Farmers and those serving the agricultural community (including agricultural economists) have come to expect much from the U.S. Department of Agriculture. Over the years, Congress has enacted extensive legislation that authorizes or mandates the USDA to assure food quality, facilitate marketing, fund research, and provide other types of marketing services; collect and disseminate market information; and establish trading rules and monitor markets. For the most part, these programs have been justified on the ground that what is good for agriculture is good for the country, a point made by Congress when enacting the Agricultural Marketing Act of 1946:

"...a sound, efficient, and privately operated system for distributing and marketing agricultural products is essential to a prosperous agriculture and indispensable to the maintenance of full employment, and to the welfare, prosperity, and health of the nation."

Currently, questions are being raised about the contribution of these programs to the "welfare of the nation" and about who should bear their cost. For example, within the political climate of the Reagan administration, regulatory programs are generally viewed as being antithetical to free competition--negative contributions to economic efficiency may exceed any positive contributions to other social goals. Consequently, several USDA regulatory programs have been scheduled for review and evaluation.
by the President's Task Force for Regulatory Relief. In its request for review of fruit and vegetable marketing orders--the most extensive of these regulatory programs to be evaluated--the Task Force specifically requested that the review focus on the programs' effects on economic efficiency, costs, and productivity.

Imposing user fees for USDA informational services is progressing rapidly: we have all been inundated of late with ERS and SRS announcements that their publications are no longer free; ERS economists have been informed that "The sales policy puts new demands on authors and editors to publish reports that are worth buying...." Without question this has serious implications for all of us, as succinctly noted by our Association president in the May, 1982 Newsletter:

"The (budget cuts necessitating user fees for information) currently proposed may well (a) leave policy makers in an increasingly vulnerable position due to lack of information, (b) cause markets to perform with less efficiency, and (c) eventually lead to slower economic growth rates as our research establishment is weakened. Just as important, we may witness the destruction of an important stock of human capital--one that cannot be easily rebuilt."

As agricultural economists, we have come to take USDA programs for granted. Indeed, many of us have been instrumental in developing and administering them, and virtually all of us use the information provided by the Market News Service, ERS, and SRS. Hence, the wholesale questioning of the social value of these programs makes us uncomfortable, at best. Nevertheless, evaluating the efficacy of these programs will
likely occupy much of our time over the near term. This paper is a modest beginning of that evaluation. In the following sections, we discuss three general programs—marketing service, information, and regulatory—with respect to (1) their intended efficiency effects, (2) possible implications of imposing user fees, and (3) some guides for appraising the net efficiency effects of regulatory programs. With the exception of the Commodity Futures Trading Commission, our discussion is limited to programs administered within the USDA.

FOOD INSPECTION, STANDARDIZATION, GRADING

Food inspection, standardization, and grading programs are largely authorized by the Agricultural Marketing Act of 1946, which directs the Secretary of Agriculture to develop quality standards, provide for commodity inspection and grading, and conduct marketing research. User fees are authorized only for inspection, for which the Secretary may prescribe "...assessment and collection of such fees as will be reasonable and as nearly as may be to cover the cost of the services rendered." Programs authorized by this legislation are intended to focus on market failures arising from uncertainty and high information costs. Means of mitigating the effects of market failure differ among programs. Below we discuss two general types of programs: inspection, and grading and standards.

The USDA administers three basic food inspection programs: meat, poultry products, and egg products. Each of these programs is designed to assure consumers of a pure, unadulterated supply of food products. The programs are mandatory and, since the benefits flow to the public at large, they are funded primarily by appropriations.
Costs of USDA food inspection seem to be borne equitably: user fees are hard to justify when the benefits of the service provided by the USDA are so clearly in the public interest. Furthermore, to impose user fees on mandatory services (ignoring the fact that to do so would require Federal Legislation) could lead to a change in the structure of the slaughter industry. As a minimum, one might expect an increase in concentration to the extent that smaller firms would find it relatively more difficult to absorb the added costs of inspection.

Inspection and grading on the basis of uniform quality standards serves to increase buyer confidence by reducing the incidence of unusable purchases. Without Federal grades and standards, the market might discipline sellers to some extent through quality discounts and premiums. But information costs incurred would likely be high.

