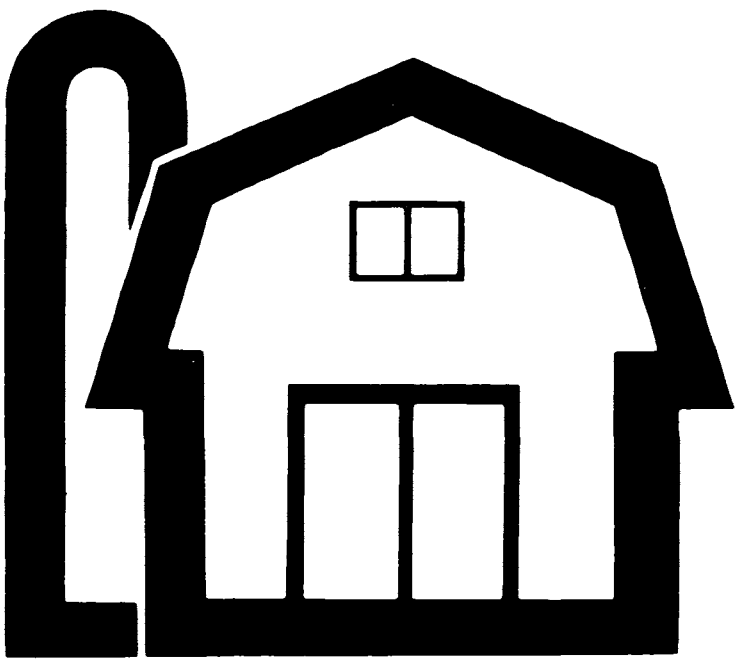
AGRICENSUS USA '82

LESSON PLAN

1982 Census of Agriculture



U.S. Department of Commerce
BUREAU OF THE CENSUS

82-A18

UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, D.C. 20233

Dear Vo-Ag Instructor:

Information is one of agriculture's most important resources. More than ever in our history, the farmer and agri-business executive need relevant data to help in making daily business decisions.

The U.S. census of agriculture is the major source of facts about American agriculture down to the county level. It provides essential information about land use and ownership, crops and livestock, value and types of products sold, and characteristics about farm owners and operators. Data from the 1982 census now have been published for your use.

We are pleased to provide you with a series of three lesson plans, designed to help you with instructing your students about the census of agriculture and its uses. These have been prepared in close cooperation with specialists from the Vo-Ag program.

We would appreciate receiving your comments on the self-addressed return card and invite your inquiries by calling my staff at (301) 763-4164. Thank you for including the census of agriculture in your instructional planning.

Sincerely,

JOHN H. BERRY
Chief, Agriculture Division
Bureau of the Census

Information about obtaining publications is available from:
Customer Service, Data Users Services Division,
Bureau of the Census, Washington, D.C. 20233

This Lesson Plan is produced by:
The Agriculture Division, Bureau of Census,
U.S. Department of Commerce, Washington, D.C. 20233

Lesson Plans for the 1982 Census of Agriculture

There is a wealth of agricultural information at your fingertips. . . . It's contained in the newly published 1982 Census of Agriculture.

This series of Lesson Plans has been specially designed to assist you in informing your students about the census—and its role in their agricultural careers.

There are six sections in this publication. Three are designed to be removed easily so that you may duplicate them for use by your students. Note that one is titled "Production Agriculture," the second is "Agri-Business Development" and the third is "Community Development."

The rest of this Lesson Plan is for you, the Vo-Ag instructor. The first section is the Introduction. The second section is a two-page narrative to give you background information for general use in class, with a glossary of terms. The final section contains instructions for you and the answers to the classroom questions. You may wish to keep these sections together in your file.

Learning to use the 1982 Census of Agriculture

The three Lesson Plans were prepared for use by your students to learn more about how local and national agricultural activities are measured, so they can use statistics comfortably to help solve business, marketing, and policy problems. Portions of the 1982 Census of Agriculture are excerpted for reproduction as part of each plan. The plan may also be used with your own state and county census data. For most teachers, the preliminary census data for your county and state have been provided, along with preliminary census data for the nation.

A step-by-step program for use of the plans is outlined on the page titled "Instructions for Teachers." While Vo-Ag instructors were consulted in designing this material for Vo-Ag classes, the three plans may also be used in math classes, civics instruction, and/or journalism or writing classes as topics for essays.

The role of the teacher is to be moderator, stimulator, and coordinator. You are not asked to possess specialized knowledge about census statistics, or to evaluate the student's work other than to check the accuracy of responses to factual questions. You are perceived to be a helper in assisting comprehension of how to use available statistics to communicate, to plan, and to evaluate agricultural issues, based on the 1982 Census of Agriculture.

Statistics are only as valuable as the use people make of them. The 1982 Census of Agriculture is compiled from millions of reports by America's farmers. All farmers are asked to respond; however, some may not realize how valuable their data can be in planning for agricultural production programs or agri-business development. As your students learn from experience with the statistics, feel free to encourage them to discuss the value of cooperating with the next U.S. Census of Agriculture.

We hope you will enjoy conveying to your students our excitement about the important role of statistics in American agriculture.

What is the Census of Agriculture?

The census is a county-by-county measurement of the nation's agriculture. It is conducted by the U.S. Bureau of the Census, in close cooperation with the nation's agricultural user groups and farmer organizations. As a result, it provides a comprehensive and valuable informational data base on America's agricultural activity.

Such a nationwide survey of U.S. agriculture has been taken periodically since 1840. It is authorized by Congress under title 13 of the United States Code and serves as an important statistical benchmark for government and private programs. The census of agriculture is the only available source of uniform and comprehensive agricultural data for each state and county.

When is it conducted?

The census is traditionally conducted once every five years. Recently it has been conducted at four-year intervals to bring it into line with the nation's other economic censuses. From now on, all related censuses including the census of agriculture will be conducted during the same year to assure maximum compatibility

The most recent census is the 1982 Census of Agriculture, conducted during the 1983 calendar year to gather data on 1982 agricultural operations. It normally takes up to 18 months to gather, process, and publish relevant information about the nation's 2.2 million agricultural operations. Preparation of this lesson plan marks the completion of all preliminary data for the 1982 Census of Agriculture.

What does it include?

Information determined to be of value to U.S. agriculture and its programs is collected by the census of agriculture. This includes:

- —information on value of sales
- —inventory and use of agricultural land
- —characteristics about farm owners and operators
- —crop acres harvested
- —classification of types of farms and ranches
- —count of livestock and poultry on hand and sold
- —information about farm machinery
- —selected production expenses

These data are needed by a wide variety of users, including farm and commodity organizations, government agencies, and universities.

Glossary of Census terms

The census of agriculture uses basic industry terms, most of which are familiar to agricultural professionals. Some of the most widely used terms are defined here:

Farm (agricultural operation)—Any place where $1,000 or more is produced and sold during the census year.

Operator—A person who operates an agricultural operation, either actually doing work, or making day-to-day management decisions.

Harvested cropland—Any land from which crops were harvested, hay was cut, or is in orchards, vineyards, groves, or nurseries.

Land in farms—All land owned and operated, as well as land rented from others, including grazing areas and woodlands.

