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**Understanding the Farm Problem:  
Six Common Errors in Presenting Farm Statistics**

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# Understanding the Farm Problem: Six Common Errors in Presenting Farm Statistics

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## Executive Summary

Farm statistics are regularly quoted in the press and in policy circles, often in misleading ways. This, in turn, can easily lead to mistaken policies. Two examples of misleading statistical presentation include the common refrain that farm incomes are now higher than non-farm incomes, so there is little justification, from either an equity or a social justice perspective, for funding farm programs. Another is the oft-quoted statement that 60% of farmers and ranchers never get any government support at all (Environmental Working Group 2004).

It is not just the press and advocacy organizations that present data in misleading ways. Noted agricultural economist Bruce Gardner, in a recent *New York Times* article, argued that small family farms were thriving. He cited the slowed rates of farm loss and the growth of “non-traditional” small farms sustained by off-farm income. As he noted, 90% of farm household income is from off-farm sources, and as a result farmers now enjoy living standards above the national average (Gardner 2005).

All of the above statements are true – and truly misleading. The same data present a very different story when treated more carefully. Small and mid-sized full-time family farms have incomes at or below the national average, and less than half of that income is from their full-time-farming activities. A large majority of this group, which accounts for over three-quarters of full-time farmers, receives government farm-support payments of some sort, and many depend on them to stay above the poverty line and to stay in farming. The largest group of farms in the United States today are so-called “rural residence farms,” which are indeed thriving as Gardner points out, but are doing so primarily because they are part-time operations with ample outside sources of income, from retirement or from full-time non-farm careers.

This paper is intended to both highlight some of the common errors in depicting the farm sector and present a more accurate image of family farming in the United States. Based on readily available data from the U.S. Department of Agriculture’s Economic Research Service, I identify six common errors:

1. **Including “Rural Residence Farms,” which represent two-thirds of all U.S. farms but do not farm for a living, in the totals for the farm sector.** This leads to the misleading statement that a minority of farms get farm payments. A minority of *part-time* farmers gets payments, but a significant majority of full-time commercial and family farmers receives farm payments.

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2. **Using averages for the farm sector as a whole when presenting income data.** The accurate but misleading statement that average farm household income is 18% higher than that of the non-farm population is rooted in this error. Some 56% of full-time farmers sell less than \$100,000 a year and have average incomes only 86% of the U.S. average.
3. **Including non-farm income in analyses of farm programs.** Family farm households rely heavily on off-farm income to keep their households solvent, getting more than half their incomes from off-farm activities. On the farm they are squeezed between low prices for their products and rising prices for their inputs.
4. **Ignoring the impact of land ownership.** Farm payments are presented as going to the farmers themselves, but some go to landowners who do not farm the land. Roughly 45% of U.S. farm land is cultivated by operators who do not own the land.
5. **Viewing the skewed distribution of farm payments in isolation from the structure of the farm sector itself.** Farm payments historically have been based on production, and some still are. Others are based on acreage. Payments are mainly skewed because land and production are highly skewed. To the extent payments remain tied to either production or land ownership, they will continue to go disproportionately to the wealthiest farmers.
6. **Presenting farm subsidies as going unfairly to the top 10%-20% of farmers, who don't need it.** Payments are highly concentrated, but the average full-time family farmer, with income around the national average, finds herself in the top 13 percent of payment recipients with modest payments of under \$18,000. The most widely used data on individual recipients is misleading: Nearly half of the top 20 subsidy recipients in 2003 went to cooperatives, Indian tribes, and conservation trusts, and the rest went to corporations, not family-owned farms.

Again, the data presented here are readily available. Hopefully, this paper will contribute to a more accurate depiction of the family farm sector and the problems it faces, and to a more grounded discussion of the policy reforms that are desperately needed in U.S. farm programs.

## Six Common Errors in Reporting Farm Statistics

Most farm data in the United States comes from the U.S. Department of Agriculture's Economic Research Service, and there is a vast array of easily searchable data on the finances and structure of the farm sector. ERS's Agricultural Resource Management Survey (ARMS) is particularly useful and easy to access, though it only contains data since 1996, making historical comparisons difficult (USDA-ERS 2005).<sup>2</sup> For a recent snapshot, though, it is quite complete and relatively reliable. It contains a typology of farms that helps us get beyond sector-wide statistics. That typology includes:

- Rural Residence Farms, including so-called "Limited Resources", "Retirement", and "Residential/Lifestyle" farms;
- Farming Occupation, divided between "low-sales" (under \$100,000) and "high-sales" (\$100,000-\$250,000) farms; together these are also referred to as "intermediate farms;"
- Commercial Farms, divided between "large" (\$250,000-\$500,000) and "very large" (above \$500,000);
- Non-family farms, which includes land farmed as a corporation, cooperative, or some other non-family entity.

Some disaggregated data for 2003 by farm group is presented in the table at the end of the paper. A more comprehensive analysis is available in an excellent new report from ERS (Banker and MacDonald 2005). It is worth noting that looking at any one year can be misleading because crop production, prices, and payments vary widely depending largely on climatic conditions. In this paper I present data for 2003, because it is the most recent year with complete data. But it is not entirely typical of recent years because crop prices were relatively high due to climate-induced crop losses. High prices, in turn, reduced government payments in programs designed to compensate for low prices. So in viewing the data keep in mind that 2003 showed relatively low commodity payments compared to recent years.

