What Kinds of Screens Might Capture Active Farming?

The current, broad definition of a farm encompasses a very diverse group of businesses, where many operators do not allocate large quantities of their labor to the farm, and most operations do not generate large amounts of output. Some policymakers have recently proposed redefining what qualifies as a farm (Abbott, 2007; Congressional Record, 2007; Good, 2008). The proposals define eligibility requirements for a particular government program or define eligibility across all government programs.

While some proposals would restrict the farm definition for NASS's Census of Agriculture and for Federal agricultural programs, these can represent conflicting goals. A broad definition for the Census survey could be desirable in order to capture the bulk of agriculture, while it might be desirable to funnel program funds toward a much narrower, targeted population. There may be unintended costs if the same population is targeted for both data collection and for all program purposes since different considerations may apply to the two goals (and to different programs). In each case, the careful identification of the desired population becomes important.

Common to the proposals is the view that Federal support of the agricultural community should go to those who are actively engaged in farming. Some policymakers aim to refine the term "actively engaged" to identify more precisely the segments of the farm population to which they wish to provide support.

Various screens have been proposed, but to be useful, they need to be easy to use and verifiable to facilitate implementation and ensure that the intended recipients of any targeted Federal funds are not unintentionally excluded from eligibility. The administration of certain programs already requires that farmers, to establish their financial history, must supply IRS income tax records at State and county offices. A similar requirement could be used to establish the proposed screens examined here.[11] For example, IRS Schedule F, titled "Profit or Loss From Farming," (filed by sole proprietorships) contains information on agricultural sales and expenses (fig. 8), and when combined with information on other tax forms (for example, U.S. Individual Income Tax Returns contain off-farm income information), can provide a measure of the relative importance of off-farm income to the household.[12] County office program managers could require farmers to bring in their filed tax forms to help determine a farmer's active engagement in agriculture. Possible screens that make use of information readily available from tax forms include farm sales, the share of income from farming, and off-farm income streams.[13] A screen such as farmer occupation and/or labor allocation, despite being a convenient way to categorize farmers that closely approximates the ideas behind the definition of "actively engaged," is self-reported and therefore not easily verifiable by program managers, reducing their value for program targeting purposes.

[11]USDA's Farm Service Agency (FSA) requires that farmers supply their last 3 years of farm financial records, including tax returns, to qualify for a loan (see Handbook 3-FLP page 3-6). Furthermore, tax returns are used to screen for beginning farmers, limited-resource farmers, and for off-farm income.

[12]Similarly, if a farm is organized as a partnership rather than a sole proprietorship, IRS Form 1065 would be appropriate. IRS Form 1120 and 1120S pertain to a farm organized as a C- or S-corporation respectively.

[13]Note that tax rules may distort some of what policymakers or program managers wish to measure. For example, rules concerning cash accounting, capital expensing, and other farm deductions may reduce net incomes for tax purposes (Durst and Monke, 2001).

Figure 8
IRS Schedule F, Profit or Loss From Farming, page 1

SCHEDULE F (Form 1040)

Department of the Treasury
Internal Revenue Service

Profit or Loss From Farming

▶ Attach to Form 1040, Form 1040NR, Form 1041, Form 1065, or Form 1065-B.

▶ See Instructions for Schedule F (Form 1040).

OMB No. 1545-0074

2007

Attachment Sequence No. 14

Name of proprietor

Social security number (SSN)

A Principal product. Describe in one or two words your principal crop or activity for the current tax year.

B Enter code from Part IV ▶

C Accounting method: (1) ☐ Cash (2) ☐ Accrual

D Employer ID number (EIN), if any

E Did you "materially participate" in the operation of this business during 2007? If "No," see page F-2 for limit on passive losses. ☐ Yes ☐ No

Part I **Farm Income—Cash Method.** Complete Parts I and II (Accrual method. Complete Parts II and III, and Part I, line 11.) Do not include sales of livestock held for draft, breeding, sport, or dairy purposes. Report these sales on Form 4797.

1	Sales of livestock and other items you bought for resale	1			
2	Cost or other basis of livestock and other items reported on line 1	2			
3	Subtract line 2 from line 1			3	
4	Sales of livestock, produce, grains, and other products you raised			4	
5a	Cooperative distributions (Form(s) 1099-PATR)	5a	5b Taxable amount	5b	
6a	Agricultural program payments (see page F-3)	6a	6b Taxable amount	6b	
7	Commodity Credit Corporation (CCC) loans (see page F-3):				
a	CCC loans reported under election			7a	
b	CCC loans forfeited	7b	7c Taxable amount	7c	
8	Crop insurance proceeds and federal crop disaster payments (see page F-3):				
a	Amount received in 2007	8a	8b Taxable amount	8b	
c	If election to defer to 2008 is attached, check here ▶ ☐		8d Amount deferred from 2006	8d	
9	Custom hire (machine work) income			9	
10	Other income, including federal and state gasoline or fuel tax credit or refund (see page F-3)			10	
11	**Gross income.** Add amounts in the right column for lines 3 through 10. If you use the accrual method, enter the amount from Part III, line 51 ▶			11	

Part II **Farm Expenses—Cash and Accrual Method.** Do not include personal or living expenses such as taxes, insurance, or repairs on your home.

12	Car and truck expenses (see page F-4). Also attach **Form 4562**	12		25	Pension and profit-sharing plans	25	
13	Chemicals	13		26	Rent or lease (see page F-6):		
14	Conservation expenses (see page F-4)	14		a	Vehicles, machinery, and equipment	26a	
15	Custom hire (machine work)	15		b	Other (land, animals, etc.)	26b	
16	Depreciation and section 179 expense deduction not claimed elsewhere (see page F-5)	16		27	Repairs and maintenance	27	
				28	Seeds and plants	28	
				29	Storage and warehousing	29	
17	Employee benefit programs other than on line 25	17		30	Supplies	30	
				31	Taxes	31	
18	Feed	18		32	Utilities	32	
19	Fertilizers and lime	19		33	Veterinary, breeding, and medicine	33	
20	Freight and trucking	20		34	Other expenses (specify):		
21	Gasoline, fuel, and oil	21		a		34a	
22	Insurance (other than health)	22		b		34b	
23	Interest:			c		34c	
a	Mortgage (paid to banks, etc.)	23a		d		34d	
b	Other	23b		e		34e	
24	Labor hired (less employment credits)	24		f		34f	

35	**Total expenses.** Add lines 12 through 34f. If line 34f is negative, see instructions ▶	35	
36	**Net farm profit or (loss).** Subtract line 35 from line 11. • If a profit, enter the profit on **Form 1040, line 18,** and **also** on **Schedule SE, line 1.** If you file Form 1040NR, enter the profit on **Form 1040NR, line 19.** • If a loss, you **must** go to line 37. Estates, trusts, and partnerships, see page F-6.	36	

37 If you have a loss, you **must** check the box that describes your investment in this activity (see page F-7).
- If you checked 37a, enter the loss on **Form 1040, line 18,** and **also** on **Schedule SE, line 1.** If you file Form 1040NR, enter the loss on **Form 1040NR, line 19.**
- If you checked 37b, you **must** attach **Form 6198.** Your loss may be limited.