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learning to use 1982 Census of Agriculture for Production Agriculture

1982 CENSUS OF AGRICULTURE

PRELIMINARY REPORT

UNITED STATES

Livestock and Poultry: 1982 and 1978

All farms		1982	1978
Cattle and calves inventory	farms	1 355 020	1 346 106
	number	104 408 187	103 865 109
Farms by inventory:			
1 to 19	farms	495 920	468 692
	number	4 692 278	4 605 211
20 to 49	farms	373 306	392 147
	number	11 754 241	12 390 851
50 to 99	farms	242 426	251 684
	number	16 755 363	17 347 509
100 to 499	farms	219 986	210 749
	number	40 564 667	38 715 651
500 or more	farms	23 382	22 834
	number	30 641 638	30 805 887
Cows and heifers that had calved	farms	1 153 899	1 163 064
	number	45 034 042	44 547 966
Beef cows	farms	957 693	954 360
	number	34 182 790	34 326 274
Farms by inventory:			
1 to 19	farms	546 968	533 567
	number	4 481 597	4 565 904
20 to 99	farms	343 896	355 190
	number	13 791 739	14 207 796
100 to 199	farms	42 373	41 741
	number	5 505 481	5 436 445
200 or more	farms	24 456	23 862
	number	10 403 973	10 116 129
Cattle and calves sold	farms	1 278 628	1 320 163
	number	71 139 881	78 020 351
Farms by number sold:			
1 to 19	farms	740 961	717 315
	number	6 000 563	6 216 857
20 to 49	farms	315 771	352 065
	number	9 589 020	10 733 893
50 to 99	farms	120 354	136 979
	number	8 099 799	9 228 457
100 to 499	farms	87 438	98 820
	number	16 757 029	18 841 963
500 or more	farms	14 104	14 984
	number	30 693 470	32 999 181
Cattle fattened on grain and concentrates sold	farms	240 052	247 114
	number	27 626 763	29 722 043
Dairy products sold	farms	199 612	216 833
	$1,000	16 322 513	11 228 899
Hogs and pigs inventory	farms	329 862	445 117
	number	55 623 711	57 697 318
Farms by inventory:			
1 to 99	farms	211 493	303 253
	number	5 082 940	7 947 891
100 to 499	farms	89 155	116 640
	number	20 086 556	24 970 099
500 to 999	farms	19 885	17 890
	number	13 137 256	11 683 066
1,000 or more	farms	9 329	7 334
	number	17 316 959	13 096 262
Hogs and pigs used or to be used for breeding	farms	223 695	328 834
	number	6 952 948	8 516 131
Farms by inventory:			
1 to 9	farms	91 905	138 681
	number	382 278	584 373
10 to 24	farms	57 866	93 908
	number	885 036	1 431 849
25 to 49	farms	34 808	50 836
	number	1 178 280	1 712 107
50 or more	farms	39 116	45 409
	number	4 507 354	4 787 802

All farms		1982	1978
Cattle and calves inventory—Con.			
Cows and heifers that had calved—Con.			
Milk cows	farms	277 784	312 095
	number	10 851 252	10 221 692
Farms by inventory:			
1 to 9	farms	92 692	118 731
	number	204 423	263 261
10 to 29	farms	52 646	65 945
	number	1 030 637	1 287 547
30 to 49	farms	59 424	63 464
	number	2 252 405	2 388 961
50 to 99	farms	53 345	47 704
	number	3 475 222	3 093 370
100 or more	farms	19 677	16 251
	number	3 888 565	3 188 533
Heifers and heifer calves	farms	1 073 653	1 060 196
	number	28 665 154	27 800 142
Steers, steer calves, bulls, and bull calves	farms	1 150 459	1 134 520
	number	30 708 991	31 517 001
Hogs and pigs sold	farms	315 119	423 578
	number	94 818 304	90 757 143
Farms by number sold:			
1 to 99	farms	163 065	237 402
	number	5 145 716	8 033 221
100 to 499	farms	100 348	140 658
	number	23 431 908	31 646 338
500 to 999	farms	30 042	29 766
	number	20 578 235	20 015 261
1,000 or more	farms	21 664	15 752
	number	45 662 445	31 062 323
Feeder pigs sold	farms	90 377	128 060
	number	20 044 693	19 491 098
Litters of pigs farrowed between—			
Dec. 1 of preceding year and Nov. 30	farms	235 191	342 660
	number	10 360 847	10 999 496
Dec. 1 of preceding year and May 31	farms	210 679	301 185
	number	5 216 245	5 510 114
June 1 and Nov. 30	farms	198 454	286 642
	number	5 144 602	5 489 382
Sheep and lambs inventory	farms	101 576	90 437
	number	12 428 171	12 243 476
Ewes 1 year old or older	farms	90 486	82 287
	number	7 648 594	7 808 221
Sheep and lambs sold	farms	94 954	85 718
	number	10 766 550	10 260 539
Sheep and lambs shorn	farms	88 118	80 475
	number	11 248 904	11 354 913
	Wool—pounds	87 144 505	88 896 358
Horses and ponies inventory	farms	417 040	399 335
	number	2 264 629	1 957 028
Chickens 3 months old or older inventory	farms	215 844	240 891
	number	362 866 518	354 357 427
Hens and pullets of laying age inventory	farms	212 639	237 070
	number	310 778 574	300 283 286
Farms by inventory:			
1 to 3,199	farms	203 698	226 398
	number	9 650 816	13 417 705
3,200 to 9,999	farms	2 693	3 718
	number	18 530 148	24 699 824
10,000 to 19,999	farms	2 789	3 323
	number	37 424 202	44 538 752
20,000 or more	farms	3 459	3 631
	number	245 173 408	217 627 005
Broilers and other meat-type chickens sold	farms	30 104	31 743
	number	3 509 892 902	3 062 154 490
Turkeys sold	farms	7 513	6 033
	number	171 426 440	141 276 176

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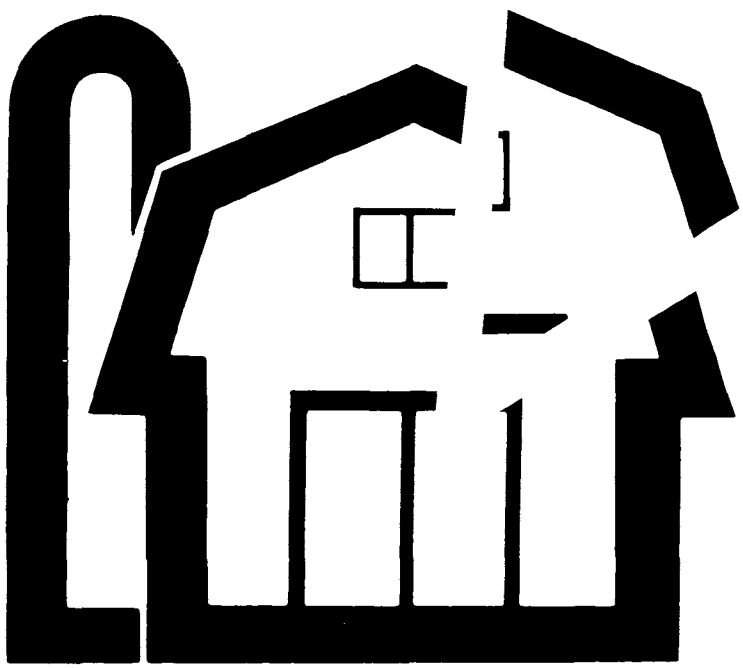
learning to use 1982 Census of Agriculture for Agri-Business Development