### **Error #1 — Counting part-time farmers**

ERS presents a typology of farms. The most common error made in presenting farm data is the inclusion of all farms – 2,122,524 in 2003 – in the analysis. EWG does this in its analysis of farm subsidies. Unfortunately, so does ERS in its recent family farm report. The problem is that fully two-thirds of those farms – 1.4 million – are not really operating for commercial purposes. They are categorized by ERS as Rural Residence Farms. This is a heterogeneous group that includes "Limited Resource" farms, "Retirement" farms, and "Residential/Lifestyle" farms. The main characteristic unifying these three is that the heads of household on these farms do not list their main occupation as farming. For this paper, I treat Rural Residence Farms as one group, in part because this is how ERS breaks down its survey data. But it is worth noting a limitation in this categorization.

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<sup>2</sup> Available at: <http://www.ers.usda.gov/data/arms/>

The category includes two groups – Retirement and Residential/Lifestyle farms – that clearly do not belong in a discussion of full-time family farming. The farms number about 1.2 million, they are operated part-time by choice (in retirement or to live a rural lifestyle), they generally are not being run to be commercially viable, and many have incomes higher than the average small family farmer due to high off-farm income.

The remaining category, Limited Resource Farms, is quite different. ERS defines these as farms with less than \$100,000 in sales (the same as “low-sales farming occupation”), assets below \$150,000, and household income less than \$20,000. These are small and very small farms, numbering about 200,000 in 2003, that do not have the resources to function economically. This includes some of the most disadvantaged farmers in the United States, including many African-American farmers. On average, these farm households lose about \$7,000 from farming, earn only about \$14,000 in off-farm income, and thus have household incomes of only \$6,875, just 12% of U.S. average. Only 35% of these farmers receive government payments of any kind. According to ERS survey data, nearly 40% are retired and many are nearing retirement. Though many of these farms might meet the definition of fully operating family farms that I am trying to isolate from the overall ERS data, the data does not lend itself easily to such analysis. For this reason, I proceed with an analysis using the aggregate category of Rural Residence Farms, despite its limitations.

As a group, Rural Residence Farms are not unimportant economically, accounting for 8.5% of total farm output in 2003. They are significant producers of soybeans and livestock, particularly cattle. But few would argue that a U.S. farm policy whose intended beneficiaries are family farmers should be concerned with making part-time farms viable. Not surprisingly, the vast majority (71% in 2003) receive no farm benefits, though on average nearly 10% of the roughly \$13,000 per year in gross farm income on these farms comes from government payments. Most of these payments relate to conservation programs, not commodity programs, so there may well be a good justification for such payments. In fact, some 58% of conservation program payments went to rural residence farms in 2003 (USDA-ERS 2005a). The flip side of that statistic, though, is that only 42% of government conservation program payments go to farmers who are trying to make a living from farming. This raises questions about the argument that family farmers would be better supported by conservation programs than the current commodity programs. Current conservation programs, at least, provide only small levels of support to family farmers.

The other group to exclude from the farm totals is so-called “non-family” farms, the farms operated by corporations or cooperatives or some form of business association. Contrary to public perception, there are relatively few such farms – only 35,042 in 2003, 1.7% of all farms. And they have not been growing in number or economic importance; their share of total farms and farm production has remained relatively stable since 1978 (Banker and MacDonald 2005). These are not the largest or wealthiest farms, at least as a group. They averaged only \$84,388 in gross cash income, and \$18,503 in net farm income, and they received government payments of only \$5,559 (USDA-ERS 2005b). This category does include, though, some very large farms that are important in specific farm products, such as hogs, cattle, rice, and some fruit and vegetable production (USDA-ERS 2005c).

	Farming Occupation		Commercial		Total
	Lower Sales	Higher Sales	Large	Very large	
Farm households					
Number	368,405	134,833	84,294	66,643	654,175
Percent of full-time & comm. farms	56%	21%	13%	10%	100%
Percent of all farms	17%	6%	4%	3%	31%
Average operator household income					
From farming (with gov. payments)	2,209	29,390	62,327	172,147	32,870
From off-farm sources	47,226	31,195	40,078	42,282	42,497
Total	49,435	60,585	102,405	214,429	75,367
Government payments	3,552	17,967	28,810	50,192	
Percent U.S. avg. household income	86%	105%	177%	371%	
Percent receiving gov. payments (1)	44%	82%	78%	67%	

Sources: USDA/ERS, *Operator Household Income, for Farm Operator Households, by Farm Typology*  
 Author's calculations. (Excludes rural residence farms and "nonfamily" farms.)  
 (1) From USDA-ERS, "Number of Farms, Average gross cash income and government payments  
 by program and farm typology, 2003."

If we leave out non-family and Rural Residence Farms, who does that leave? Commercial and family farmers, those operating their farms full time with the goal of making a living – or at least a significant portion of a living – and/or a profit. As the table above shows, there were 654,175 such farm operators in the United States in 2003. How does this change our understanding of farm subsidies? It is true that only 40% of the farmers included in the Environmental Working Group’s 2003 farm subsidy statistics got any farm payments, but exclude part-time farmers and one finds that fully 54% of so-called “farming occupation” family farmers (divided by ERS into “lower-sales” and “higher-sales”) and 67% of the larger commercial farmers (divided into “large” and “very large”) received government payments (USDA-ERS 2005a).

