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# LETTERS

From You...

**From: Wayman G. Chapell**

*President, Southern Farm Management, Inc.*

**Re: Farmer Need For Financial Planning**

Financial management and business planning at the farm level is only marginally better than it was 10, 15, or even 25 years ago. It is paradoxical that this can be said in spite of the analytical tools that are available, the economic management techniques that have been developed, and the financial difficulties that many farm operators and their families have experienced in the 1980s.

Many good, production oriented farmers have gone bankrupt in the past 6 years and haven't yet done the first cash flow budget. The utilization of some meaningful business analysis would

have, in many cases, uncovered opportunities that could have possibly saved the farm.

All too many farm operators feel out of their element and

somewhat threatened when they get involved with data handling and financial analysis.

The problem, in its simplest terms, seems to be that of educating the producer to his acute need for better financial management. Then he must be aided in the effective use of the tools that are available.

Most producers consider farm business planning as foreign, vague, and difficult. Most avoid it whenever possible. In contrast many of these same people readily adopt and adapt the latest production technologies even though their utilization may be complex and costly.

The farm media is loaded with farm production success stories and tantalizing advertising to make the producer aware and to create the desire to attain the newest production items. Producers are also kept constantly aware of the importance of marketing by daily reported market changes.

How is the wall of resistance to better financial management and business planning to be overcome with dispatch?

It would help if there was general agreement as to the basic or minimum system of financial management and accounting for farm operators. The land grant universities, bank associations and the Farm Credit System would seem to have major responsibilities in fostering the identification of such a system.

Such a system needs to incorporate the specialized needs of a farm business. It must also be useable by people with very little formal economic or business management training. The average farm user of such a system needs to be spoon fed the basics during the first year as he is weaned away from "seat of the pants" business management and learns the "state of the art" record-keeping and analysis.

Availability of a system is not sufficient, however. Farm operators need to be motivated to use it. Research money could well be spent to find out how producers can be motivated to use financial management and business planning tools. In fact, using research money in this way may be more important than developing new technologies; for today's farmers to be successful must combine production and marketing with sound financial planning.

**From: Donald MacLaren**

*University of Melbourne*

**Re: Grennes' "The Case for Multilateral Decoupling"  
and Ballenger's "PSEs," First Quarter 1988 CHOICES**

Grennes has put forward a proposal for the multilateral decoupling of income support from production levels as a means of transferring income to farmers without distorting international trade (*CHOICES*, First Quarter 1988). While Sanderson and Breimyer (*CHOICES*, Second Quarter 1988) were skeptical, for a variety of reasons, that this result could be achieved, Grennes responded as follows: "The use of lump sum payments permits politicians and bureaucrats to set policy parameters at any level...without distorting economic incentives" (*CHOICES*, Second Quarter 1988).

This assertion is incorrect. It ignores the changes in the riskiness of returns which the policy would introduce. Decoupled income support in the context of a multi-commodity farming operation is likely to affect relative price riskiness and, therefore, alter the product mix of risk averse farmers, at least in the short run. Hence, it is not clear exactly what definition should be given to the term "distortion" in the above quote.

Consider the single product firm facing price risk. It has been shown that a lump sum payment, acting as an increment of wealth, may affect the optimal short-run level of output. Of course, this is a possibility which is denied by the deterministic model. The following table illustrates the outcomes derived from different models of the risk averse firm's objective function.

The essential conclusion is that it is not obvious in which direction, if at all, optimal short-run output will move, but it is clear that it is possible for decoupled income support to generate a supply response and thus to have an effect on trade. It is also likely that the size of this response increases the more risk averse the producer is, and the larger the increment to wealth provided by the policy. Hence, I believe that the conjecture made by Grennes is false, that decoupled income support would have an impact on trade relative to either a free market situation or the present situation in international trade and, therefore, that policy parameters cannot be freely set without producing economic incentives.

Ballenger discussed the use of Producer Subsidy Equivalents (PSEs) in the context of the international trade negotiations (*CHOICES*, First Quarter 1988) and claimed that they were a measure of a country's level of protection. However, it is not clear that there is such a concept of protection. Corden has used the following definitions for a "small" trading country: rate of protection is the proportional gap between the internal and world or reference price; the protective effect is the proportionate change in domestic production; and the trade effect is the proportionate change in imports. In each case the base is the value of the variable under free trade.