1982 CENSUS OF AGRICULTURE
PRELIMINARY REPORT
UNITED STATES

Selected Summary Items: 1982 and 1978

All farms		1982	1978
Market value of agricultural products sold	$1,000	131 810 903	107 073 458
Average per farm	dollars	58 815	47 424
Crops, including nursery and greenhouse products	$1,000	62 274 394	48 203 200
Grains	$1,000	36 405 401	26 747 307
Cotton and cottonseed	$1,000	3 232 609	3 101 232
Tobacco	$1,000	2 782 111	2 319 428
Hay, silage, and field seeds	$1,000	2 314 999	2 275 068
Vegetables, sweet corn, and melons	$1,000	4 150 275	3 238 826
Fruits, nuts, and berries	$1,000	5 849 637	4 601 397
Nursery and greenhouse products	$1,000	3 823 663	2 835 732
Other crops	$1,000	3 715 699	3 084 210
Livestock, poultry, and their products	$1,000	69 536 509	58 870 258
Poultry and poultry products	$1,000	9 732 222	8 463 486
Dairy products	$1,000	16 322 513	11 228 899
Cattle and calves	$1,000	31 579 973	29 610 751
Sheep, lambs, and wool	$1,000	608 369	644 574
Hogs and pigs	$1,000	9 872 193	8 071 766
Other livestock and livestock products	$1,000	1 421 239	850 783
Farms by value of sales:			
$250,000 or more[1]		86 776	56 450
$100,000 to $249,999[1]		216 188	165 791
$40,000 to $99,999		333 047	360 423
$20,000 to $39,999		249 063	299 398
$10,000 to $19,999		259 258	299 421
$5,000 to $9,999		281 895	314 245
Less than $5,000		814 897	762 047
Value of agricultural products sold directly to individuals for human consumption	farms	143 535	125 236
	$1,000	504 272	380 827
Farm-related income:			
Income from machine work, customwork, and other agricultural services	farms	165 424	222 212
	$1,000	687 589	637 667
Farms by type of organization:			
Individual or family	number	1 945 724	1 965 860
	acres	641 739 017	673 187 925
Partnership	number	223 339	232 538
	acres	151 342 890	158 078 005
Corporation:			
Family held	number	52 657	44 413
	acres	112 492 046	104 002 340
Other than family held	number	7 131	5 818
	acres	13 992 416	16 118 159
Other—cooperative, estate or trust, institutional, etc.	number	12 273	9 146
	acres	65 188 746	63 390 805
Tenure of operator:			
Full owners	farms	1 325 931	1 297 902
	acres	342 630 172	331 920 878
Part owners	farms	656 219	681 112
	acres	528 861 161	561 138 719
Owned land in farms	acres	260 168 674	281 452 255
Rented land in farms	acres	268 692 487	279 686 464
Tenants	farms	258 974	278 761
	acres	113 263 782	121 717 637

All farms		1982	1978
Operators by principal occupation and residence:			
Farming		1 234 858	1 269 305
Residence on farm operated		934 949	957 409
Residence not on farm operated		175 796	182 686
Other than farming		1 006 266	988 470
Residence on farm operated		646 312	628 295
Residence not on farm operated		253 575	239 104
Operators by age group:			
Under 25 years		62 339	66 575
25 to 34 years		293 856	285 420
35 to 44 years		443 456	433 900
45 to 54 years		505 445	549 159
55 to 64 years		536 426	552 175
65 years and over		399 602	370 546
Average age		50.5	50.3
Female operators:			
Farms	number	121 626	112 799
Land in farms	acres	35 462 394	35 342 860
Operators by race:			
White		2 186 755	2 199 787
Black and other races		54 369	57 988
Operators reporting days of work off farm:			
Any		1 187 490	1 203 286
100 days or more		963 728	950 815
Selected farm production expenses[2]:			
Livestock and poultry purchased	$1,000	17 110 899	16 039 244
Feed for livestock and poultry	$1,000	18 573 721	15 785 995
Commercially mixed formula feeds	$1,000	10 433 263	8 793 653
Seeds, bulbs, plants, and trees	$1,000	3 173 754	2 607 118
Commercial fertilizer	$1,000	7 689 577	6 330 581
Other agricultural chemicals[3]	$1,000	4 282 795	2 889 503
Hired farm labor	$1,000	8 434 399	6 814 428
Workers working 150 days or more	farms	312 621	317 161
	number	950 112	953 694
Contract labor	$1,000	1 106 129	898 959
Customwork, machine hire, and rental of machinery and equipment	$1,000	2 024 725	1 750 875
Energy and petroleum products	$1,000	9 973 663	6 025 704
Gasoline and gasohol	$1,000	2 987 056	2 054 818
Diesel fuel	$1,000	3 150 413	1 469 392
Electricity	$1,000	2 040 615	1 308 290
Interest expense	$1,000	11 673 895	(NA)
Machinery and equipment[2]:			
Estimated market value of all machinery and equipment	$1,000	93 686 308	77 600 689
Average per farm	dollars	41 930	34 471
Motortrucks, including pickups	farms	1 914 124	1 907 021
	number	3 435 299	3 357 829
Wheel tractors	farms	1 919 732	1 962 676
	number	4 525 373	4 626 228
Grain and bean combines, self-propelled only	farms	560 963	572 532
	number	644 276	654 695

[1]Retabulated 1978 data for 1982 comparability.
[2]Data are based on a sample of farms.
[3]Data for 1978 include the cost of lime which was not collected in 1982.

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Hired farm labor	$1,000	8 434 399	6 814 428
Workers working 150 days or more	farms	312 621	317 161
	number	950 112	953 694
Contract labor	$1,000	1 106 129	898 959
Customwork, machine hire, and rental of machinery and equipment	$1,000	2 024 725	1 750 875
Energy and petroleum products	$1,000	9 973 663	6 025 704
Gasoline and gasohol	$1,000	2 987 056	2 054 818
Diesel fuel	$1,000	3 150 413	1 469 392
Electricity	$1,000	2 040 615	1 308 290
Interest expense	$1,000	11 673 895	(NA)
Machinery and equipment[2]:			
Estimated market value of all machinery and equipment	$1,000	93 686 308	77 600 689
Average per farm	dollars	41 930	34 471
Motortrucks, including pickups	farms	1 914 124	1 907 021
	number	3 435 299	3 357 829
Wheel tractors	farms	1 919 732	1 962 676
	number	4 525 373	4 626 228
Grain and bean combines, self-propelled only	farms	560 963	572 532
	number	644 276	654 695

[1]Retabulated 1978 data for 1982 comparability.
[2]Data are based on a sample of farms.
[3]Data for 1978 include the cost of lime which was not collected in 1982.

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Farms, Land in Farms, and Land Use: 1982 and 1978

All farms	1982	1978
Farms—number	2 241 124	2 257 775
Land in farms—acres	984 755 115	1 014 777 234
Average size of farm—acres	439	449
Value of land and buildings[1]:		
Average per farm—dollars	347 974	279 672
Average per acre—dollars	791	619
Farms by size:		
1 to 9 acres	187 699	151 233
10 to 49 acres	449 301	391 554
50 to 179 acres	711 701	759 047
180 to 499 acres	526 566	581 631
500 to 999 acres	203 936	213 209
1,000 to 1,999 acres	97 396	97 800
2,000 acres or more	64 525	63 301

All farms	1982	1978
Land in farms according to use:		
Total cropland—farms	2 010 779	2 081 604
acres	445 527 557	453 874 133
Harvested cropland—farms	1 809 901	1 904 602
acres	326 311 614	317 145 955
Cropland used only for pasture or grazing—farms	869 809	949 206
acres	65 070 141	73 204 828
Other cropland—farms	537 064	699 464
acres	54 145 802	63 523 350
Woodland, including woodland pastured—farms	917 141	939 563
acres	87 133 026	91 815 487
Pastureland and rangeland other than cropland and woodland pastured—farms	595 016	585 446
acres	415 933 304	433 316 686
Land in house lots, ponds, roads, wasteland, etc.—farms	1 496 824	1 478 319
acres	36 161 228	35 770 928
Irrigated land—farms	278 368	280 779
acres	49 014 423	50 349 906

[1]Data are based on a sample of farms.