37a ☐ All investment is at risk.
37b ☐ Some investment is not at risk.

For Paperwork Reduction Act Notice, see page F-7 of the instructions. Cat. No. 11346H **Schedule F (Form 1040) 2007**

Farm Sales

One way to measure active engagement in agriculture is to examine the level of sales during the year. Generally speaking, those with high levels of sales are more likely to be heavily involved in farming than those with low sales. Exceptions do exist, though, especially among those considered beginning, limited-resource, or socially disadvantaged farmers.[14] USDA actively works to provide assistance to farmers in these classes to promote equity. If a farm sales screen were adopted, the typical sales generated from farms run by beginning, limited-resource, or socially disadvantaged farmers could easily disqualify them from receiving Federal support.

According to 2006 ARMS data, operations selling at least $10,000 worth of agricultural products accounted for a little over 42 percent of all U.S. farms, 98.5 percent of all agricultural sales, and received 93 percent of all government payments. Nearly 75 percent of farms with operators who allocate at least 1,500 hours to the farm produce sales of at least $10,000. In contrast, approximately one out of every four operations with either a socially disadvantaged operator or limited-resource operator generates sales above $10,000 (table 3). Using a higher cutoff (operations with at least $50,000 in sales), while accounting for only 24 percent of farms, still captures an estimated 94 percent of all agricultural sales and nearly 82 percent of all government payments in 2006. However, this higher cutoff only captured about half of all operations where the principal operator spent at least 1,500 hours on the farm and included less than 6 percent of operations run by limited-resource and just over 11 percent of the farms run by socially disadvantaged operators.

[14]A beginning operator has fewer than 10 years' experience running a farm. A socially disadvantaged operator is either female and/or belongs to one of the following groups: African Americans, American Indians, Alaskan natives (Native Americans), Hispanics, Asian Americans, or Pacific Islanders. Finally, a limited-resource operator must have earned less than $115,600 (2006 dollars) and had household income below the national poverty level for a family of four, or the household income was below the county median household income in the previous 2 years.

Table 3
U.S. farms included in each proposed statistical screen, 2006

	Screen 1: Sales		Screen 2: Off-farm income as a share of household income		Screen 3: Off-farm income	
	$10,000 or more	$50,000 or more	< 50 percent	< 25 percent	< $100,000	< $50,000
			Percent			
All U.S. farms	42.7	24.0	12.5	7.2	81.7	47.2
Farms run by operator who allocates at least 1,500 hours of labor to farm	73.0	51.0	24.3	15.3	87.5	60.1
Farms run by beginning operators[1]	d	d	6.1	1.1	66.0	6.2
Farms run by limited-resource operators[2]	25.1	5.6	7.2	5.7	99.8	99.2
Farms run by socially disadvantaged operators[3]	27.2	11.1	7.5	3.4	81.5	50.5

[1]A farm is classified as being run by a beginning operator(s) if the operator(s)—up to 3—each have less than 10 years' experience.
[2]A farm is classified as being run by a limited-resource operator if in each of the last 2 years gross farm sales were below $115,600 (in 2006 dollars) and either had household income below the national poverty level for a family of four or had household income below the county median household income in the 2 previous years.
[3]A farm is classified as being run by a socially disadvantaged operator if the operator belongs to any of the following groups: females, African Americans, American Indians, Alaskan natives (Native Americans), Hispanics, Asian Americans, or Pacific Islanders.
Note: d means cannot be disclosed due to confidentiality restrictions.

Source: USDA, Agricultural Resource Management Survey, 2006.

While a "farm sales" screen may be useful as a rough gauge for involvement and is easily implemented, it has drawbacks. A small but substantial number of actively engaged farm households with production or investment but no sales (e.g., orchards) would be screened out. For example, an estimated 7 percent of all point farms in 2006 (approximately 31,000 farms) had little or no sales yet produced goods valued between $1,000 and $10,000. Moreover, a further estimated 1,645 farms with few, if any, sales produced goods valued above $10,000.[15]

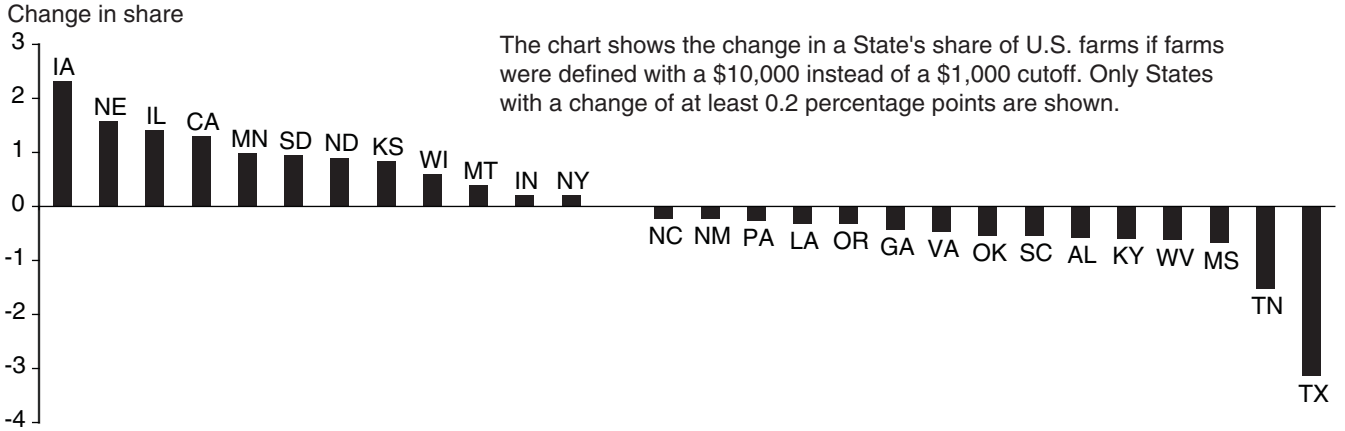
A sales screen can be used for several purposes. It can be used as a screen that can help refine the actively engaged standard adopted in the 2008 Farm Act to help target Federal monies to the farm population. It is also currently (and has been historically) the backbone of the USDA farm definition. If a sales screen above $1,000 were implemented, it could affect how Federal funds are disbursed for programs such as Federal land-grant universities for research and dissemination of information as established through the Hatch Act of 1887, and Cooperative Extension services established through the Smith-Lever Act of 1914. USDA's Natural Resources Conservation Service (NRCS) currently distributes funds to States based on farm-population counts to its Conservation Technical Assistance (CTA) program, and formulas for fiscal year 2009 include farm-population counts for the Agricultural Management Assistance and EQIP programs. Similarly, USDA's Farm Service Agency (FSA) allocates funds across States primarily using the number of farmers in each State for its loan programs, including Direct Farm loans (Farm Ownership and Operating Loans), Emergency Farm loans, and Beginning Farmers and Ranchers loans.