As the table shows, the group with the highest proportion receiving government payments is not the “large” or “very large” commercial farms, but the “higher sales” family farmers. Some 82% of this group received government payments of some sort in 2003, while 78% of “large” and 67% of “very large” commercial farmers received payments. This is partly because the main supported field crops are grown by the larger sales family farmers (USDA-ERS 2005d).

It remains true that the only farmers who are eligible for commodity program payments are those growing a limited set of most of the largest crops; these notably exclude fruit and vegetable crops. It is also true that these programs are highly skewed, with the largest farmers receiving a disproportionate share of the benefits. But they are not nearly as skewed as some suggest.

**Summary: It is false to suggest that the vast majority of full-time family farmers are excluded from federal farm programs. A significant majority receive such benefits.**

## **Error #2 — Beware averages**

One of the first lessons in introductory statistics is to beware the misleading use of simple averages when dealing with highly skewed distributions. Development specialists have been particularly sensitive to this problem, criticizing the too-common use of GDP per capita – average income per person – as a measure of the well-being of a nation’s people. Income is notoriously skewed, particularly in developing countries, with large numbers of people at the bottom making little and small numbers of people at the upper ends making very large amounts. Reporting a simple average implies that those at the bottom are getting an equal share of national income, something we know not to be true.

As straightforward as this seems, it is all too common in development and agricultural policy circles for averages to be quoted in justifying particular policies. Most common in agricultural policy analysis is the statement that farm incomes are now higher than non-farm incomes, so the “farm problem” that U.S. agricultural programs were designed to solve, coming out of the Great Depression, is no longer a problem. While it is true that the structure of farming in the United States has changed dramatically since then, and changed in relation to the non-farm population, it is misleading to imply that farmers are well-off. In part, this is because the averages are misleading.

For the farm sector as a whole, including the Rural Residence Farms noted above but not “non-family farms,” average farm household income is 118% of average U.S. household income, above the national average. There are two problems with this presentation: all farm households are included and non-farm income is counted. The first is related to the previous error of including all farmers in the statistics.

Including all farm households skews the results because Rural Residence farmers do not rely on farming for their livelihoods, and large commercial farms dominate the farm sector. If there is one thing we know about farming, it is that the sector has become highly concentrated, with a small number of large farms not only collecting a large share of subsidy payments but also controlling a large share of the land and producing a large share of farm output.

Because ERS makes more disaggregated analysis relatively easy, we can get beyond misleading averages. As the table presented earlier shows, the categories that obviously should concern those interested in family farming are the “lower-sales” and “higher-sales” farm households who list farming as their principal occupation. ERS categorizes these as small family farmers, not because their farms are small in size but because their farming operations are family-sized operations in which the head of household is a full-time farmer and gross sales (not net farm incomes) are under \$250,000 per year.

In the low-sales group, there were 368,405 such farms in 2003. *That is only 17% of all farms if one includes Rural Residence farms, but it represents fully 56% of all commercial and family farms.* Their average net income from farming activities was only \$2,209, including government farm payments. This they supplemented with household income from off-farm sources of \$47,226, for total household income of \$49,435. In contrast to the picture of relative

well-being suggested by the 118% average of U.S. household income for farm households as a whole, this group earns just 86% of the U.S. average.

More detailed ERS figures for farm business income show that this group had annual sales generally well under \$100,000. The average was \$35,279 in gross farm income – \$14,556 from livestock, \$11,550 from crops, and \$9,174 from other sources, including government payments, which averaged \$3,552 in 2003. Average farm size was 458 acres.<sup>3</sup>

The higher-sales group of family farmers should also be included in any assessment of the need for U.S. farm programs. This group, which includes 21% of commercial and family farms (but only 6% of all farms), is clearly closer to economic viability from its farming operations, earning nearly \$30,000 in net income from farming. This includes government payments, which averaged \$17,967. This is considerably higher than the amount received by low-sales farmers in part because a higher proportion of this group's land is devoted to bulk crop production. Still, they supplement farm income with an average of \$31,195 in off-farm income. Farms average 1,165 acres in size. These households can hardly be called well-off. Average household income was barely above the U.S. average in 2003, at 105%.

If one took these two groups together, one would be looking at 77% of the family and commercial farm households in the United States. With average incomes just 91% of the U.S. average, it would be difficult to argue that any significant proportion of these farmers is well-off.

In contrast, the “very large” commercial farms numbered only 66,643 – just 10% of all full-time farms – and averaged over \$1 million in gross farm income on farms averaging 2,377 acres in size. They received \$50,192 in government payments in 2003. Their net cash farm income was \$172,147. Household income for this group was 371% of the U.S. average.