Farms With Sales of $10,000 or More: 1982 and 1978

[Excludes abnormal farms]

Item	1982	1978
Farms—number	1 143 253	1 180 151
Land in farms—acres	809 505 375	829 228 636
Average size of farm—acres	708	703
Value of land and buildings[1]:		
Average per farm—dollars	560 808	440 971
Average per acre—dollars	791	628
Farms by size:		
1 to 9 acres	40 604	35 631
10 to 49 acres	76 295	69 133
50 to 179 acres	287 327	293 302
180 to 499 acres	401 291	438 872
500 to 999 acres	184 863	191 483
1,000 to 1,999 acres	91 698	91 731
2,000 acres or more	61 175	59 999
Land in farms according to use:		
Total cropland—farms	1 083 774	1 125 698
acres	396 297 942	394 833 266
Harvested cropland—farms	1 051 626	1 091 464
acres	306 244 631	292 172 740
Irrigated land—farms	183 472	190 147
acres	46 869 004	47 784 021
Tenure of operator:		
Full owners	482 201	485 164
Part owners	490 983	514 399
Tenants	170 069	180 588
Operators by principal occupation:		
Farming	901 504	934 066
Other than farming	241 749	246 085
Estimated market value of all machinery and equipment[1]—$1,000	79 469 277	66 003 646
Average per farm—dollars	69 640	55 694
Market value of agricultural products sold—$1,000	127 959 648	102 927 581
Average per farm—dollars	111 926	87 216
Crops, including nursery and greenhouse products—$1,000	60 658 213	46 375 510
Livestock, poultry, and their products—$1,000	67 301 435	56 552 071
Poultry and poultry products—$1,000	9 701 956	8 430 754
Dairy products—$1,000	16 237 251	11 127 307

Item	1982	1978
Selected farm production expenses[1]:		
Livestock and poultry purchased—$1,000	16 554 334	15 576 421
Feed for livestock and poultry—$1,000	17 883 345	15 144 923
Seeds, bulbs, plants, and trees—$1,000	3 049 607	2 470 186
Commercial fertilizer—$1,000	7 320 440	5 909 619
Other agricultural chemicals[2]—$1,000	4 155 709	2 738 024
Hired farm labor—$1,000	8 147 471	6 541 391
Energy and petroleum products—$1,000	9 286 101	5 475 402
Interest expense—$1,000	10 952 360	(NA)
Cattle and calves inventory—farms	675 671	711 436
number	89 058 785	89 260 678
Beef cows—farms	416 162	442 990
number	26 591 377	26 948 942
Milk cows—farms	212 215	229 473
number	10 634 955	9 922 646
Hogs and pigs inventory—farms	219 155	283 535
number	53 696 097	54 115 219
Chickens 3 months old or older inventory—farms	77 524	99 021
number	357 802 528	348 295 261
Corn for grain or seed—farms	546 648	587 183
acres	67 612 791	66 542 688
bushels	7 342 017 529	6 573 923 121
Wheat for grain—farms	367 256	302 679
acres	68 457 908	51 202 136
bushels	2 313 661 262	1 541 197 841
Cotton—farms	33 188	43 937
acres	9 608 299	12 417 308
bales	11 259 932	10 544 540
Tobacco—farms	87 626	86 279
acres	794 636	805 723
pounds	1 641 618 569	1 647 868 195
Soybeans for beans—farms	410 460	413 082
acres	62 273 380	58 047 445
bushels	1 931 321 423	1 653 376 011
Irish potatoes—farms	13 896	14 559
acres	1 253 254	1 368 354
cwt	332 476 027	349 017 726
Hay—alfalfa, other tame, small grain, wild, grass silage, green chop, etc.—farms	593 688	645 284
acres	46 429 647	48 780 891
Vegetables harvested for sale—farms	40 092	41 659
acres	3 208 983	3 363 252
Land in orchards—farms	51 469	53 386
acres	4 148 195	3 908 105

[1]Data are based on a sample of farms.
[2]Data for 1978 include the cost of lime which was not collected in 1982.

Community Development

Information from the 1982 Census of Agriculture can help pinpoint facts about your local community and assist you in assisting with planning and development. The following questions can be answered by use of the census tables excerpted on the previous two pages.

Your county's officials will soon do an in-depth study of the local rural community to assess potential for added agricultural development. They will stress potential for the following: (a) Direct farm-to-consumer marketing; (b) Part-time farm income; and (c) Productive years expected from farm operators. Be prepared to write a letter to your county officials, after you've finished these questions, to add your own assessment of the local agricultural potential.

I. True or false.

	True	False
a. The number of smaller farms (less than 50 acres) decreased in 1982.	☐	☐
b. The number of farms with more than $250,000 in value declined from 1978.	☐	☐
c. Farm operators are getting older, on average.	☐	☐
d. There are more farms run by females in 1982 than 1978.	☐	☐
e. The number of farm residents with non-farm principal occupations increased in 1982.	☐	☐

II. Cross out the incorrect word.

While the number of farm operators over 65 is (rising/falling) the number of farmers in the middle-age bracket (45-64) is (rising/falling).

III. Fill in the blanks.

The number of farms with sales of more than $10,000 declined to _____ in 1982, although the average size rose from _____ acres in 1978. While the number of full-time owners of $10,000+ farms in 1982, _____, was relatively unchanged, the number of part-time owners dropped to _____. This contrasts to an increase in the number of full-time owners (_____) of all farms regardless of sales in 1982, and a general decline in the number of farms with part owners.

IV. True-False-Unproven.

Only one of the following statements can be proven *true* with the tables supplied. Two statements can be proven *false*. The other two cannot be proven true *or* false because to do so requires information not supplied by the tables.

True	False	Unproven	
☐	☐	☐	Most tenant farms are run by 25-year-olds and less.
☐	☐	☐	The number of farmers under 65 years of age is increasing.
☐	☐	☐	Farms with less than $5,000 in sales produce most of the vegetables sold.
☐	☐	☐	The cost of feed, up 18%, was the largest increase in farm expenses.
☐	☐	☐	Family-held corporations increased less from 1978 to 1982 than any other form.

Now that you have become familiar with the kinds of data available from tables of the 1982 Census of Agriculture, compose a letter to your county officials explaining why you think the need for an economic development study is or is not warranted. Include your rationale, based upon supporting data from the census tables. Explain why you feel you should be hired to help develop the study.

Suggested additional activities:

(a) Modify the questions, above, to pertain solely to your state or county (your teacher has the preliminary census figures for your state and/or county).

(b) Study the tables and determine which facts would be most interesting to talk about, if you were to be interviewed on a farm radio talk show.

(c) If you are involved with your school newspaper, use census statistics to ask questions about local farm trends when interviewing local officials or farm leaders.

Livestock and Poultry: 1982 and 1978—Con.