Several grading programs are administered by the Department, the major ones being under the United States Grain Standards Act that covers all major grain crops. Additional programs cover live animals being delivered on futures contracts, naval stores, cotton, and tobacco. In addition, grading services are available for meat and poultry, dairy products, and fresh and processed fruits and vegetables.

These programs are voluntary and, as the benefits are perceived to flow to the users of grading programs, they are funded by user fees. There are, however, exceptions to this general principle. For example, Congress has authorized the USDA to develop standards and grades for food products, stating that to do so would improve the orderliness and efficiency of the marketing system—a grading program based on well-defined and widely-accepted standards can facilitate trading between
distant points by eliminating the need for the buyer to physically in-
spect the commodity before purchasing it. Because of this, part of the
costs of developing product standards are met through appropriations.
In addition, legislation mandates funding by appropriation in some
instances, the naval stores program and parts of the cotton classing
program being cases in point.

In general, the method of paying for these voluntary programs
appears to be in accord with the principle that those who benefit from
the services should pay for them.

INFORMATION AND USER FEES

We now turn to the imposition of user fees for information dissem-
inated by the USDA; we focus on three agencies: Statistical Reporting
Service (SRS), Agricultural Marketing Service (AMS), Economic Research
Service (ERS). The discussion begins by making the important distinction
between "data" and "information", terms that are not, contrary to popular
usage, interchangeable. This distinction is effectively made in the
context of an agricultural information system, an insightful paradigm
about which much has been written (Riemenschneider).

An Agricultural Information System

In the context of an information system, the function of a data
system is to provide a statistical picture of a population of interest
("reality"), where by population we refer to such things as the inventory
of market hogs on December 1, number of acres planted to soybeans, and
crop acres under irrigation. That this statistical picture is taken on
the basis of assumptions concerning the operationalization of conceptual
variables and that the "numbers" are typically collected via a sampling
method is of no consequence here. The important thing is that the data system provides us with "numbers" that are collected and put together in such a way that a meaningful description of "reality" emerges. The SRS and the Market News program of the AMS comprise the basic public data system for the agricultural sector. From the reports issued by these two agencies we obtain over time a series of snap-shots of the many aspects of the agricultural sector.

The second component of the information system is the inquiry system, which uses as one of its major inputs the output of the data system. By applying market theory and appropriate statistical methods, the inquiry system transforms the data into information, that is, it attempts to discover the story behind the picture: it is one thing to know that there are 40 million hogs in farm inventory, it is another thing to translate this into knowledge (forecast) of the subsequent course of market hog prices. The ERS is a basic component of the agricultural inquiry system, where through the various Situation reports and research publications the basic data of agricultural markets are transformed into information of value to the decision maker.

The final component of the agricultural information system is made up of the decision makers--farmers, ranchers, processors, merchants, brokers, retail buyers, households, policy makers, and the like--the raison d'etre of the agricultural information system. Absent these potential payers of user fees for AMS, ERS, and SRS publications (as our Association President has noted) "...we may witness the destruction of an important stock of human capital--one that cannot be easily rebuilt."
Information as a Commodity

In talking about user fees for information, we are in a real sense talking about "pricing" a "commodity", and it is therefore necessary to recognize the commodity characteristics of information as they may have implications for its pricing. Three particular characteristics are considered: uncertainty, nonrivalry, and nonappropriability or nonexcludability.

Following Arrow and Boulding, we recognize that economic agents must make decisions "today", the consequences of which will not be realized by the economic agent until "tomorrow." And "...a most salient characteristic of the future is that we do not know it perfectly" (Arrow, p.6). In the context of the competitive model, this means that in the real-world decisions are not made on the basis of "perfect knowledge", consequently the optimum resource allocation predicted by this model is not likely to obtain in real-world markets. It may be, however, that the distortion of resource allocation can be mitigated by the acquisition of information, the idea being that information may improve the quality of the decision-making. In this sense, information is inextricably intertwined with uncertainty: "Indeed, information is merely the negative measure of uncertainty, so to speak" (Arrow, p.8). Of singular importance, then, is to recognize that information possesses value only in the presence of uncertainty, a paradox not common to most commodities.

The second characteristic is nonrivalry, by which we refer to the instance where the consumption of the commodity by one person does not at the same time deny its consumption by another. This clearly characterizes information: my "consumption" of the December Hogs and Pigs
Report does not deny your "consumption" of it also.