**In summary, small family farmers are the large majority of farmers trying to make a living from farming in the United States. Most of those had farm sales under \$100,000. In 2003 they barely covered costs from their farming operations, and even with off-farm earnings they had incomes of only \$49,435, 86% of the U.S. average.**

### **Error #3—Counting off-farm income**

A third problem with the most common presentations of this data – the figure of 118% of average U.S. household income, for example – is the inclusion of non-farm income. On the one hand, there is no arguing with including non-farm income in the snapshot of the overall economic well-being of the farming population. Without it, in fact, many in the sector would clearly have ceased farming. And there is no denying that non-farm economic activity is more

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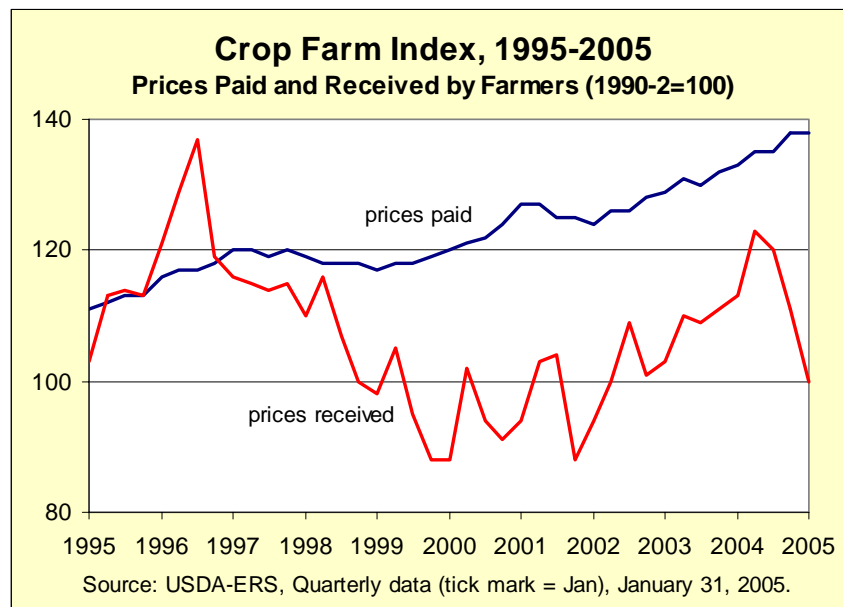
<sup>3</sup> It is worth noting that this category is quite heterogeneous. In some cases the distinction between a full-time farmer with very low sales and, for example, a “residential lifestyle” farmer who devotes slightly less time to farming is very small. Still, ERS data support the distinction. The data show, for example, that nearly three-quarters of farm operators in the “low sales” category work at least 1,000 hours per year on their farms, while only 38% of “residential lifestyle” farmers spend that much time in farm work. (USDA-ERS, “Structural Characteristics,” 2003.)



important than the farm economy in many rural areas. As the earlier table shows, even full-time farmers as a whole depend on off-farm sources for 58% of household income.

On the other hand, if our goal is to evaluate the need for and efficacy of farm programs it is misleading to look beyond the farm. If we restrict our analysis to the viability of farming itself, we see that farmers are being hurt on the income side by low prices, which have dropped significantly since the United States ended its modest supply management programs with the 1996 Farm Bill. On the expense side, they are suffering from continued increases in prices for inputs. For the low-sales family farmers, the costs of seeds, chemicals, feed, fuel, and equipment account for two-thirds of average variable expenses. Fixed expenses are dominated by the costs of land – taxes, mortgage payments, rental payments, etc. As noted earlier, expenses in 2003 for this group gobbled up nearly all farm income.

As the graph below shows, farmers as a whole have seen nominal prices for their products fluctuate a great deal but remain roughly the same as they were a decade earlier. Meanwhile, the prices they pay to run their farms have risen quite steadily, roughly at the rate of inflation. Taking 1990-92 as a base year, prices received by farmers, without adjusting for inflation, have fluctuated around their 1990-92 level, notwithstanding a brief upward spike last year. In real terms, of course, farm prices have generally been well below their 1990-92 level. Prices paid by farmers have risen consistently to nearly 40% above the level just over a decade ago (USDA-NASS 2005). Government payments averaging just \$3,552 for low-sales family farmers hardly make a dent in this losing economic proposition.



**Summary: The majority of family farmers operate on the edge of viability, squeezed between low prices for their products and rising prices for their inputs. They stay above the poverty line by supplementing meager farm incomes with off-farm earnings. Off-farm earnings in effect subsidize farm operations for many farmers.**

## **Error #4 — Ignoring land ownership**

When farm payments are discussed, there is an unspoken assumption is that farmers are the beneficiaries. This is only partially true. An estimated 45% of U.S. farm land is rented, and the majority of agricultural landlords are not in farming. It has been shown that landowners capture a significant portion of the value of government payments in their lease arrangements with farm operators (Goodwin, Mishra et al. 2003). As the table at the end shows, only 62% of farms in 2003 were fully owned by farm operators. Only 55% of low-sales family farmers and 19% of high-sales family farmers fully owned the land they farmed. Some 9% and 13%, respectively, owned none of the land they farmed.