Ballenger also explains what PSEs do not indicate, e.g., the world market effects of a country's policies. The basic problem with PSEs in a trade context is that there is no unique relationship between the value of the PSE and any of the above aspects of protection, as any analysis of a partial equilibrium diagram

**Farm  
Management**

**PSEs**

**Table: The direction of change in short-run optimal output from a lump sum payment is:**

|                         |   |
|-------------------------|---|
| <u>Certainty</u>        | 0 |
| <u>Safety-first</u>     |   |
| Roy                     |   |
| "a"                     | - |
| "b"                     | 0 |
| Telser                  | + |
| Kataoki                 | 0 |
| <u>Expected Utility</u> |   |
| Sandmo                  | + |

Notes: The models referred to which allow for uncertainty are the safety-first models due to Roy, Telser and Kataoki, and the maximum utility model due to Sandmo.

a: probability constraint not binding

b: probability constrain binding

-: a leftward shift in the short-run supply function

0: no shift

+: a rightward shift

will show. Hence, I agree with Jabara (*CHOICES*, Second Quarter 1988) that the value of PSEs in trade negotiations is very limited, at least from a theoretical perspective.

The negotiations ought to be concerned with analyzing the different trade effects of the numerous instruments employed to achieve national objectives for agriculture. It is well established that some policies, such as threshold price/variable levy, have a greater impact on world markets when used by a "large" country than would an "ad valorem" tariff which achieved the same level of the domestic objective.

The case for free trade rests on the same theoretical foundations as the general case for free markets. Yet economic theory recognizes that there is a role for governments in markets. The prospects for something useful emerging from the trade talks would be greater if the negotiators focused more on the choice of instruments permissible, taking account of their external effects, rather than discussing the levels of internal subsidies to producers and consumers which are largely irrelevant in a trade context.



**From: Nicole S. Ballenger**

*Economic Research Service*

**Re: The Author Responds**

The essence of Dr. MacLaren's remarks is that PSEs have a limited role in the trade negotiations because they do not directly draw the connection between the use of particular policy instruments and the trade effects of those instruments. My own tendency as an economist is to agree. And yet the history of the negotiations reveals the difficulty countries have agreeing whose policies are "OK" and whose are not. Prior to the Uruguay Round, the GATT Committee on Trade in Agriculture discussed this topic for four years to no avail.

The usefulness of PSEs to the Uruguay Round has been twofold. First, it has provided an empirical basis for recognizing and discussing the extensive involvement of governments all over the world in their agricultural sectors. It forces the reporting of policy information in a manner similar to tariff schedules, even though the information is not directly comparable across countries in the manner that tariffs are. Many countries involved in the negotiations have recognized this role for PSEs in calling for some sort of "monitoring device."

Second, the PSE approach offered an alternative course for negotiations which had the potential to prove more fruitful than

the tedious process of tackling the problem commodity-by-commodity and policy-by-policy. The notion was that target reductions in the aggregate level of support, as measured by the PSE, would allow countries the flexibility in policy reform that would help to avoid some of the internal political resistance, and that so long as certain guidelines were imposed, we would all be "moving in the right direction."

Even with the midterm review behind us, we still don't have a very good feeling for where the negotiations will end. It is my impression that, as Dr. MacLaren would recommend, considerable energy will be devoted by U.S. and other countries' negotiators to identifying means of supporting agriculture that have less deleterious trade effects.

What the role for the PSE or some variant on the PSE (such as one that removes the policies not deemed trade distorting) will be remains to be seen. It would be unfortunate, though, if we were to abandon the PSE exercise. As Dr. MacLaren says, the levels of internal subsidies do not directly give their trade effects. However, it is well recognized in our profession and in the trade negotiations that internal subsidies do have trade effects, sometimes very significant ones. The PSEs help us keep track of these policies. Without them we would know less about U.S. deficiency payments, Canadian transportation subsidies, and the Brazilian credit subsidies, to name just a few internal subsidies with important trade effects.