For nearly half of the States in the Nation, using a farm definition based on $10,000 in sales would induce less than a 0.2-percent change in their share of farms. However, some States would experience much larger changes, with implications for the amount of Federal funds available to them for certain programs (fig. 9). For example, Texas and Tennessee would each see their share of U.S. farms drop by just over 3 percent and more than 1.5 percent, respectively. By contrast, Iowa would find its share increased by over 2 percent, while Nebraska, Illinois, and California would all experience increases in their share of farms by more than 1 percent.

Some Federal programs also use the State shares of farm population to distribute funds in a similar fashion to that used with the State share of farm numbers. Very similar, although not identical, results follow from using the farm population instead of number of farms. Over half of the States in the Nation would experience changes in their share of farm population of more than 0.2 percent. Texas and Tennessee would lose almost 2 percent and just over 1 percent, respectively. Iowa would gain the largest share, at almost 2 percent of the farm population, while Minnesota, Nebraska, and Wisconsin would all experience increases greater than 1 percent in their relative share of the farming population (fig. 10).

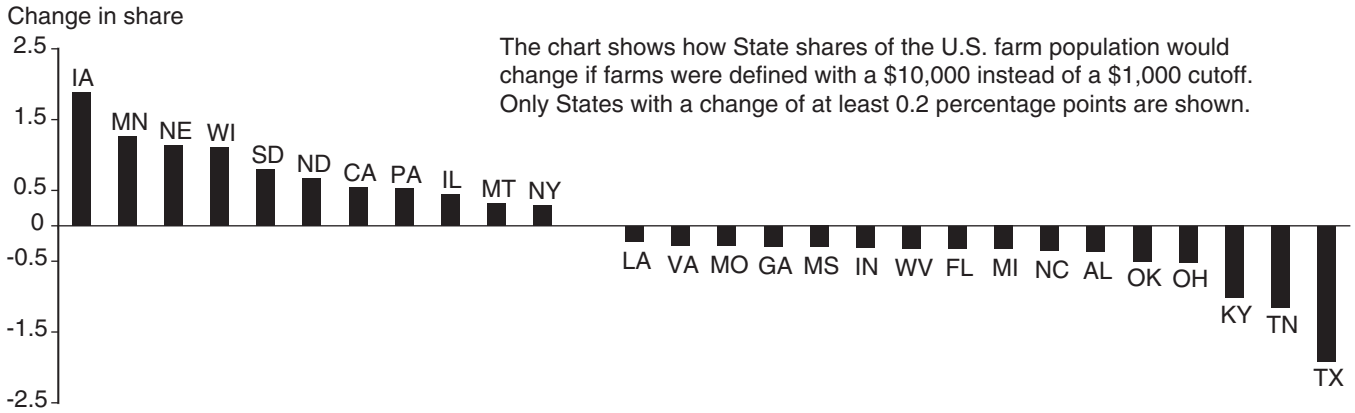
[15]The value of production of goods can be estimated "as if" the goods were sold in the market (using market prices and production quantities). Sales, however, refer to what actually was sold in the marketplace. The value of production and sales can differ for several reasons. For example, an operator can produce grain, but store it rather than sell it during the reference year, or sell grain out of inventory that was actually produced in previous years.

Figure 9
The effect of changing the farm definition on State shares of all U.S farms



Source: ERS calculations based on USDA, National Agricultural Statistics Service, *Farms, Land in Farms, and Livestock Operations*, February 2008.

Figure 10
The effect of changing the farm definition on State shares of the U.S. farm population



Source: ERS calculations based on U.S. Department of Commerce, U.S. Census Bureau, 2000 Census of Population.

Share of Income From Farming

If policymakers are concerned about sending Federal funds to operators not actively engaged in farming, one option is to make those operators who do not think of themselves primarily as farmers and do not devote many hours to farming ineligible for payments. However, occupation title and labor hours are self-reported and therefore cannot be easily verified.

Household income, on the other hand, can be checked using Federal tax forms. Therefore, the importance of farm income to the overall household income of the operator has been proposed as an alternative way to measure active engagement.

Using a screen based on the share of household income from farming, however, may be a poor proxy for the level of involvement in farming, and could exclude a substantial portion of U.S. production. For example, only

7 percent of all farm households derived at least three-quarters of their income from farming, while generating about one-third of all farm sales (table 2). Collectively, these households received 28 percent of all government payments. This screen would capture almost 16 percent of those operations where the operator allocated at least 1,500 hours of labor to the farm, 1 percent of all beginning farmers, approximately 6 percent of all limited-resource operations, and less than 4 percent of farms run by those operators considered socially disadvantaged.

Reducing the threshold to those households that generated at least half of their income from farming does not radically alter the picture. Only 12 percent of all farm households generated at least half of their income from farming. This includes almost 1 out of every 4 farms with operators who spend at least 1,500 hours on the farm, as well as 6 percent of all beginning farmers, and just over 7 percent of all farms run by limited-resource and socially disadvantaged operators (table 3). As a group, farms operated by households earning more than half of their income from farming produced less than half of all U.S. agricultural sales and received 41 percent of all government payments in 2006.