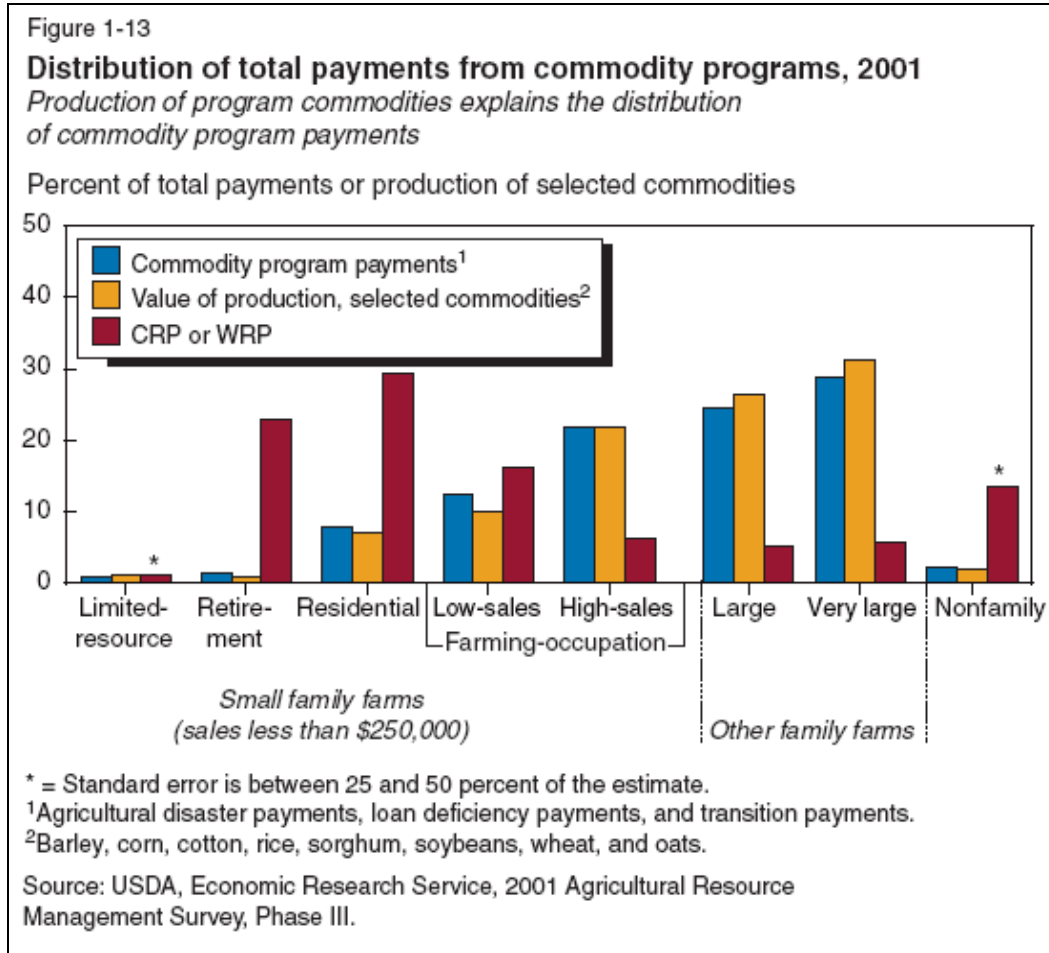
As noted earlier, farm operators also lose some of the value of farm benefits to input suppliers, as suggested in the graph presented earlier. It has also been shown that much of the value of farm payments is ultimately capitalized into land values, so farmers benefit more to the extent they own their land (Cochrane and Ryan 1976).

This more complicated picture of who owns U.S. farmland, who farms it, and who ultimately benefits from government farm programs belies the common image of farmers getting fat off of their government payments. A significant portion of the payments under these programs do not directly benefit the people farming the land.

**Summary: With nearly half of U.S. farm land leased and not owned by the farmers, it is misleading to assume that farmers are the ultimate beneficiaries of farm programs.**

## **Error #5 — Viewing farm payments in isolation**

In public discourse, there is a marked tendency to view the skewed distribution of farm program benefits in isolation from the structure of the farm sector itself. As the following table from ERS shows, U.S. program benefits are concentrated among the largest producers not because they have succeeded in capturing a disproportionate share of those payments but because they control a disproportionate share of the land and production in agriculture and most payments are tied to land or production. As the following graph illustrates, commodity payments, in particular, closely track production value (Banker and MacDonald 2005, p. 20).



The table at the end shows in some detail the distribution of farms, production, acreage, and government payments, with the latter broken down by the main payment groups ERS reports. Several things are worth noting from these numbers:

1. Production is even more concentrated than program payments, with the “Very Large” commercial farms producing 44% of total farm output in 2003. These largest farms receive 27% of the value of total program payments, and 32% of the payments in the main commodity programs. Since farm programs have historically been linked to production, and remain partially linked, it is not surprising that the largest producers receive the largest benefits.
2. Payments linked to acreage – direct payments and conservation programs, as noted above – will tend to go to those who control the most land. In the table below, this means the Rural Residence farmers as a group, who manage 27% of farm acres. But in general the largest farms in supported crops will receive a disproportionate share of such benefits based on their larger number of acres historically planted in supported crops.
3. As noted earlier, Conservation Program payments are highly skewed toward Rural Residence farmers. Low-sales farmers receive a higher share of Conservation payments than they do of most other program payments, but still only 17% of the total.

4. The year selected, 2003, was somewhat unusual for recent years because prices were relatively high. This reduced counter-cyclical payments and loan deficiency payments, which are higher when prices are lower. In more typical recent years, these would be significantly higher.

The concentration of farm payments, in this context, is caused primarily by the concentration of land and production in the hands of a relatively small number of large farmers. It may be necessary to address the root causes of this concentration in order to meaningfully address inequities in U.S. farm programs. As one observer once ruefully told me, “It may just be the U.S. needs its own land reform.”

### **Error #6 — Farm subsidies data are particularly misleading**

I conclude with one final note of caution about misleading presentations of some of the most accessible data on government farm subsidy payments, the EWG “Farm Subsidies Database” mentioned earlier. This web-based database of all individual farm payments made in the United States by recipient, with impressive user-friendly interfaces, is widely quoted not just in the press but in academic papers and even World Trade Organization disputes. Most often, the EWG data is quoted to highlight the extent to which farm payments are going to wealthy farmers and to wealthy people with no connection to farming.