The controversy the PSE generates is interesting to me: many of my colleagues and I have struggled to put the PSE in a box, that is, how exactly does it relate to concepts that we recognize well such as welfare measures, nominal and effective protection rates? Admittedly, the PSE defies rigorous definition and is difficult to express mathematically. Probably the most comfortable way to think of the PSE is as a framework for keeping track of a wide range of policy information. Most actual PSEs are constructed using both budget data (reflecting costs to taxpayers of a variety of agricultural programs) and wedges between internal producer and 'world' reference prices (reflecting costs to consumers of another set of agricultural policies). The link between this array of policy information and the protection (or income support) actually afforded producers and, likewise, the trade effects of that protection depends on the particular policy regime under consideration and the validity of the underlying assumptions regarding market behavior.

Those of us working with PSEs find the framework useful for collecting policy information and often very revealing with respect to the relative importance of different policy tools within a country. We offer many caveats when drawing implications based on cross country comparisons of PSEs and when using the summary (or total) PSE in modeling exercises. Despite our caveats, we find the PSE considerably more informative than nominal protection coefficients, and dependent on fewer parameters than welfare measures and effective protection rates. We also note that empirical applications of these 'more rigorous' concepts suffer some of the same problems encountered in calculating PSEs, e.g., identifying prices that represent 'free trade' alternatives.



**From: Thomas Grennes**

*North Carolina State University*

**Re: The Author Responds**

Traditional commodity programs are an inefficient way to transfer income to producers to the extent that the cost of the last unit to producers differs from the value placed on the last

unit by consumers. My article in the First Quarter 1988 *CHOICES* issue and the reply in the Second Quarter 1988 *CHOICES* claim that lump sum payments are more efficient in this sense than commodity programs that link production and payments. Donald MacLaren questions this conclusion on the grounds that the effect of transfers on uncertainty is not treated satisfactorily.

My response is that economic theory unambiguously predicts that binding support prices will increase production and decrease consumption. A vast empirical literature has demonstrated that the magnitude of these effects is large. For example, support prices have converted Saudi Arabia into a wheat exporter and Japan into a rice exporter. Conversely, the models cited by MacLaren do not inspire confidence about the theoretical implications concerning uncertainty. The predictions of the five models listed are that production will either increase, decrease, or remain the same following a lump sum payment. Two of the five models have the same implications as deterministic models, namely production will be unaffected by lump sum transfers. Given the ambiguity about the theoretical implications of models of uncertainty, it is not surprising that the empirical literature offers little guidance about the magnitude of production effects. Although uncertainty may increase or decrease production, is there a better forecast of this effect than zero?

A more general criticism of MacLaren's comment is that the effect of policy reform on uncertainty cannot be captured by a model of a single firm producing a single product. That formulation rules out some important ways in which farmers can and do diversify production and their asset portfolios. Farmers can vary their product mix and the percentage of time devoted to farm and nonfarm activities. Abandoning price supports in favor of market determined prices and lump sum payments need not increase agricultural price uncertainty. A major current source of price variability in the world grain market is the price support program and the variable levy of the European Community. Multilateral adoption of decoupled payments would eliminate this source of uncertainty. The use of lump sum payments would also eliminate political uncertainty about the level of support prices, the required land diversion, and other program parameters. Abandoning support prices would also make the agricultural sector less vulnerable to macroeconomic disturbances coming from monetary, fiscal, and exchange rate policy.

I do not claim that payments to farmers that are unrelated to production would have no effect on economic behavior. However, such a program would alter production and consumption less than traditional commodity programs. Commodity programs are financed partly by higher consumer prices, whereas decoupled payments would require higher taxes. Use of the income tax would reduce labor supply by distorting the labor-leisure choice. However, given the small values of estimated labor supply elasticities, the labor market distortion would be smaller than the distortions of production and consumption induced by support prices. In absence of lump sum taxes, decoupled payments will have some effect on economic behavior. However, the relevant comparison is between the effects of decoupled payments and the distortions caused by commodity programs transferring the same amount of money to producers.