All farms		1982	1978
Cattle and calves sold	farms	1 278 628	1 320 163
	number	71 139 881	78 020 351
Farms by number sold:			
1 to 19	farms	740 961	717 315
	number	6 000 563	6 216 857
20 to 49	farms	315 771	352 065
	number	9 589 020	10 733 893
50 to 99	farms	120 354	136 979
	number	8 099 799	9 228 457
100 to 499	farms	87 438	98 820
	number	16 757 029	18 841 963
500 or more	farms	14 104	14 984
	number	30 693 470	32 999 181
Cattle fattened on grain and concentrates sold	farms	240 052	247 114
	number	27 626 763	29 722 043
Dairy products sold	farms	199 612	216 833
	$1,000	16 322 513	11 228 899
Hogs and pigs inventory	farms	329 862	445 117
	number	55 623 711	57 697 318
Farms by inventory:			
1 to 99	farms	211 493	303 253
	number	5 082 940	7 947 891
100 to 499	farms	89 155	116 640
	number	20 086 556	24 970 099
500 to 999	farms	19 885	17 890
	number	13 137 256	11 683 066
1,000 or more	farms	9 329	7 334
	number	17 316 959	13 096 262
Hogs and pigs used or to be used for breeding	farms	223 695	328 834
	number	6 952 948	8 516 131
Farms by inventory:			
1 to 9	farms	91 905	138 681
	number	382 278	584 373
10 to 24	farms	57 866	93 908
	number	885 036	1 431 849
25 to 49	farms	34 808	50 836
	number	1 178 280	1 712 107
50 or more	farms	39 116	45 409
	number	4 507 354	4 787 802

All farms		1982	1978
Hogs and pigs sold	farms	315 119	423 578
	number	94 818 304	90 757 143
Farms by number sold:			
1 to 99	farms	163 065	237 402
	number	5 145 716	8 033 221
100 to 499	farms	100 348	140 658
	number	23 431 908	31 646 338
500 to 999	farms	30 042	29 766
	number	20 578 235	20 015 261
1,000 or more	farms	21 664	15 752
	number	45 662 445	31 062 323
Feeder pigs sold	farms	90 377	128 060
	number	20 044 693	19 491 098
Litters of pigs farrowed between—			
Dec. 1 of preceding year and Nov. 30	farms	235 191	342 660
	number	10 360 847	10 999 496
Dec. 1 of preceding year and May 31	farms	210 679	301 185
	number	5 216 245	5 510 114
June 1 and Nov. 30	farms	198 454	286 642
	number	5 144 602	5 489 382
Sheep and lambs inventory	farms	101 576	90 437
	number	12 428 171	12 243 476
Ewes 1 year old or older	farms	90 486	82 287
	number	7 648 594	7 808 221
Sheep and lambs sold	farms	94 954	85 718
	number	10 766 550	10 260 539
Sheep and lambs shorn	farms	88 118	80 475
	number	11 248 904	11 354 913
	Wool—pounds	87 144 505	88 896 358
Horses and ponies inventory	farms	417 040	399 335
	number	2 264 629	1 957 028
Chickens 3 months old or older inventory	farms	215 844	240 891
	number	362 866 518	354 357 427
Hens and pullets of laying age inventory	farms	212 639	237 070
	number	310 778 574	300 283 286
Farms by inventory:			
1 to 3,199	farms	203 698	226 398
	number	9 650 816	13 417 705
3,200 to 9,999	farms	2 693	3 718
	number	18 530 148	24 699 824
10,000 to 19,999	farms	2 789	3 323
	number	37 424 202	44 538 752
20,000 or more	farms	3 459	3 631
	number	245 173 408	217 627 005
Broilers and other meat-type chickens sold	farms	30 104	31 743
	number	3 509 892 902	3 062 154 490
Turkeys sold	farms	7 513	6 033
	number	171 426 440	141 276 176

Crops Harvested: 1982 and 1978

All farms		1982	1978
Corn for grain or seed	farms	715 228	810 577
	acres	69 867 737	70 043 480
	bushels	7 509 431 410	6 805 185 861
Farms by acres harvested:			
1 to 24 acres		244 739	294 127
25 to 99 acres		249 959	289 818
100 to 249 acres		152 239	164 802
250 acres or more		68 291	61 830
Corn for silage or green chop	farms	222 313	240 561
	acres	8 018 721	8 271 817
	Green weight—tons	110 728 705	111 126 003
Sorghum for grain or seed	farms	93 700	113 336
	acres	12 678 698	12 899 829
	bushels	725 981 750	658 573 141
Wheat for grain	farms	446 049	378 574
	acres	70 889 930	54 155 168
	bushels	2 372 551 007	1 607 540 430
Farms by acres harvested:			
1 to 24 acres		128 047	125 760
25 to 99 acres		152 067	121 414
100 to 249 acres		85 269	67 956
250 acres or more		80 666	63 444
Barley for grain	farms	79 310	96 060
	acres	8 651 617	8 943 812
	bushels	468 383 031	427 558 661
Oats for grain	farms	280 888	319 744
	acres	9 131 093	10 121 903
	bushels	505 783 555	513 485 225
Cotton	farms	38 268	52 628
	acres	9 781 905	12 693 772
	bales	11 375 770	10 686 447
Farms by acres harvested:			
1 to 24 acres		5 098	7 978
25 to 99 acres		11 164	15 504
100 to 249 acres		10 138	13 655
250 acres or more		11 868	15 491

All farms		1982	1978
Tobacco	farms	179 285	188 649
	acres	934 380	963 224
	pounds	1 877 557 187	1 918 189 782
Soybeans for beans	farms	511 247	537 037
	acres	64 830 833	61 339 849
	bushels	1 989 931 447	1 722 154 229
Farms by acres harvested:			
1 to 24 acres		108 348	126 345
25 to 99 acres		208 093	226 822
100 to 249 acres		129 175	126 598
250 acres or more		65 631	57 272
Irish potatoes	farms	27 025	26 421
	acres	1 269 268	1 385 886
	cwt	334 857 218	351 217 422
Hay—alfalfa, other tame, small grain, wild, grass silage, green chop, etc.	farms	1 051 055	1 132 997
	acres	56 750 845	60 241 391
Alfalfa hay	farms	508 303	557 585
	acres	23 911 551	25 960 083
	Dry weight—tons	71 675 213	75 008 845
Vegetables harvested for sale	farms	69 157	73 183
	acres	3 337 095	3 534 142
Farms by acres harvested:			
0.1 to 4.9 acres		29 553	29 777
5.0 to 24.9 acres		19 957	21 893
25.0 to 99.9 acres		13 219	14 885
100.0 acres or more		6 428	6 628
Land in orchards	farms	123 707	121 852
	acres	4 752 968	4 463 627
Farms by acres harvested:			
0.1 to 4.9 acres		48 504	44 881
5.0 to 24.9 acres		44 422	45 743
25.0 to 99.9 acres		21 870	22 940
100.0 acres or more		8 911	8 288
Nursery and greenhouse products, mushrooms, and sod grown for sale	farms	35 514	34 650
	sq. ft	642 303 957	564 542 585
	acres	452 297	404 404
	$1,000	3 823 663	2 835 732

Agri-Business Development

Information from the 1982 Census of Agriculture can help solve marketing problems and assist in planning for future company growth. The following questions can be answered by use of the census tables excerpted on the previous two pages.

Assume you are a marketing manager for a manufacturer of automatic water-trough equipment, and your primary marketing target has been dairy farms where the cows are confined virtually year-round. Your regional sales manager asserts that beef cattle feed-lot operators are a better marketing target than the large dairy farmers. Be prepared to write a letter to your sales vice president agreeing or disagreeing with your regional manager, using the facts from national statistics, when you have completed the following questions.