In a market setting, commodities are typically appropriable in the sense that the producers of the commodities can obtain the returns to their production. Alternatively, the production and marketing characteristics of the commodity are such that the property rights of producers can be protected. Information is not appropriable: there exist no mechanisms for protecting the property rights attached to providing information. True, attempts at protecting property rights are present in patent laws, copyright laws, and the like, but experience attests to the near impossibility of enforcing these laws. For all practical purposes, then, information is nonappropriable.

Thus, we see that information as a commodity has value only in the face of uncertainty, it is characterized by nonrivalry, and it is nonappropriable. In other words, information possesses the basic characteristics of a "public good."

Should User Fees Be Charged For Information?

Economic theory tells us that the pricing of a public good, such as information, by the market mechanism results in the sub-optimal production of that good. And this consequence, in the context of competitive market theory where the role of "perfect knowledge" is so crucial in the decision making that leads to optimum resource allocation, is serious. Imposing user fees for the various informational publications of the USDA would not, of course, reduce the production of information in a literal sense—cattle on feed reports will still be published—but it will reduce the distribution of the information by raising the transactions costs, and this is the important point. Unfortunately, the incidence of
higher transactions costs is likely to be borne by smaller firms (decision makers), who may forego the added burden of user fees. Consequently, the quality of their decisions will suffer, and they will find themselves at a competitive disadvantage in the marketplace.

Because economic theory tells us that the Pareto-optimal production (distribution of information, in our case here) of a public good occurs when it is "priced" at zero, and because of the role that "perfect knowledge" ultimately plays in optimum resource allocation (a public benefit), we strongly oppose the general policy of imposing user fees for informational publications of the Market News Service, the SRS, and the ERS.5/

MARKET REGULATION

Few, if any, sub-sectors of agriculture, from farms to retail stores, escape the small mesh of a regulatory net, the strands of which are the various programs administered by the United States Department of Agriculture and the Commodity Futures Trading Commission. As mentioned in our introductory remarks, the current administration, which generally views regulatory programs as being antithetical to "free competition", has taken steps it hopes will lead to less regulation of the agricultural sector. Whether this objective is based on the belief that the net public benefits to regulation are negative, or that deregulation will yield larger net positive benefits is not clear, nor is clarification necessary. The simple, direct question is whether deregulation will yield larger net public benefits than regulation.

Measuring net public benefits of regulation and deregulation, the
comparison of which is necessary for public policy, is complex, too complex for an exhaustive treatment here. Consequently, we adopt the more modest approach of commenting on some issues related to measuring the cost of regulation, reviewing the objectives of existing regulatory programs administered by the USDA and the CFTC, and on the basis of these objectives stating our position with regard to deregulation and user fees.

General Comments on Measuring Costs of Regulation

There are two components of the overall costs of regulation, those borne by the regulator and those borne by the regulated. We consider only the latter here.

Regulatory costs to the regulated may arise in a rather direct fashion, or they may arise more indirectly. An example of a direct cost would be that part of a merchant's costs of dealing fairly with customers above that routinely incurred as a matter of good business practice. Similarly, the cost to a commodity exchange of justifying a new futures contract to the CFTC would be the cost of developing the contract plus the added cost of justifying the contract. In cases such as these, measuring the cost to the regulated is straightforward, as it is, in principle, simply the added cost of meeting regulatory requirements. In practice, of course, problems such as prorating fixed costs will arise.

Costs to the regulated may arise more indirectly as a consequence of such things as delays on the part of the regulator: inspectors may be late to conduct a mandatory inspection required before the product can move off-site, paper work for seed certification may get lost in transit from an out-box to an in-box, the CFTC may delay approving a new
contract. Measuring these costs is difficult, yet they may be more burdensome on the regulated than the direct type of cost mentioned above.

General Comments on the Benefits of Regulation

While there are problems in measuring the costs of regulation, they pale in comparison to measuring the benefits from regulation, and we certainly do not have any magic solution to the measurement problem. Here we approach it indirectly by examining the stated objectives of some regulatory programs and from them speculate on how one might take a stab at measuring benefits. To impose some semblence of structure, our discussion is organized around three broad types of regulatory programs: orderly marketing, antitrust, and fair trading. Within each group we consider such issues as benefits suggested by the stated objective of the program and whether deregulation or user fees would be in the public interest.