Many farm households that would appear to be actively engaged in farming by most standards would not be considered active using a screen that required that at least 50 percent of their income come from farming. In large part, this has to do with the complex interplay between actual production and what the farm household claims as income. A household may have a reduced (and even negative) share of income from farming for several reasons. For some, operating expenses could have been unexpectedly high. For others, decisions to increase their inventories rather than sell their goods could have reduced their revenues. Still others may have made recent substantial investments in capital equipment that could allow them to report significant capital depreciation expenses, reducing their net taxable income from farming.

This issue becomes even more transparent if we focus on only the very largest farms, those with at least $500,000 in sales. About one in five farms selling at least $500,000 of agricultural products incurred losses during 2006, which would immediately disqualify the households associated with them from being considered actively engaged in farming using the "share of income" screen, despite the fact that they generated a large volume of sales during the year (table 2). Another 15 percent of these households had positive household income but derived more than half of their income from off-farm sources. Overall, using a "50 percent of income from farming" screen, 35 percent of the very largest farm households would be considered not actively engaged in farming. This pattern is not restricted to just the very largest farms; using the "50 percent of income from farming" screen, the households of almost half of all farms with sales between $175,000 and $500,000 would also be considered not actively engaged in farming. If such a screen were applied, a large number of farm households representing a significant portion of total U.S. agricultural output would become ineligible for farm program funds.

Additionally, if a "percent of income from farming sources" screen were used, it might discourage farm households from diversifying into nonfarm activities. Such disincentives could imperil the overall success of the farm

and nearby communities, especially rural communities with a large number of farm households.

Off-Farm Income

A third type of screen, "level of off-farm income," has been proposed to try to exclude individuals with high off-farm income from receiving Federal funding. While this type of screen directly assesses the individual's need for assistance (if off-farm income is very high, presumably the individual would not require Federal assistance), it also can proxy for level of engagement in agriculture. Generating earned off-farm income requires spending time in nonagricultural pursuits and, in general, the higher the off-farm income, the less time is available for the farm operation.

Self-reported occupation status can provide a rough proxy for how the operator chooses to spend time, either in on- or off-farm pursuits. Less than one in four farmers with off-farm income greater than $100,000 considered farming as their primary occupation. By contrast, 78 percent of those earning below $10,000 in off-farm income and one out of every two operators generating between $10,000 and $50,000 in off-farm income considered themselves farmers.

Operators of farms with sales of at least $100,000 are more likely to be considered actively engaged in farming than farmers of smaller operations. Households of farms that generate sales of $100,000 or more also earn an approximate mean off-farm income of $50,000. If an off-farm income screen of $50,000 were used in 2006, operations where households earned less than $50,000 in off-farm income accounted for nearly 48 percent of all farms, generated 73 percent of all sales, and received 70 percent of all government payments. This included more than 60 percent of all farms where the operator worked at least 1,500 hours on the farm, but only 6 percent of all beginning farmers. It also included over 99 percent of all limited-resource farmers and just over half of all socially disadvantaged farmers (table 3). If the screen were set to exclude only those who generated more than $100,000 in off-farm income, in 2006 this would have excluded the households of 18 percent of all farms that generated 10 percent of agricultural sales and received 12 percent of all government payments.

Of the farms run by operators who allocated at least 1,500 labor hours to the farm, nearly 88 percent would be captured using the higher valued screen of $100,000. This elevated screen also captured almost two-thirds of all beginning operators, virtually all limited-resource operators, and more than 80 percent of all farms run by socially disadvantaged operators. Finally, those households generating at least $250,000 in off-farm income represented only 2 percent of all farms and generated only 2 percent of all sales, while collecting only 2 percent of all government payments. At the higher off-farm income cutoffs, few farm households are excluded, while at lower off-farm income cutoffs, substantial levels of production are excluded (over one-quarter of all production is excluded at the $50,000 cutoff), implying that, at the $50,000 cutoff, some farm households with significant agricultural activity would be excluded from Federal programs.

The 2008 Farm Act includes an off-farm income screen to limit Federal payments to those who earned more than $500,000 in average adjustable gross nonfarm income. Very few farm households earned such large amounts of off-farm income.

Self-reported employment categories do not necessarily capture engagement in farming. Most farmers who earned low off-farm income in 2006 did consider themselves farmers and appeared to be actively engaged in farming. However, a full 14 percent of farmers earning less than $1,000 in off-farm income considered their occupation something other than farming, while another 11 percent stated that they were not in the paid workforce. An additional 6 percent of operators whose households earned between $1,000 and $10,000 in off-farm income, and 30 percent of operators whose households earned between $10,000 and $50,000 in off-farm income did not consider themselves farmers when asked their occupation in 2006. In other words, despite earning relatively low levels of off-farm income, a large number of households may still not be actively engaged in farming. Policymakers and program managers using such a screen may continue to fail to target their intended recipients with Federal program funds. Additionally, an off-farm income screen might create incentives for farmers to hide off-farm income to become eligible for Federal funding.

While all of the three screens (sales, the portion of total household income coming from off-farm sources, and total off-farm income) would be relatively easy to implement, the drawbacks associated with them imply that care needs to be taken to ensure that those designated as "actively engaged" do, in fact, match policymakers' intended recipients. Additionally, these screens may not work well if program goals include issues such as environmental improvement or help for beginning farmers rather than just ensuring that Federal assistance accrues to those who are actively engaged in agriculture. Alternative program goals may require targeting users of land and water resources or a more thorough examination of farming activity.

Another key concern is how the screens might affect family farms, an integral part of our Nation's agricultural sector. Part of the difficulty assessing such a concern stems from the lack of a widely held, precise definition of a family farm. There are many ways to define a family farm, and various organizations within the United States define them differently.

Family Farm Definitions

The family farm has long held a dominant place in U.S. agriculture. According to ERS, most production occurs on family farms. Some USDA programs are designed explicitly to support and encourage the growth of family farms, such as the Direct Operating Loans, Direct Ownership Loans, and Emergency Farm Loans administered by FSA.[16] Additionally, some observers have argued that the family organization of farms has been an important reason for the superior performance of U.S. agriculture (Gardner, 2002).

Despite their central role in farm policy, legislators have not formally defined family farms, and various institutions, organizations, and researchers employ different definitions of a family farm. Many equate family farms with small, limited production farms, while associating the larger farms that generate

[16]FSA defines family farms differently than ERS. Under FSA's definition, in addition to making the business decisions, the family must be recognized by the community as running a farm and the farm must produce goods in sufficient quantities so that it is recognized as a farm rather than a rural residence. Furthermore, the amount of labor provided to the farm must be significant and provided mostly by the family.

the bulk of production with corporate, nonfamily interests. “The legendary ‘family farm’ is largely as quaint as Grant Wood’s 1930 painting, ‘American Gothic.’ While mom-and-pop farms remain, most U.S. agriculture involves corporate mega-farms rather than pitchforks, barns and overalls,” Deroy Murdock of Scripps News noted (Murdock, 2008).