I want to note two particular problems with the ways in which this data are used. First, the data are, by EWG’s own admission, not perfect. In particular, EWG, despite its tireless efforts, has not been able to trace all the individuals receiving farm payments. Instead, it has documented the “entities” receiving farm payments, many of which are individuals but many of which are not. While the database is commonly used to highlight the extent to which millionaire farmers are reaping multi-million-dollar government hand-outs, EWG’s own data do not really support such a conclusion. EWG’s Top 20 recipients for 2003 are presented in the table that follows.

EWG presents the top 20 recipients of farm payments by name, with amounts received ranging from \$2 million up to an astounding \$69 million. A quick look at the list, though, shows that not one of the Top 20 is an individual family farm. As the table on the following page shows, eleven are corporations or corporate partnerships. A remarkable seven of the twenty are collective entities – five Indian tribes or groups and two cooperatives. The collective entities distribute farm payments to their members in amounts that EWG cannot trace. The remaining two in the top 20 are a non-profit and a trust involved in conservation.

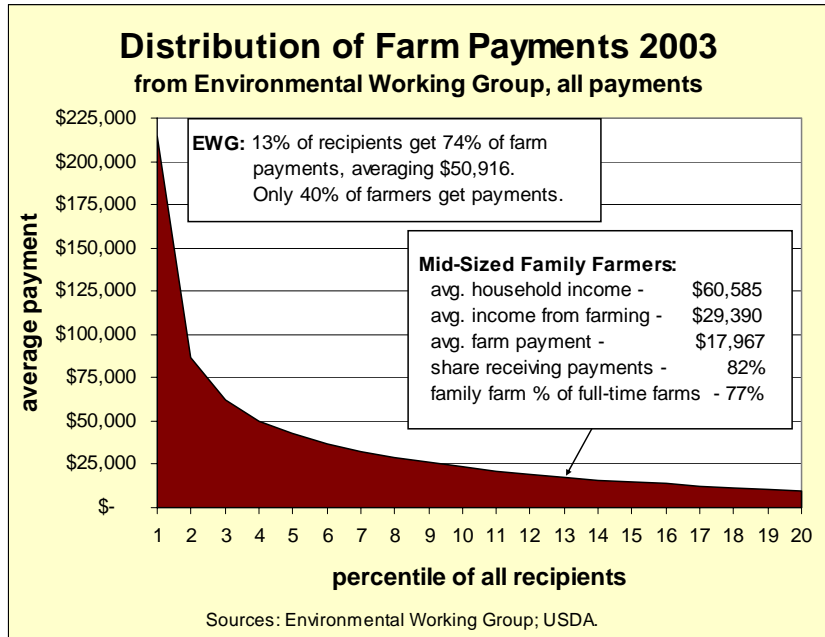
Should we be outraged that Riceland Foods got \$69 million in government farm payments? Quite probably. Should we be similarly outraged that the Bureau of Indian Affairs got \$2.7 million for its members, or that Ducks Unlimited received \$7 million for its wetlands conservation? Probably not. Lumping together all of these farm payment recipients can easily lead to unfounded generalizations about farmers and farm payments.

Environmental Working Group's Top 20 Farm Subsidy Recipients, 2003 Not Just Rich Farmers and Agribusiness				
Rank	Recipient*	Total USDA - Subsidies 2003	Nature of Entity	Types of payments, production
1	<u>Riceland Foods Inc</u>	\$68,942,419	Corporation	rice, some other commodities
2	<u>Producers Rice Mill Inc</u>	\$51,400,838	Cooperative	rice, some other commodities
3	<u>Farmers Rice Coop</u>	\$17,914,254	Cooperative	rice
4	<u>Pilgrim's Pride Corporation</u>	\$11,401,045	Corporation	wheat, sorghum, cotton, soy
5	<u>Ducks Unlimited Inc</u>	\$7,078,200	Non-profit	conservation (wetlands)
6	<u>Cargill Turkey Products</u>	\$6,693,286	Corporation	Avian flu indemnity
7	<u>Ute Mountain Tribe Dnrc Trust Land</u>	\$4,035,347	Indian Tribes	Disaster payments
8	<u>Management - Exem</u>	\$3,106,805	Estate	\$2 m conservation; \$1 m crops; Montana land
9	<u>Attebury Grain Co</u>	\$2,971,143	Corporate partnership	Disaster payments, Texas grains
10	<u>Bureau Of Indian Affairs Ute Mountain Ute Farm &amp;</u>	\$2,655,353	Indian Tribes	Commodity, conservation and disaster payments; 50 counties listed as recipients
11	<u>Ranch Ent</u>	\$2,606,189	Indian Tribes	Disaster payments
12	<u>Colorado River Indian Tribes Farm</u>	\$2,479,854	Indian Tribes	Commodity payments, mainly in cotton, two locations
13	<u>Dublin Farms</u>	\$2,442,748	Corporate partnership	Cotton, on various farms in California
14	<u>Richmond Farming Dale Bone Farms</u>	\$2,208,672	Corporate partnership	Cotton, on various farms in Arkansas
15	<u>Partnership</u>	\$2,106,825	Corporate partnership	Disaster payments, mainly in cotton, tobacco in NC
16	<u>Tyler Farms</u>	\$2,102,799	Corporation	Disaster payments, cotton
17	<u>Perthshire Farms</u>	\$2,101,931	Corporate partnership	Cotton payments, Mississippi
18	<u>Phillips Farms</u>	\$2,065,876	Corporate partnership	Cotton, rice payments, Mississippi
19	<u>Catron Farms</u>	\$2,025,697	Corporate partnership	Cotton, rice payments, Arkansas
20	<u>Ak-chin Farms</u>	\$2,001,025	Indian Tribes	Cotton, other commodities, Ariz and Calif.
<b>Analysis of Top 20</b>			<p>Nearly half (9) of top 20 are group entities or non-profits, most notably 5 Indian tribes. In the group entities, payments are distributed in various ways among members. Conservation payments account for a large share of two of the top 20. Among the 17 receiving commodity or disaster payments, rice and cotton farms are the most represented</p> <p>Source: EWG Farm Subsidies Database, accessed March 8, 2005; <a href="http://www.ewg.org/farm/">http://www.ewg.org/farm/</a></p>	
7 corporate partnerships	11 commodity			
4 corporations	6 disaster			
5 Indian tribes	1 conservation			
2 cooperatives	2 mixed			
2 non-profits (conservation)				