Orderly Marketing

Included under orderly marketing programs are the Agricultural Marketing Agreement Act and the recently enacted Commodity Research and Promotion Acts. Programs implemented under these acts encourage group activity--by permitting producers to impose the will of their majority on handlers as well as themselves--to achieve such goals as lowering marketing costs by using standardized contracts, grades, containers, and the like; and enhancing revenue by administratively allocating supply among markets or over shipping seasons and by stimulating product demand.

Marketing orders and agreements have recently been subjected to an extensive review, so little needs to be said about them here (USDA, 1981). Depending on commodity characteristics, the provisions permitted,
and the ways these provisions are employed, marketing orders and commodity promotion acts may have net positive or net negative effects on marketing efficiency.

Antitrust Issues

The Packers and Stockyards Act (section 202) and the Capper-Volstead Act (section 2) deal quite specifically with antitrust concerns. The intended purpose of these USDA regulatory programs is, in part, to ensure behavior consistent with the goals of general competitive policy; hence the programs promote marketing efficiency to the extent that the general goals do. The programs differ in that Packers and Stockyards proscribes specific anticompetitive acts by packers, while Capper-Volstead prohibits undue price enhancement by agricultural marketing cooperatives.

That the P&SA was enacted in response to the flagrant anticompetitive behavior of a small number of large meat packers argues that this legislation, like all antitrust legislation, was meant to create public benefits. That the public, via congressional appropriations, continues to incur the cost of the program suggests that this view persists. Consequently, deregulation in this instance would not appear to be in the public interest even though private interests may be served by termination of the Act.

The Capper-Volstead Act of 1922 assures farmers the right to form and operate a cooperative to market their products without thereby being in violation of the antitrust laws. At the same time, it empowers the Secretary of Agriculture to take action against any cooperative that the Secretary has reason to believe monopolizes or restrains trade to the extent that prices to consumers are raised unduly. There is no unique
administrative entity that oversees cooperative performance under the Capper-Volstead Act; rather, potential violations are dealt with by the USDA on an ad hoc basis (Manchester).

There may be private benefits to cooperative members, such as easier access to markets and the potential for participating in management decisions. However, with minimal exceptions, marketing cooperatives follow an open-membership policy and do not enter long-time, exclusive contracts with their members. Consequently, farmer-members are free to market their commodities either through their cooperative or through a proprietary firm; that they do use the latter alternative at times suggests that cooperatives have not consistently gained a long-run advantage over proprietary firms that can be passed back to farmer-members.

Of perhaps greater importance is the perception of the public benefits associated with farmer cooperatives. A careful reading of the legislative history of Capper-Volstead reveals that the proponents of the act argued persuasively that, while private benefits might exist, the preponderence of the benefits would accrue to the public because of the improvement in market efficiency resulting from the presence of active farmer marketing cooperatives (Johnson and Jesse).

On balance, we believe that public benefits of cooperative enterprise exceed private benefits and that the net benefits are positive. Thus, society would not gain from "deregulating" farmer cooperatives by removing their Capper-Volstead charter. And public confidence in cooperatives would diminish with elimination of the undue price enhancement proscription.
Fair Trade Practice Regulations

The third set of programs considered here is fair trade regulations, the objectives of which are similar to those of antitrust programs in that they proscribe certain types of market behavior. But they differ in an important way: fair trade regulations apply to specific parties to a trade; hence, aggrieved parties are easier to identify than they are in, say, restraint-of-trade litigation. And this distinction raises the thorny problem of public benefits vs. private benefits. As we pointed out above, antitrust legislation and the rules and regulations ensuing therefrom are held to be in the "public interest", that is, the public is the beneficiary. From this it follows that the public should (and does) pay for the costs of these programs via legislative appropriations. The situation is, or appears to be, different for fair trade regulations: the comparative ease of identifying the participants involved leads to the presumption of private benefits, in which case the imposition of user fees is the appropriate funding method.

It is not clear to us that all the benefits of fair trade regulations are necessarily private. Don't we receive some social (public) benefit from a "healthy" trading milieu? Isn't it likely that we pay a lower price for our fresh vegetables, obtain them in a more timely manner, and enjoy a higher quality product because of the suppression of unfair and fraudulent practices by the Perishable Agricultural Commodities Act? Isn't the integrity of our total export activity enhanced by the Export Fruit Acts designed to prevent deception or misrepresentation of the quality of the fruits we export? Doesn't the Federal Seed program by assuring the quality of seeds contribute to
improved resource use in agricultural production? Issues such as these lead us to question the view that only private benefits accrue to fair trade programs and, therefore, user fees should be universally applied.