I. True or false.

	True	False
a. While there were fewer farms in 1982, market value of machinery and equipment increased.	☐	☐
b. Dairy products sold increased from 1978 to 1982 by $5 billion.	☐	☐
c. Virtually all the dairy products sold in 1982 came from 18% fewer farms.	☐	☐
d. More than one-third of all 1982 milk cows were on less than 10% of farms.	☐	☐
e. There were fewer beef cows on farms in 1982, compared to 1978.	☐	☐

II. Cross out the incorrect word.

The number of cows and heifers that had calved (increased/decreased) from 1978 to 1982, while the total from farms with less than 100 cows (increased/decreased).

The total number of farms with milk cows (increased/decreased) from 1978 to 1982, while the number of farms with 50 head or more (increased/decreased).

III. Fill in the blanks.

Approximately $_____ billion in agricultural products was sold in 1982, of which $_____ billion was sold in dairy products, and $_____ billion in cattle and calves. In 1982, _____ farms sold hogs and pigs, _____ sold dairy products, and _____ farms sold cattle and calves. Comparing 1978 to 1982, for cattle sold, the increase in the number of farms was greatest among the farms selling _____ head; in 1982, there were _____ farms with 500 or more head of cattle and calves.

IV. True-False-Unproven.

Only one of the following statements can be proven *true* with the tables supplied. Two statements can be proven *false*. The other two cannot be proven true *or* false because to do so requires information not supplied by the census tables.

True	False	Unproven	
☐	☐	☐	Farms with sales of more than $250,000 specialize primarily in cattle.
☐	☐	☐	Interest expense is third-largest, behind the cost of feed and livestock, in 1982.
☐	☐	☐	Farms selling cattle fattened on grain are mostly those with 100+ head.
☐	☐	☐	The 1,945,724 individual or family-held farms in 1982 accounted for less than half the total farm acreage.
☐	☐	☐	The number of tenant farmers declined by more than 10% from 1978 to 1982.

Now that you are familiar with the information in the census tables about national trends among feed-lot operators and large dairy farmers, draft a memorandum agreeing or disagreeing with your regional sales manager's choice of beef-cattle feed-lots as a new marketing target. Use statistics to prove your viewpoint.

Suggested additional activities:

(a) Modify the questions, above, to pertain solely to your state or county (your teacher has the preliminary census figures for your state and/or county).

(b) Study the tables and determine which facts would be most interesting to talk about, if you were to be interviewed on a farm radio talk show.

(c) If you work on your school newspaper, use census statistics to ask questions about farm trends when interviewing local officials or farm leaders.

Crops Harvested: 1982 and 1978

All farms		1982	1978
Corn for grain or seed	farms	715 228	810 577
	acres	69 867 737	70 043 480
	bushels	7 509 431 410	6 805 185 861
Farms by acres harvested:			
1 to 24 acres		244 739	294 127
25 to 99 acres		249 959	289 818
100 to 249 acres		152 239	164 802
250 acres or more		68 291	61 830
Corn for silage or green chop	farms	222 313	240 561
	acres	8 018 721	8 271 817
	Green weight..tons	110 728 705	111 126 003
Sorghum for grain or seed	farms	93 700	113 336
	acres	12 678 698	12 899 829
	bushels	725 981 750	658 573 141
Wheat for grain	farms	446 049	378 574
	acres	70 889 930	54 155 168
	bushels	2 372 551 007	1 607 540 430
Farms by acres harvested:			
1 to 24 acres		128 047	125 760
25 to 99 acres		152 067	121 414
100 to 249 acres		85 269	67 956
250 acres or more		80 666	63 444
Barley for grain	farms	79 310	96 060
	acres	8 651 617	8 943 812
	bushels	468 383 031	427 558 661
Oats for grain	farms	280 888	319 744
	acres	9 131 093	10 121 903
	bushels	505 783 555	513 485 225
Cotton	farms	38 268	52 628
	acres	9 781 905	12 693 772
	bales	11 375 770	10 686 447
Farms by acres harvested:			
1 to 24 acres		5 098	7 978
25 to 99 acres		11 164	15 504
100 to 249 acres		10 138	13 655
250 acres or more		11 868	15 491

All farms		1982	1978
Tobacco	farms	179 285	188 649
	acres	934 380	963 224
	pounds	1 877 557 187	1 918 189 782
Soybeans for beans	farms	511 247	537 037
	acres	64 830 833	61 339 849
	bushels	1 989 931 447	1 722 154 229
Farms by acres harvested:			
1 to 24 acres		108 348	126 345
25 to 99 acres		208 093	226 822
100 to 249 acres		129 175	126 598
250 acres or more		65 631	57 272
Irish potatoes	farms	27 025	26 421
	acres	1 269 268	1 385 886
	cwt	334 857 218	351 217 422
Hay—alfalfa, other tame, small grain, wild, grass silage, green chop, etc.	farms	1 051 055	1 132 997
	acres	56 750 845	60 241 391
Alfalfa hay	farms	508 303	557 585
	acres	23 911 551	25 960 083
	Dry weight..tons	71 675 213	75 008 845
Vegetables harvested for sale	farms	69 157	73 183
	acres	3 337 095	3 534 142
Farms by acres harvested:			
0.1 to 4.9 acres		29 553	29 777
5.0 to 24.9 acres		19 957	21 893
25.0 to 99.9 acres		13 219	14 885
100.0 acres or more		6 428	6 628
Land in orchards	farms	123 707	121 852
	acres	4 752 968	4 463 627
Farms by acres harvested:			
0.1 to 4.9 acres		48 504	44 881
5.0 to 24.9 acres		44 422	45 743
25.0 to 99.9 acres		21 870	22 940
100.0 acres or more		8 911	8 288
Nursery and greenhouse products, mushrooms, and sod grown for sale	farms	35 514	34 650
	sq. ft	642 303 957	564 542 585
	acres	452 297	404 404
	$1,000	3 823 663	2 835 732

Farms With Sales of $10,000 or More: 1982 and 1978

[Excludes abnormal farms]

Item		1982	1978
Farms	number	1 143 253	1 180 151
Land in farms	acres	809 505 375	829 228 636
Average size of farm	acres	708	703
Value of land and buildings[1]:			
Average per farm	dollars	560 808	440 971
Average per acre	dollars	791	628
Farms by size:			
1 to 9 acres		40 604	35 631
10 to 49 acres		76 295	69 133
50 to 179 acres		287 327	293 302
180 to 499 acres		401 291	438 872
500 to 999 acres		184 863	191 483
1,000 to 1,999 acres		91 698	91 731
2,000 acres or more		61 175	59 999
Land in farms according to use:			
Total cropland	farms	1 083 774	1 125 698
	acres	396 297 942	394 833 266
Harvested cropland	farms	1 051 626	1 091 464
	acres	306 244 631	292 172 740
Irrigated land	farms	183 472	190 147
	acres	46 869 004	47 784 021
Tenure of operator:			
Full owners		482 201	485 164
Part owners		490 983	514 399
Tenants		170 069	180 588
Operators by principal occupation:			
Farming		901 504	934 066
Other than farming		241 749	246 085
Estimated market value of all machinery and equipment[1]	$1,000	79 469 277	66 003 646
Average per farm	dollars	69 640	55 694
Market value of agricultural products sold	$1,000	127 959 648	102 927 581
Average per farm	dollars	111 926	87 216
Crops, including nursery and greenhouse products	$1,000	60 658 213	46 375 510
Livestock, poultry, and their products	$1,000	67 301 435	56 552 071
Poultry and poultry products	$1,000	9 701 956	8 430 754
Dairy products	$1,000	16 237 251	11 127 307