The second problem is the way payment concentration is presented. EWG illustrates the skewed concentration of payments by presenting payments to the top 20% of recipients. Thus, EWG shows that for all payments in 2003, the top 1% – some 18,000 recipients – got 24% of all payments – nearly \$4 billion total – for an average payment of \$214,000. The table, partly reproduced below, goes down the list percentile by percentile, adding to the totals. It shows, for example, that the top 5% got 51% of payments (\$91,000 average), the top 10% got 68% (\$60,000 average), and the top 20% got 84% of all payments (\$38,000 average).

Two Measures of Concentration			
EWG Farm Subsidies Data			Alternative
Pct. of Recip.	Pct. of Paym.	Payment per Recipient	Payment per Percentile
Top 1%	24%	\$214,088	\$214,088
Top 2%	34%	\$150,294	\$86,500
Top 3%	41%	\$120,982	\$62,358
Top 4%	46%	\$103,314	\$50,311
Top 5%	51%	\$91,182	\$42,656
Top 6%	55%	\$82,170	\$37,108
Top 7%	59%	\$75,097	\$32,657
Top 8%	62%	\$69,333	\$28,987
Top 9%	65%	\$64,510	\$25,924
Top 10%	68%	\$60,394	\$23,352
Top 11%	70%	\$56,826	\$21,149
Top 12%	72%	\$53,695	\$19,247
Top 13%	74%	\$50,916	\$17,573
Top 14%	76%	\$48,429	\$16,102
Top 15%	77%	\$46,186	\$14,783
Top 16%	79%	\$44,149	\$13,598
Top 17%	80%	\$42,289	\$12,529
Top 18%	82%	\$40,583	\$11,575
Top 19%	83%	\$39,011	\$10,710
Top 20%	84%	\$37,556	\$9,916

Source: EWG Farm Subsidies Database, 2004.



What is misleading about this snapshot? The last category mentioned shows an average payment of \$38,000 for the top 20% of recipients, but if you are a farmer who finds yourself in that 80<sup>th</sup> percentile, you got only \$10,000. Such a recipient would likely be one of the “higher-sales” family farmers identified earlier, a “small farmer” according to the ERS family farm report. Your net farm income would be under \$30,000 *including government payments* and you only stayed out of poverty by bringing in off-farm income. Presenting the concentration data as cumulative can easily lead to mistaken conclusions about the very real problem of subsidies concentration and abuse.

The graph above presents the same data somewhat differently. It shows the average payment received by each percentile, which is much more revealing. It shows how remarkably skewed farm payments are, just as EWG suggests, but not to the top 20% or the top 10% but rather the top 1% or 2%. By the time we hit the next percentile we are down to about \$62,000, not the cumulative \$120,000 average presented by EWG. As noted on the graph, I identified where the higher-sales family farmer, with \$17,967 in farm payments, would fall. That total comes right around the 87<sup>th</sup> percentile, which EWG illustrates by showing the top 13% with a cumulative average of more than \$50,000 in farm payments. Both statistics are accurate, but which presents a more accurate picture of this mid-sized family farmer and the government

payments he or she receives? It is also worth reiterating a point made earlier in this paper: while EWG states that only 40% of farmers got any payments at all, some 82% of these mid-sized family farmers received payments, and those payments kept them right around the U.S. average household income.

**Summary: Data from the most commonly cited source on farm subsidies suggests that the top 20% of farmers are getting an inordinate share of farm benefits. On closer examination, the top recipients aren't farmers at all; some are cooperatives and Indian tribes, who share those benefits among their members; others are conservation trusts; some are corporations. These high payments to corporate farms may well represent an abuse of farm programs, but they are neither typical of farmers nor representative of a significant part of the farm sector.**

## Conclusion

Thanks to the U.S. government and some dedicated and meticulous researchers, there is no shortage of data on the farm sector, nor on the position of family farmers within agriculture. Unfortunately, there is a tendency in the media, policy circles, and even academia to misrepresent the true meaning of that data. Analyses that lump all farmers together yield misleading conclusions. So too do analyses that fail to distinguish between those family farmers working full-time on their farms and the large category of part-time family farms being run in retirement or for reasons of lifestyle. These so-called rural residence farmers do not depend on farming to make a living. Full-time family farmers do. The majority are having a difficult time earning a decent living from farming, public perceptions notwithstanding. They are squeezed between low prices for their farm products and high prices for their inputs, and they are under constant threat of losing their land to bigger farmers with more resources.