The separation of public benefits from private benefits for these fair trade programs, with an eye toward the appropriate funding method, is difficult, although the degree of difficulty may vary over the programs. Quite frankly, we do not have any immediate suggestions as to how to measure the separate benefits. To our knowledge, there has been very little, if any, research, theoretical or empirical, that specifically addresses the issue at hand. Although it may seem a cop-out, all we can do here is to say that if our profession wants to take a serious stance on this issue then it must marshal its research forces.

Assuming a workable resolution to the above, a second problem arises in connection with user fees. Inherent in the financing of Federal regulation of marketing activity through fees is that there could be too much or too little regulation, depending on the money collected. A further difficulty from the standpoint of the regulator is that fees may not provide a sufficiently stable income with which to operate an effective control program—a matter that varies widely from case to case. For example, income from levies against public warehouses would be much more stable than income from levies against transactions on commodity exchanges.

Among the most difficult public benefits to measure are those arising from Federal regulation of futures trading. Commodity exchanges are, themselves, regulatory bodies that have evolved rules and regulations to facilitate trade, assure performance on contracts, establish
standards of fair dealing, settle disputes and discipline members who violate its rules. But there is much uneveness in how well commodity exchanges enforce their own rules. Poor performance is reflected in inaccurate price information as well as in lost opportunities to develop wider business use of the forward market. The benefits of having good price information and liquid markets should be measured by the additional output from a given set of resources by better organization of production and distribution.

Over time, the number of commodity exchanges in the United States has shrunk. For reasons of market liquidity, futures trading in a contract tends to gravitate to one exchange. This gives it the status of quasi-public utility, suggesting that there needs to be Federal oversight to see that exchanges enforce their own rules and there needs to be an authority to mobilize trade information and mediate conflicting interests in fashioning suitable contract terms.

The upshot of all this discussion is that we are haunted by the question of whether fair trade regulations really differ from antitrust regulations, especially when compared in the context of that nebulous construct known as the social welfare function. If they do not differ, then they should not differ with regard to who pays the bill.

CONCLUDING REMARKS

Agricultural economists questioning the social value of USDA marketing programs may be akin to Phylis Schafly questioning motherhood. We are, perhaps, too close to the trees to see the forest--our emphasis on production and marketing of farm products gives us a myopic perspective of aggregate social welfare. However, we prefer to believe that
our general support for government involvement in providing marketing services, disseminating information, and regulating trade practices is based on economics, not vested interests.

We recognize and support the need for periodic review and modification of programs to ensure relevance. But the food inspection and standardization programs in effect seem to be well-justified on efficiency grounds, and the distribution of costs seems to be commensurate with public and private benefits. USDA agricultural information is invaluable to our profession; cutbacks and charges can hardly be applauded. Regulatory programs administered by USDA and CFTC have increased farmer, merchant, and public confidence in the workings of agricultural product markets. In short, evidence that these programs, as presently administered, contribute negatively to marketing efficiency is not readily apparent.
FOOTNOTES

Jesse and Paul are agricultural economists with the Economic Research Service, U.S. Dept. of Agriculture. Johnson is professor of Agricultural Economics, University of Wisconsin-Madison. The views expressed herein are those of the authors and do not necessarily reflect U.S. Dept. of Agriculture policy.

1/ Separate acts cover inspection and grading of cotton (U.S. Cotton Standards Act), grain (U.S. Grain Standards Act), naval stores (The Naval Stores Act), and tobacco (The Tobacco Inspection Act). User fees are not authorized in the legislation for cotton, tobacco, and naval stores, although the 1982 budget shows that $28.4 million will be collected from users--primarily for special services rendered.


3/ A modest amount (4-10%) of the cost of these programs is reimbursed by user fees imposed for overtime and holiday inspections requested by individual firms.

4/ To facilitate the following discussion we will use the word information without quotes to refer collectively to "data" and "information" as defined in the previous section.

5/ We do support the long-standing policy of imposing fees for services provided for and at the specific request of private parties.

6/ The regulated can sometimes pass their costs on to customers or suppliers to varying extents by changing their input acquisition, production, and output decisions.