Other observers have weighed in with similar outlooks. “Federal farm policies specifically bypass family farmers,” Heritage Foundation budget analyst Brian Riedl noted in 2007. He also stated, “Subsidies are paid per acre, so the largest (and most profitable) agribusinesses automatically receive the biggest checks,” and agricultural government payments amount to the “largest corporate welfare program maintained by the Federal Government” (Riedl, 2007; Riedl, 2002). Similarly, Ryan Alexander, president of Taxpayers for Common Sense, said, “Family farms are really getting peanuts under the current system, while corporate agriculture is living high on the hog.” (Groppe, 2007).

As a result of the many definitions surrounding family farms, public perceptions of the family farm remain rather vague. In contrast, ERS defines a family farm rather specifically—operator ownership and control determine family farm status. ERS designates a family farm as any farm where the operator, and individuals related to the operator by blood, marriage, or adoption, own more than 50 percent of the business.

The ERS definition captures a very broad range of farms. An operator who owns the entire farm business clearly qualifies as a family farm. However, an operator whose family owns 51 percent of the farm business also qualifies under the ERS definition, even though the operator may choose to incorporate and find investors.[17] ERS’s definition of family farms includes sole proprietorships, partnerships, and even corporations, as long as the principal operator’s family owns more than half of the farm business. Only farms with ownership that is separate from management (a hired manager runs the farm), partnerships and cooperatives among unrelated people, and operations organized as estates, trusts, grazing associations, and corporations with dispersed ownership do not qualify as family farms.

[17]Ownership of the farm does not require ownership of land or, for that matter, any inputs to production. The owner of the farm is the individual (or set of individuals) who receives the gains (or incurs the losses) from the farm business after paying for the factors of production (land, equipment, labor, etc.).

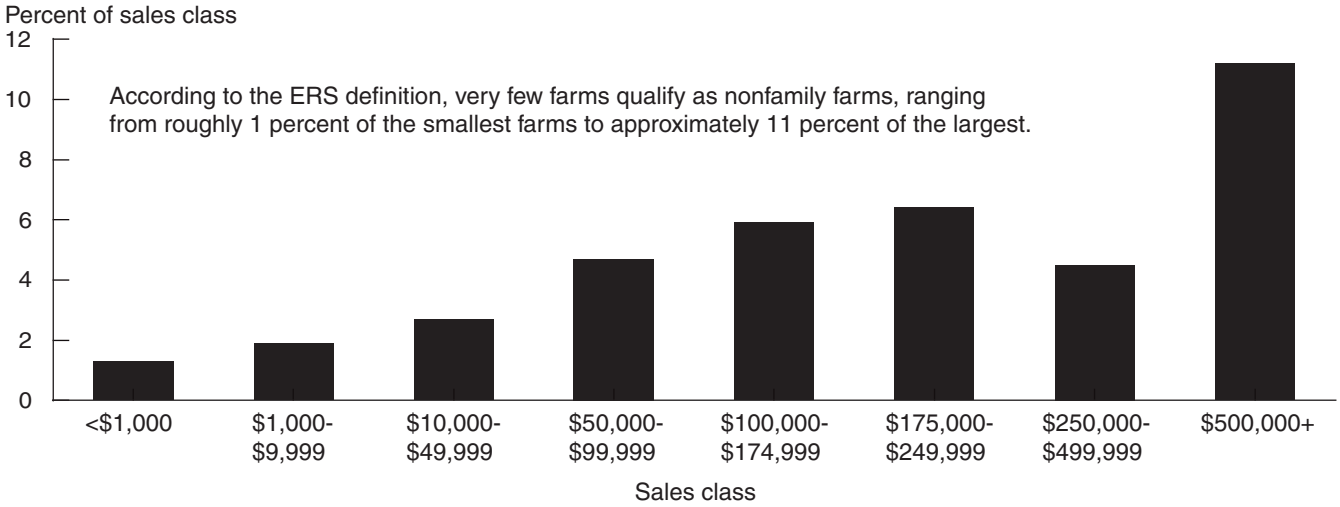
In 2006, ERS identified 97 percent of all farms in the U.S. as family farms, including 92 percent of farms with agricultural sales of $250,000 or more. These farms generated 84 percent of total U.S. agricultural sales. Nonfamily farms accounted for only 1 to 11 percent of U.S. farms, depending on the sales class (fig. 11, table 1).

It is not surprising that almost all U.S. farms qualify as family farms. The Small Business Administration identifies over 97 percent of all U.S. firms as small businesses (defined as businesses with less than $750,000 in sales in a year). Overall, families run most small businesses in the United States.

Alternative Family Farm Criteria

To define a family farm, ERS requires that the operator’s family own more than 50 percent of the business. ARMS also collects data on whether the principal operator’s household (those living in the operator’s housing unit)

Figure 11
How many farms were nonfamily farms in 2006?



Source: USDA, Agricultural Resource Management Survey, 2006.

owns the entire business. This information is used to gauge how sensitive the farm coverage is to variation in share of ownership of the family farm.

Other groups use alternative definitions of the family farm, often imposing explicit or implicit size constraints. The National Family Farm Coalition requires that "the family provides the vast majority of labor and management decisions."[18] The Ohio Family Farm Coalition calls for "the farm's ownership, assets, management, and major decisions [to be] controlled by at least one family member on the farm."[19] Researchers have weighed in with their own definitions. Daniel Sumner proposed that either the operator generate a significant portion of household income or that the operator's primary occupation lie in the agricultural sector, while no more than three extended families can run the operation and the farm must provide at least half-time employment for an individual (Sumner, 1985). Breimyer and Frederick (1981) required that a family farm must supply more labor than it hires, must own some of the land operated, and cannot employ production contracts, since they limit managerial discretion.[20] Finally, World Hunger Year (WHY), an organization with the stated aim of fighting hunger and poverty, requires that a family farm operate fewer than 1,000 acres and not qualify as a confined animal feeding operation (CAFO).[21] Overall, three criteria appear consistently in these alternative definitions of the family farm: labor, land ownership, and size restrictions.

