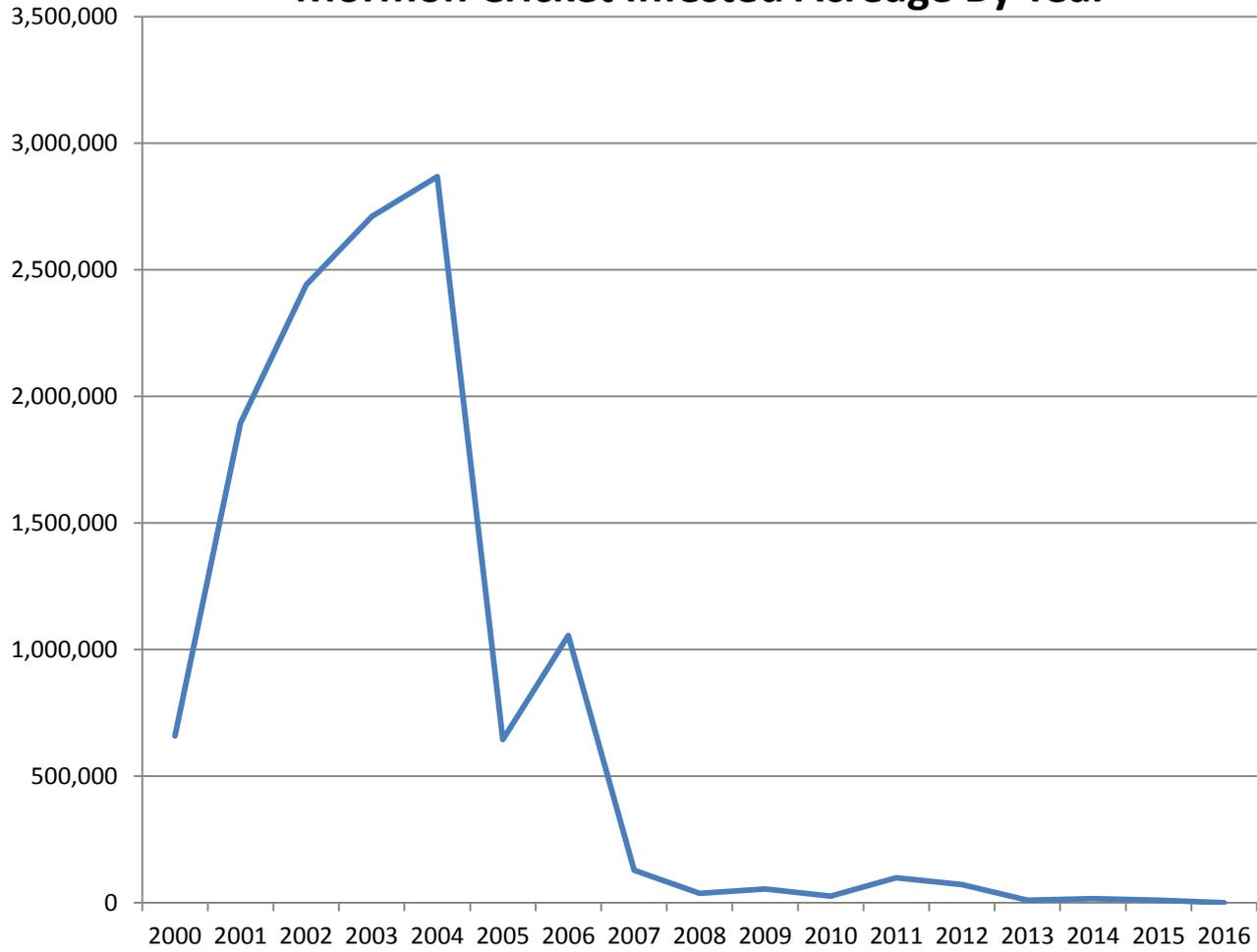
Participants: 11
Total Acres Treated: 2956



Mormon Cricket Infested Acreage By Year

County	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Beaver	6,000	7,000	158,500	226,700	257,850	2,540				1,280	7,250	44,271	16,116	5,741	1,280		
Box Elder			108,300	125,900	276,620	499,550	966,340	98,276	30,326	3,892			1,829			1,280	
Cache		8,100	4,400	8,400	8,260												
Carbon		33,100	33,100	2,530													
Daggett				4,600	21,450	7,610	8,160	7,956	1,280	2,341							
Duchesne		83,900	7,000														
Emery		1,150	1,100	50													
Garfield				2,530	1,650								1,280				
Iron				7,600	70,790	3,040											
Juab	116,000	502,500	618,900	651,500	680,550	43,160		2,559		4,377	6,837	6,142	22,610	2,061	4,616	4,942	
Millard	190,000	539,500	536,500	517,800	547,700	19,610				20,678	12,274	48,036	26,927				
Rich						2,530											
Salt Lake						2,530		1,280		1,280							
San Juan		18,300	14,400		3,920												
Sanpete				31,760	310	4,380				1,280				1,280			
Sevier		24,500	85,500	190,200	177,420	1,570							1,280				
Summit					2,530												
Tooele	346,000	622,000	749,700	793,500	691,050	49,190	11,300	1,279	2,121	17,781				1,280	10,379	1,280	
Uintah		48,800	48,900	31,300		5,070	68,740	16,579	2,560	1,280							2,561
Utah	500	5,650	74,600	116,200	123,800	3,780	1,280		1,280				106				
Washington					4,600												
Wayne													1,280				
Total	658,500	1,894,500	2,440,900	2,710,570	2,868,500	644,560	1,055,820	127,929	37,567	54,189	26,361	98,449	71,428	10,362	16,275	10,063	0

Mormon Cricket Infested Acreage By Year





2016 Grasshopper and Mormon Cricket Survey