Item		1982	1978
Selected farm production expenses[1]:			
Livestock and poultry purchased	$1,000	16 554 334	15 576 421
Feed for livestock and poultry	$1,000	17 883 345	15 144 923
Seeds, bulbs, plants, and trees	$1,000	3 049 607	2 470 186
Commercial fertilizer	$1,000	7 320 440	5 909 619
Other agricultural chemicals[2]	$1,000	4 155 709	2 738 024
Hired farm labor	$1,000	8 147 471	6 541 391
Energy and petroleum products	$1,000	9 286 101	5 475 402
Interest expense	$1,000	10 952 360	(NA)
Cattle and calves inventory	farms	675 671	711 436
	number	89 058 785	89 260 678
Beef cows	farms	416 162	442 990
	number	26 591 377	26 948 942
Milk cows	farms	212 215	229 473
	number	10 634 955	9 922 646
Hogs and pigs inventory	farms	219 155	283 535
	number	53 696 097	54 115 219
Chickens 3 months old or older inventory	farms	77 524	99 021
	number	357 802 528	348 295 261
Corn for grain or seed	farms	546 648	587 183
	acres	67 612 791	66 542 688
	bushels	7 342 017 529	6 573 923 121
Wheat for grain	farms	367 256	302 679
	acres	68 457 908	51 202 136
	bushels	2 313 661 262	1 541 197 841
Cotton	farms	33 188	43 937
	acres	9 608 299	12 417 308
	bales	11 259 932	10 544 540
Tobacco	farms	87 626	86 279
	acres	794 636	805 723
	pounds	1 641 618 569	1 647 868 195
Soybeans for beans	farms	410 460	413 082
	acres	62 273 380	58 047 445
	bushels	1 931 321 423	1 653 376 011
Irish potatoes	farms	13 896	14 559
	acres	1 253 254	1 368 354
	cwt	332 476 027	349 017 726
Hay—alfalfa, other tame, small grain, wild, grass silage, green chop, etc.	farms	593 688	645 284
	acres	46 429 647	48 780 891
Vegetables harvested for sale	farms	40 092	41 659
	acres	3 208 983	3 363 252
Land in orchards	farms	51 469	53 386
	acres	4 148 195	3 908 105

[1]Data are based on a sample of farms. [2]Data for 1978 include the cost of lime which was not collected in 1982.

Production Agriculture

Information from the 1982 Census of Agriculture can help you better understand your local farming environment and assist you in planning for future growth. The following questions can be answered by use of the tables excerpted on the previous two pages.

Assume your family has decided to raise hogs for the first time. Here are some questions about hog production trends, nationally. Be prepared to write an essay about your family's plans, when you're finished.

I. True or false.

	True	False
a. There was a 36% decline in inventory of hogs from 1978 to 1982.	☐	☐
b. Most of the decline occurred on the farms with the most pigs and hogs.	☐	☐
c. Fewer pigs and hogs were sold in 1982 than in 1978.	☐	☐
d. In 1982, there were less than 10,000 U.S. farms with more than 1,000 hogs.	☐	☐
e. The number of breeder farms with the most hogs increased from 1978 to 1982.	☐	☐

II. Cross out the incorrect word.

While the number of farms selling feeder pigs has (declined/increased), the number of feeder pigs sold has (declined/increased). While the number of hog farms with 500 or more hogs has (declined/increased), the number of farms with less than 500 has (declined/increased).

III. Fill in the blanks.

Farms with more than $10,000 sales nationwide, total more than one million in number. The number of hog farms was almost one-fourth smaller than the 1978 total of _____. Yet the market value of livestock, poultry and their products on these $10,000+ farms had risen considerably, from $_____ million in 1978 to $_____ million in 1982.

IV. True-False-Unproven.

Only one of the following statements can be proven *true* with the information supplied by the tables. Two statements, below, can be proven *false* with the information. The other two statements cannot be proven true *or* false because to do so requires information not supplied in the tables.

True	False	Unproven	
☐	☐	☐	Approximately 15 million litters were farrowed in 1982.
☐	☐	☐	Of the 546,648, $10,000+ farms producing corn for grain or seed, 219,155 had hogs.
☐	☐	☐	Farms with inventories of less than 11 pigs increased to 303,253 in 1982.
☐	☐	☐	The larger farms with more than 1,000 hogs increased production by more than 30% over 1978.
☐	☐	☐	The 2,000 new farms with more than 1,000 hogs produced 14.5 million more pigs throughout all of 1982 over 1978.

Now that you are familiar with census information about national trends in pig and hog production, write a letter to your family giving your reasons why you support—or disagree with—their impending decision to begin raising hogs.

Suggested additional activities:

(a) Modify the questions, above, to pertain solely to your state or county (your teacher has the preliminary census figures for your state and/or county).

(b) Study the tables and determine which facts would be most interesting to talk about if you were to be interviewed on the local farm radio show.

(c) If you assist on your school newspaper, use census data to ask questions about farm trends when interviewing local officials or farm leaders.

How should it be used properly?

The most difficult aspects of using any statistical data stem from the limitations and precision of definitions. Numbers imply precision, so their use must be precise, too. To use data correctly, there must be correct understanding of the definitions, their limitations and configurations. A glossary of terms accompanying this explanation may help; your review of terminology defined in the back of a complete state or national census is encouraged.

Who benefits from the Census?

Everyone directly or indirectly connected with agriculture benefits from a national census of the industry. That's why the Bureau of the Census, U.S. Department of Commerce, conducts this nationwide collection of data. Those who benefit include:

- —the farmer . . . to better understand his chosen industry
- —agri-business . . . to better serve producers and processors
- —local government . . . to better plan for rural development
- —colleges . . . to better design programs of research and education
- —USDA . . . to better chart future direction of farm programs
- —Congress . . . to better legislate farm and commodity policy

Selected production expenses—Expenses incurred for the agricultural operation during the census year including interest and custom work.

Agricultural products sold—Gross market value before taxes and production expenses of all agricultural products sold or removed from the premises.

Other Income—Gross income from agricultural services, including custom work and machine services.

Crop year covered—Acres and quantity harvest during the same calendar year as the census, except for some crops reported for the season preceeding the census year such as citrus fruits, avocadoes, olives, vegetables and pineapples.

How is it conducted?

Current censuses of agriculture are conducted by mail. Every effort is made to assemble an accurate national listing of the nation's 2.2 million agricultural operations. Duplicates are eliminated, and census forms mailed at the end of the census calendar year. Replies are requested in 45 days. Limited telephone follow-up is made if no census form is received. Upon receipt, the forms are checked for completeness and accuracy. Preliminary reports by state and county are published as soon as data are received, usually beginning about eight months after the forms are mailed.

When is the next Census of Agriculture?

Watch for the 1987 Census of Agriculture. Forms will be mailed during the last days of 1987, to collect information for 1987 agricultural operations. Forms should be in the hands of farm and ranch operators by early January, 1988.

Bureau of the Census means information

Information is the main job of the U.S. Bureau of the Census. Staffs of skilled professionals gather, document, categorize, and publish such valuable data as import-export statistics of the nation, capacities and operating levels of major industries, and economic statistics on U.S. housing, manufacturing and construction.

In brief, the Bureau of the Census means information for all sectors of the U.S. economy. Additional information that may be of interest to you has been listed as follows:

1982 Census of Agriculture

Geographic Area Series—Fifty-four separate reports, with data for each State, the United States, Puerto Rico, Guam, and the Virgin Islands. Each two-chapter report contains detailed data for the state and its counties or equivalents.