ERS's family farm definition can be compared with the definition that states the operator's household must own 100 percent of the business. In addition, by imposing household labor supply restrictions, land ownership requirements, and explicit size limitations, we can explore how the ERS classification of farms and sales into either family or nonfamily farms would be altered (table 4, fig. 12). The proposed screens (sales, off-farm income share of total household income, and off-farm income screens) can then be compared with the various family farm definitions to explore the screens' coverage of family farms.

[18]For more details on the National Family Farm Coalition, see http://www.nffc.net/learn/page-learn.html.

[19]For the Ohio Family Farm Coalition statement, see http://www.geocities.com/RainForest/2727.

[20]For more details, see http://extension.missouri.edu/xplor/agguides/agecon/g00820.htm.

[21]For more details, see http://www.yhunger.org/programs/fslc/topics/family-farms.html.

Table 4
Family farms defined under different criteria, 2006

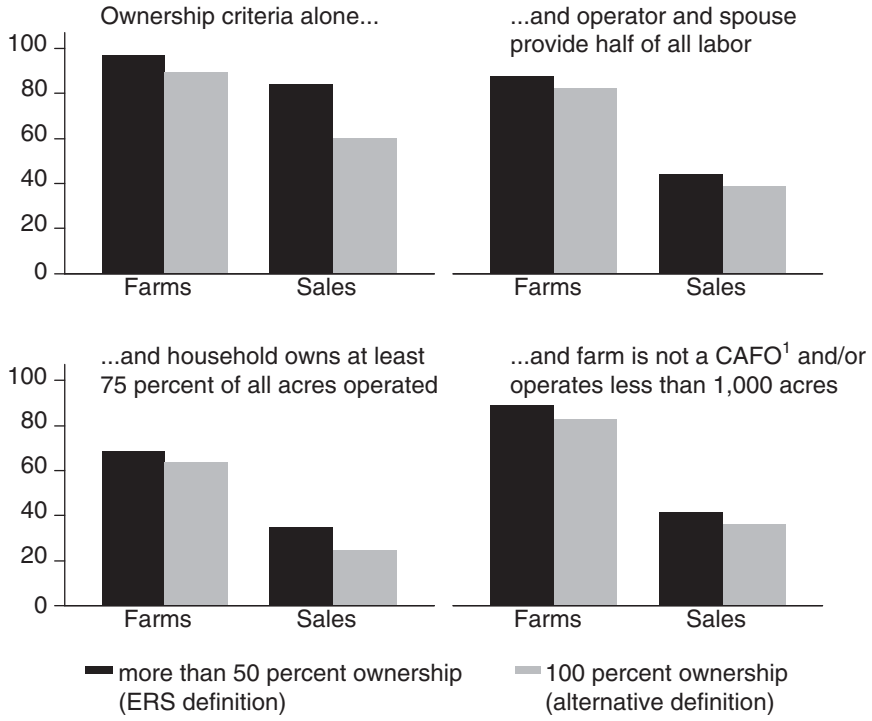
Farms, sales, and criteria	More than 50 percent held by operator & relatives (ERS definition)	100 percent held by operator & household (Alternative definition)
	Number	
Total farms	2,083,674	2,083,674
	Percent	
Ownership criteria alone—		
Farms:		
Family farm	97.1	89.1
Nonfamily farm	2.9	10.9
Sales:		
Family farm	84.0	60.1
Nonfamily farm	16.0	39.9
Ownership criteria and operator and spouse provide half the labor—		
Farms:		
Family farm	87.4	82.1
Nonfamily farm	12.6	17.9
Sales:		
Family farm	44.1	38.7
Nonfamily farm	55.9	61.3
Ownership criteria and operator owns at least 75 percent of acres operated—		
Farms:		
Family farm	68.7	63.8
Nonfamily farm	31.3	36.2
Sales:		
Family farm	34.9	24.9
Nonfamily farm	65.1	75.1
Ownership criteria and 1,000-acre farms and/or CAFOs[1] are excluded—		
Farms:		
Family farm	88.9	82.8
Nonfamily	11.1	17.2
Sales:		
Family farm	41.5	33.7
Nonfamily	58.5	66.3

[1] CAFO = confined animal feeding operation
Source: USDA, Agricultural Resource Management Survey, 2006.

If the principal operator's household must own the entire farm business to qualify as a family farm, the percent of all farms defined as family farms would drop from 97 percent to 89 percent, inducing a 24-percent shift in sales of all agricultural goods from family to nonfamily farms in 2006. As farm size increases, fewer farm households own the entire operation.

Under some of the definitions noted previously, the operator and the spouse must provide at least half the labor on a farm for the farm to be considered a family farm. This would place strict limits on the size of labor-intensive operations (e.g., fruit and vegetable farms and some livestock operations

Figure 12
Family farms defined under different criteria, 2006



[1]CAFO = confined animal feeding operation.
The first definition requires that the principal operator and family (related by blood) own more than half of the farm. The second definition requires that the principal operator's household owns 100% of the farm business.

Source: USDA, Agricultural Resource Management Survey, 2006.

such as dairies and hog operations). As a result, such labor restrictions would focus heavily on smaller farms, inducing a substantial drop in both the number of farms qualifying as family farms and the sales generated by family farms. The ERS definition combined with this labor criterion means that roughly 88 percent of all farms would qualify as family farms. In 2006, those farms generated an estimated 44 percent of all U.S. agricultural sales. Comparable, but slightly steeper, drops occur using the alternative definition (100-percent ownership of farm by the operator's household) combined with this labor criterion.

Land-ownership restrictions constrain the size of the family farm under some definitions—not many families with very large farms own all of the land they farm, nor would it necessarily be wise to pursue such an undiversified investment strategy. Families associated with smaller operations often own more of their land and tend to rent land to, rather than from, others. Younger farmers, particularly those involved in growing field crops, would be penalized by such land-ownership restrictions as they are less likely to have accumulated enough wealth to purchase costly farmland and often rent most, if not all, of the land they operate.

If a farm operator's household must own at least 75 percent of the land it operates and 50 percent of the farm business to qualify as a family farm, roughly 69 percent of farms in the country would be classified as family

farms, generating one-third of all agricultural sales. Using the more stringent business ownership criterion (the household owns the entire operation) combined with the land-ownership criterion, family farms would make up an estimated 64 percent of all U.S. farms and would generate one-quarter of all agricultural sales.

These last two definitions strongly, yet implicitly, focus attention on smaller farms. The next definition explicitly introduces size constraints by restricting family farms from operating 1,000 acres or more and eliminates any farm that qualifies as a confined animal feeding operation (CAFO).[22] ARMS does not collect much of the information required to identify CAFOs.[23] A farm is therefore conservatively defined as a CAFO if it has at least 700 milk cows, 2,000 cattle, 10,000 hogs, or 125,000 birds.