To the extent U.S. farm policy has as one of its goals to make family farming more viable, it is important to understand who those farmers are and what pressures they face. U.S. government data allows us to paint a fairly accurate portrait of contemporary family farms. Misleading presentations of the data can only cloud that picture and lead to repeated errors in the formulation of agricultural policy.

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[http://www.ase.tufts.edu/gdae/policy\\_research/globalization.html](http://www.ase.tufts.edu/gdae/policy_research/globalization.html)

**Structural Characteristics of Farms and Government Payments by Farm Type 2003**

	Rural Res.	Farming Occupation		Commercial		Non-family	Total
		Low Sales	High Sales	Large	Very large		
<b>Farm households</b>							
Number	1,406,438	390,467	135,305	84,766	67,549	37,999	2,122,524
Percent of total	66.3%	18.4%	6.4%	4.0%	3.2%	1.8%	100%
<b>Production</b>							
Value (millions \$)	16,330	12,662	24,073	27,441	85,402	26,268	192,177
Percent of total	8.5%	6.6%	12.5%	14.3%	44.4%	13.7%	100.0%
<b>Land</b>							
Acres (thousands)	250,023	168,594	157,135	141,276	158,415	51,542	926,985
Percent of total	27.0%	18.2%	17.0%	15.2%	17.1%	5.6%	100.0%
<b>Farms by tenure</b>							
Fully owned	72.1%	54.8%	19.1%	20.9%	24.1%	65.5%	62.7%
Partially owned	24.0%	36.4%	68.2%	66.4%	58.7%	23.7%	31.7%
Rented	3.8%	8.8%	12.7%	12.6%	17.2%	10.8%	6.2%
<b>Government payments (millions \$)</b>							
Direct payments	471	413	1,019	1,071	1,334	111	4,420
Percent of direct	11%	9%	23%	24%	30%	3%	100%
Counter-cyclical payments (CCP)	127	95	233	230	302	44	1,032
Percent of CCP	12%	9%	23%	22%	29%	4%	100%
Loan deficiency payments (LDP)	28	27	109	120	324	10	618
Percent of LDP	5%	4%	18%	19%	52%	2%	100%
Milk income loss payments	50	65	313	257	225	12	922
Percent of milk income loss	5%	7%	34%	28%	24%	1%	100%
Disaster/emergency payments	207	182	313	317	402	44	1,465
Percent of disaster/emerg.	14%	12%	21%	22%	27%	3%	100%
Conservation Program payments	914	269	124	124	96	43	1,569
Percent of conservation	58%	17%	8%	8%	6%	3%	100%
Other Federal program payments	69	58	100	150	175	12	564
Percent of other federal	12%	10%	18%	27%	31%	2%	100%
Other State and Local payments	51	26	20	10	41	1	149
Percent of other state/local	34%	18%	13%	7%	28%	0%	100%
<b>Total payments</b>	<b>1,919</b>	<b>1,136</b>	<b>2,233</b>	<b>2,280</b>	<b>2,901</b>	<b>277</b>	<b>10,746</b>
Percent of total payments	18%	11%	21%	21%	27%	3%	100%
Percent receiving gov. payments	21%	44%	82%	78%	67%	43%	39%
Total Commodity (Dir., CCP, LDP)	626	535	1,362	1,422	1,960	165	6,069
Percent of direct, CCP, LDP	10%	9%	22%	23%	32%	3%	100%

Sources: USDA/ERS, Number of farms, average gross cash income and government payments by program and farm typology, 2003; Structural Characteristics by Farm Typology, 2003, from ARMS. Author's calculations.



## REFERENCES

- Banker, D. E. and J. M. MacDonald, Eds. (2005). Structural and Financial Characteristics of U.S. Farms: 2004 Family Farm Report. Agriculture Information Bulletin. Washington, D.C., USDA-ERS.
- Cochrane, W. W. and M. E. Ryan (1976). American Farm Policy, 1948-1973. Minneapolis, University of Minnesota Press.
- Environmental Working Group (2004). Farm Subsidy Database, Environmental Working Group. **2004**.
- Gardner, B. L. (2005). "The Little Guys Are O.K." New York Times. New York.
- Goodwin, B. K., A. K. Mishra, et al. (2003). "What's Wrong with Our Models of Agricultural Land Values?" Am J Agricultural Economics **85**(3): 744-752.
- USDA-ERS (2005). Agricultural Resource Management Survey, USDA-ERS. **2005**.
- USDA-ERS (2005a). "Briefing Room: farm income and costs: which farms receive government payments?" USDA-ERS. **2005**.
- USDA-ERS (2005b). "Farm Business Income Statement, for All Farms, by Farm Typology, for 2003", USDA-ERS. **2005**.
- USDA-ERS (2005c). "Structural Characteristics, for All Farms, by Farm Typology and Production Specialty, for 2003", USDA-ERS. **2005**.
- USDA-ERS (2005d). "Number of farms, average gross cash income and government payments by program and farm type, 2003", USDA-ERS. **2005**.
- USDA-NASS (2005). Crop Farm Index, USDA-NASS. **2005**.

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