Graphic Summary—Multicolored pattern and dot maps depicting graphically the nation's agricultural production at the county levels.

Ranking of States and Counties—Contains rankings for major agricultural commodities and various other data items.

Cotton Ginnings—Annual series of reports detailing cotton ginnings from August through March.

Farm Population of the U.S.: 1982—A joint report by the Bureau of the Census and USDA's Economic Research Service, its 32 pages are packed with information on the nation's farm population, much of it charting trends back to 1920.

Statistical Abstract of the U.S.—A wealth of statistical data about the nation, this annual volume gathers pertinent information from a variety of sources, including USDA and other federal government agencies.

County Business Patterns—Presents primarily employment and payroll data on agricultural service, forestry, and fisheries; mining; contract construction; manufacturing; transportation, wholesale and retail trade, among other items.

Current Industrial Reports—A series of over 100 monthly, quarterly, and annual reports showing information for selected manufactured products.

For information on obtaining publications, write to Customer Service, Data User Services Division, Bureau of the Census, Washington, D.C. 20233.

Information from other sources

In addition to census publications, there are several other government statistical and informational booklets that may be of interest to the Vo-Ag classroom. Here are some suggestions:

Fact Book of U.S. Agriculture—A 130-page booklet that lists a wealth of facts and figures about the nation's agriculture. Includes charts and data on the scope of the industry, detailed descriptions of USDA agencies and services, plus a glossary of U.S. agricultural terms. Limited quantities available from: Office of Information, U.S. Department of Agriculture, Washington, D.C. 20250.

Getting Started in Farming—A booklet especially designed by USDA writers to assist youth in beginning a career in production agriculture. Contains a variety of management tips and advice, including illustrations and farm facts. Available upon request from: Office of Information, U.S. Department of Agriculture, Washington, D.C. 20250.

Farmline Magazine—This colorful magazine is published eleven times a year, to cover research and analyses from USDA's Economic Research Service. It emphasizes how current economic developments affect U.S. farmers, agri-business, and consumers. Includes striking charts and graphs. Sample copies available from: Director of Information, Economic Research Service, U.S. Department of Agriculture, Washington, D.C. 20250. Subscription is $16.00 per year, from: Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

People on the Farm—A series of specialized booklets detailing the work of U.S. farmers. The nine-part series includes information on such farming operations as dairy, beef, wheat, fruits and vegetables, and even a part on blacks in farming. A teachers' guide is included. Available upon request from: Office of Information, U.S. Department of Agriculture, Washington, D.C. 20250.

Instructions for the Teacher

Student Objectives

In each of the three Lesson Plans, the student will learn to:

A. Read and use actual statistics from the 1982 Census of Agriculture.

B. Explain how statistics indicate agricultural trends from 1978 to 1982.

C. Identify and define what data are contained in the 1982 Census of Agriculture.

D. Experience the composition of an essay using statistics for support.

E. Learn how statistics may be used in business situations.

There are eleven steps recommended for teachers to follow:

1. Reproduce the four-page Lesson Plan for each topic you intend to use. Each student needs a copy. There are three topic areas: Production Agriculture, Agri-Business Development, and Community Development.

2. Examine the national, state, and county preliminary census publications which should be supplied along with the overall Lesson Plan. Note that the tables and page numbers correspond among all three versions. Determine if you wish to localize questions by using state and county data. (You are urged to do so, for the students best identify with their own localities.)

If you need preliminary census reports for surrounding counties, call 301/763-1113 or write to Agriculture Division, Bureau of the Census, Washington, D.C. 20233.

3. Review other sources of statistical data, in case you wish to refer to them during class discussion. Students may ask questions which cannot be answered with data from the 1982 Census of Agriculture; knowing of other sources enables you to refer the student elsewhere to find out the answers—an equally valid way to introduce students to the value of statistical information.

4. During class, describe briefly how the census takes place, what is important about definitions, and why it is important. Use the previous three pages of information as background. Then hand out copies of the Lesson Plan for students.

5. Review the table headings and definitions with the class. Point out one or two statistics that you think are unusual or interesting. Answer any questions about the tables presented.

6. Conduct the "test" on the last page of the Lesson Plan, just for the factual questions. *Do not undertake any essay questions now.* The test should be completed within fifteen minutes.

7. When the test is completed, have the students retain their test papers. Conduct a discussion about how statistics can be used for planning. Encourage discussion of imaginative uses, and if appropriate, refer to other sources of information. The objective is to help students think about uses of statistics while they have just completed "hands-on" experience.

8. Once discussion ebbs, have the students correct their own tests. Explain the answers, using the guide on the last page of this teacher's section. The objective is for students to understand why their answers may have been incorrect.

9. Consider and undertake an "activity" by the entire class. You may wish to postpone this step until after you have read all of the essays.

10. Assign an essay to be written over a period of time, perhaps in the form of a letter to someone knowledgeable about farm policy. Accuracy in using the correctly defined terms and statistical definitions should be the focus of your grading of the essay. Note how the use of statistics can be helpful for descriptive, argumentative, *and* narrative essays.

11. Fill out the comment card and return it to the Bureau of the Census, adding comments on how the Lesson Plan concept might be improved.

We do not recommend "mixing" the Lesson Plans to be taught simultaneously in the same class at the same time. The tables reproduced in each one are slightly different. We recommend using the Lesson Plans over several days or weeks, so that the format becomes familiar. This allows the challenge to come from understanding how to effectively use the data.

Suggested class activities:

a. Conduct your own census of local farmers and facilities. Then compare your own survey with the data available from your county, state and nation.

b. Invite a business executive or local official to talk to the class about how he/she uses statistics. Suggest that the speaker bring into class a simple but real problem requiring students to look up information.

c. Compose a class letter to an official about a policy decision, using statistics to buttress the viewpoint. Ask if the official interprets the data in the same way (the reply may illustrate how statistics can be used by different people to draw different conclusions).

Answers for the Teacher

Here are the answers to the factual questions on each Lesson Plan. There are no "correct" answers to the essay questions, obviously. However, when you review the essays, be sure to look for the proper usage of statistical definitions. Many mis-interpretations arise because the definition is imprecisely understood. For example, all farmers are not necessarily farm operators, and not all farm operators own only their own farms. Precise use of precisely defined numbers leads to precise conclusions.

Production Agriculture

I. a. false. It's 3.6%
b. false. Farms increased.
c. false.
d. true.
e. false. Farms decreased.

II. Cross out "increased" and "declined."
Cross out "declined" and "increased."

III. 283,535; $56,552,071 to $67,301,435

IV. a. False. Approximately 10-million.
b. Unproven; no correlation possible.
c. False. 303,253 in 1978 is correct.
d. true.
e. Unproven. Changes in yearend inventories do not correlate with yearlong production.

Agri-Business Development

I. a. true
b. true
c. false; approximately 8%
d. true
e. true

II. Cross out "decreased" and "increased"
Cross out "increased" and "decreased"

III. $132-billion; $16-billion; $32-billion; 315,119; 199,612; 1,278,628; 1 to 19; 23,382

IV. a. unproven; no correlation
b. true
c. unproven
d. false; 65%
e. false; 7%

Community Development

I. a. false; increased.
b. false; increased.
c. false; essentially unchanged
d. true.
e. true.

II. Cross out "falling" and "rising."

III. 1,143,253; 703; 482,201; 490,983; 1,325,931

IV. a. unproven; no correlation
b. false; decreased by 45,707
c. unproven
d. false; energy rose 66%
e. true