Under the ERS definition, combined with the 1,000 acres and/or CAFO restriction, almost 90 percent of all U.S. farms still qualify as family farms, but these farms only generate approximately 40 percent of total U.S. agricultural sales. Under the alternative definition (the household owns the entire business) combined with the size and CAFO criteria, an estimated 83 percent of farms qualified as family farms, producing just over one-third of all agricultural sales. While adding explicit size limits to the family farm definition does not reclassify many farms as nonfamily farms, the largest farms in terms of total production become classified as nonfamily farms, indicating that this screen assigns a much larger share of production to nonfamily farms.

The Screens and Family Farm Definitions

Given the central place that family farms hold in U.S. farm policy, how would they fare under the "actively engaged" screens discussed previously? The different family farm definitions explored give rise to different distributions of family versus nonfamily farms (table 4). Considering the labor, land, and CAFO definitions along with the various proposed screens aimed at establishing Federal aid eligibility provides an idea of how the family farm, as perceived by various groups, would fare under the different screens (table 5).

If a farm business needed at least $10,000 of agricultural sales to receive Federal assistance in 2006, 43 percent of all U.S. farms would have been eligible for payments, generating 98.5 percent of all U.S. agricultural sales. An estimated 41 percent of all U.S. farms would have qualified as family farms eligible for Federal assistance, generating over 83 percent of all U.S. agricultural sales. Significant reclassifications of farms, and especially the associated sales, take place using the other definitions of a family farm. Using both the labor definition and CAFO definition, the result would have meant approximately one-third of all farms qualified for Federal assistance as family farms, generating between 40 and 42 percent of all U.S. agricultural sales. The land definition would have the largest impact on the family–nonfamily farm split, classifying roughly 21 percent of all farms as family farms eligible for Federal assistance, generating just over one-third of all U.S. agricultural sales. If the sales screen were raised to $50,000, a large percentage of family farms with small sales would become ineligible for farm payments, while those remaining eligible (family and nonfamily combined) would have still produced more than 94 percent of all U.S. agricultural sales in 2006.

[22]To qualify as a confined animal feeding operation (CAFO), an operation must confine animals in an area with no vegetation for at least 45 days in a 12-month period. Sheer numbers determine if an operation qualifies as a large CAFO. Medium CAFOs confine fewer head of livestock, but to be designated as such, must also have either a manmade conveyance to surface waters or a stream running through the confinement area that could allow pollutants to contaminate surface waters. Small CAFOs, by contrast, must be designated as such by the permitting authority.

[23]For example, ARMS does not collect information on the number of days livestock are confined, the manure system in place, or livestock weights, etc.

Table 5

Percent of U.S. farms (percent of U.S. sales) by farm type, family farm definition, and statistical screen, United States, 2006

Sales			Off-farm income as share of total household income			Off-farm income		
Screen	Nonfamily Farms	Family Farms	Screen	Nonfamily Farms	Family Farms	Screen	Nonfamily Farms	Family Farms
ERS definition - Owned and operated by family members								
Percent								
$10,000 or more	2.0 (15.4)	40.7 (83.1)	< 50 percent	2.9 (15.3)	17.7 (60.0)	< $100,000	2.9 (15.3)	79.1 (74.0)
$50,000 or more	1.5 (15.3)	22.5 (79.1)	< 25 percent	2.9 (15.3)	12.6 (48.2)	< $50,000	2.9 (15.3)	45.3 (58.2)
Labor definition – Operator and spouse provide at least half of labor on farm								
$10,000 or more	8.6 (55.8)	34.1 (42.7)	< 50 percent	6.4 (48.0)	14.2 (27.3)	< $100,000	10.1 (49.5)	71.9 (39.5)
$50,000 or more	6.6 (55.4)	17.4 (39.0)	< 25 percent	5.6 (43.1)	9.9 (20.4)	< $50,000	7.5 (43.0)	40.7 (30.2)
Land definition – Operator owns at least 75 percent of operated acres								
$10,000 or more	21.8 (64.9)	20.9 (33.6)	< 50 percent	11.8 (51.9)	8.8 (23.4)	< $100,000	27.4 (59.5)	54.6 (29.5)
$50,000 or more	14.8 (63.3)	9.2 (31.1)	< 25 percent	9.1 (44.4)	6.4 (19.1)	< $50,000	18.2 (49.9)	30.0 (23.3)
CAFO definition – Farm is not a confined animal feeding operation (CAFO) and has < 1,000 acres								
$10,000 or more	9.9 (58.4)	32.8 (40.1)	< 50 percent	7.7 (50.5)	12.9 (24.8)	< $100,000	10.0 (53.4)	72.0 (35.6)
$50,000 or more	8.4 (58.0)	15.6 (36.4)	< 25 percent	6.4 (44.8)	9.1 (18.7)	< $50,000	8.1 (46.4)	40.1 (26.8)

Note: ERS definition of a family farm requiring family ownership and control of the operation underlies each family farm definition outlined above. For example, the labor definition (the operator and spouse provide at least half of labor on the farm) is in addition to requiring that more than 50 percent of the farm business is owned by those related through blood, marriage, or adoption to the principal operator. Land and CAFO definitions are similar.

Source: USDA, Agricultural Resource Management Survey, 2006.

If program eligibility required 50 percent or more of total household income to be generated on the farm, almost 21 percent of all farms—accounting for over three-quarters of all agricultural sales—would have qualified for Federal aid in 2006. While roughly 13 to 18 percent of all farms would have qualified as eligible family farms using either the ERS, the labor, or the CAFO definition of a family farm, the percent of sales generated by eligible family farms under these alternative definitions differs widely. Under the ERS definition, 60 percent of all U.S. agricultural sales would have been from eligible family farms in 2006, while the production of eligible family farms under the labor and CAFO definitions would have accounted for roughly one-quarter of all U.S. agricultural sales. Again, the land definition has the most pronounced effects, with nearly 9 percent of all farms as family farms that obtained at least half of their income from the farm business, producing roughly 23 percent of all U.S. agricultural sales. Increasing the amount of income that must come from the farm to 75 percent of total household income would have small effects, especially for nonfamily farms, with the land definition classifying the fewest as eligible family farms.

Finally, if Federal aid eligibility required that the farm household generate less than $100,000 in off-farm income, 82 percent of all U.S. farms would have qualified for assistance in 2006. But again, the split between family and nonfamily farms varies considerably depending on the definition of a family farm. Under this screen, the labor and the CAFO definitions reclassify a relatively few, larger farms as nonfamily farms. While between 70 and 80 percent of all farms would have remained family farms eligible for aid under the ERS, labor, and CAFO definitions, the ERS definition classifies roughly three-quarters of all sales as coming from eligible family farms, while the labor and CAFO definitions attributed between 36 and 40 percent of all U.S. agricultural sales to eligible family farms. The land definition again appears the strictest, categorizing nearly 55 percent of farms as eligible family farms that produced roughly 30 percent of all U.S. agricultural sales. Decreasing the level of off-farm income to less than $50,000 causes roughly an additional one third of all U.S. farms to become ineligible for Federal programs. Despite this drop in eligibility, those eligible (both nonfamily and family farms) for aid under the land definition still generate nearly 75 percent of all sales.

Alternative definitions of the family farm place some implicit or explicit limits on farm size, which can substantially reclassify farms, and especially sales, from family to nonfamily farms. The land definition appears to be the strictest, resulting in large shifts of both farms and reported sales from family to nonfamily farms. Although the labor and CAFO definitions have much more modest shifts in numbers of farms, the shifts in sales between family and nonfamily farms remain substantial.

While alternative definitions of the family farm can reclassify substantial numbers of farms and sales between family and nonfamily farms, a small number of farms would not meet any definition of a family farm. Most of these operations tend to be partnerships and closely held corporations with unrelated owners. A few nonfamily farms qualify as the mega-farms mentioned by Murdock. These farms generate very large revenues across many agricultural industries.

For example, Smithfield Foods, the world's largest hog producer and pork processor, generated total revenues close to $12 billion in 2007. Del Monte generated over $3 billion in net sales in 2006 producing, among other goods, fresh and processed fruits and vegetables. Alico, Inc., another large corporation, produces, among other goods, citrus, sugarcane, and cattle in Florida, generating over $77 million in total revenues in 2006. While corporate farms make up a relatively small share of nonfamily farms (15 percent), they accounted for almost half of nonfamily farm production in 2006.

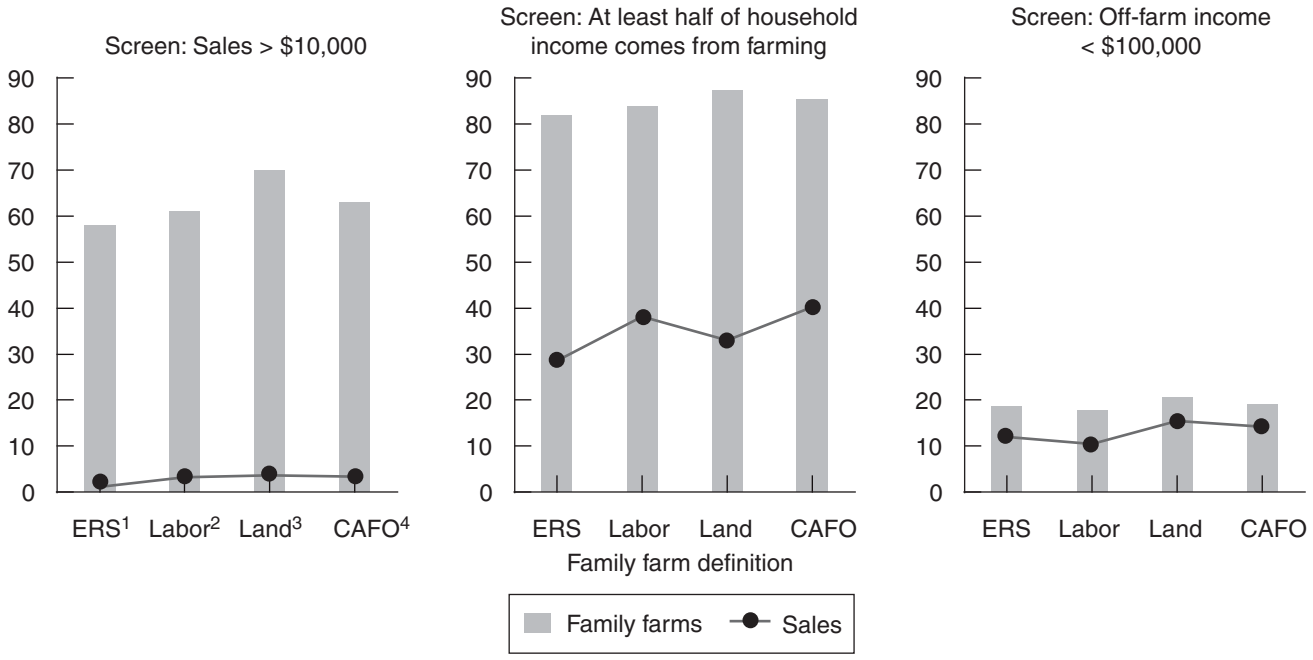
Regardless of the definition used, family farms make up the majority of farms. Despite large differences among family farm definitions, the type of screen appears to have a much more significant impact on the number of family farms eligible for Federal assistance than the definition used. Indeed, a large percentage of family farms would become ineligible under two of the three "actively engaged" screens ("sales" and "household income from farming") no matter which family farm definition is considered here (see fig. 13).

Requiring operators to rely on the farm for most of their household income would likely have the greatest impact on the number of family farms quali-

fying for Federal assistance. Depending on the definition of family farm used, requiring farm income to account for at least 50 percent of household income would have disqualified 82 to 87 percent of family farms and between 30 and 40 percent of family farm sales in 2006. Requiring annual farm sales of $10,000 or more would have disqualified 58 to 70 percent of family farms and less than 4 percent of family farm sales. Disqualifying farm operators earning $100,000 in off-farm income would have reduced the number of family farms eligible for assistance by 18 to 20 percent, and the amount of sales from family farms by 10 to 15 percent.

Figure 13

Percent of U.S. family farms and sales that become ineligible for Federal assistance, by screen and definition



[1] ERS definition = Owned and operated by family members.
[2]Labor definition = Operator and spouse provide at least half of labor on farm.
[3]Land definition= Operator owns at least 75 percent of operated acres.
[4]CAFO definition = Farm is not a confined animal feeding operation (CAFO) and has less than 1,000 acres.

Source: ERS calculations based on USDA, Agricultural Resource Management Survey, 2006.