Finally, the idea of decoupling is not an all-or-nothing proposition, and some current policies are less distortionary than others. Producer payments that are credibly based on historical (frozen) acreage and yield have a neutral effect on current production. Complete decoupling would entitle producers to receive 100 percent of payments they would have received in some historical period even if their production of the program crop is zero in the current period. Experiments with 50-92 and 0-92 provisions are a move in this direction.

**From: Eldon D. Smith**

*University of Kentucky*

**Re: The McDowell-Farrell Exchange**

**(Second, Third, and Fourth Quarters 1988 *CHOICES*)**

When I read Kenneth Farrell's comment on George McDowell's article, my reaction was one of confusion. As I remembered it, the burden of Farrell's critique did not address the McDowell thesis. My memory was correct. Seldom has a statistic been more completely irrelevant to the issue than Farrell's 1.6 productivity growth rate.

First of all, McDowell was not talking about anything so narrow. Schertz noted in the T.W. Schultz career profile in the same



issue that Schultz refused to accept the notion that the traditional commodity groups owned the colleges, i.e., that broader public interests were involved. Now, McDowell is saying, even if they wanted to control the agenda they cannot for several

reasons. Implicitly of importance is the erosion of their power, partly because the important problems of human welfare are no longer commodity-related, but people-related. And the rural people of the nation are predominantly nonfarm people with nonagricultural problems.

When you have, as you do in substantial regions of this country, one third of the rural labor supply unutilized, with several hundred dollars per capita total population direct payments from public sector accounts for an entire region, to say nothing of fiscal burdens of transfers for support of schools, roads and other public services, you have an identifiable broad public problem of unambiguous relevancy. Surely to refer to 1.6 percent agricultural productivity growth as evidence of that there is no serious problem of service priority distortion is misplaced. To cite this in the context of the employment/public assistance problem and other major problems of designing appropriate service delivery systems for rural people, farm and nonfarm alike, evinces a classic instance of institutional and professional myopia.

Farrell is right that organized traditional agricultural groups are not likely to insist that the agenda be broadened. John Dewey a long time ago defined a public interest in terms of the conjoint interest in the shared outcome of a collective activity. That traditional agricultural groups do not recognize that the survival of a system which has served them well in the past may require a broader coalition of support is obvious. But historically farm people did not recognize their own interest in the "people universities and colleges" either. The colleges took an active part in organizing farmers into effective political demanders of their services. But I find nothing in McDowell's paper to preclude such active participation in a late 20th century transformation of the same kind. To identify these commonalities of interest will take time, and certainly will not happen automatically; but it falls within the purview of our responsibility as educational institutions to aid in this process. True it is that depending on Chambers of Commerce, councils of local public officials, etc., for support is not costless nor riskless, but no demonstrably riskier

than it was to depend on the Farmer's Alliance, Grange, Farm Bureau and the various commodity organizations.

Finally, I am moderately encouraged to find that among our colleagues in traditional specialties there is an increasing recognition of the broader problem sets to which McDowell alludes. In at least a small number of colleges the reward system is being reviewed in the hope that it can be made affordable for professors to be more responsive to the real priority problem configurations of the countryside, agricultural and nonagricultural, alike. But it will take the vision of broad gauge administrators and public policy educators to work at the problem from both ends—developing coordinately the capacity to provide the services and the political demand for them. A few institutions like VPI, University of Wisconsin, and Pennsylvania State have shown that it can be done. Others, one may hope, will follow their lead.



**From: Marvin Julius**

*Professor of Economics (retired)  
Iowa State University*

**Re: Tweeten and Jordan's Farm Fundamentalism  
(Third Quarter 1988 CHOICES)**

Tweeten and Jordan's survey on the societal attitude toward agriculture and the family farm provides, in their view, some indication that public support for 'legislation and government programs that transfer money to farmers' will be less in the future. This may be a valid conclusion in regard to total transfers, but it may mislead the individual farmer who wishes to project the future role of government in his operation. I propose that future per-farmer transfers may be larger if the number of farmers declines more rapidly than the decline in public support.

Other scientists who are closer to the situation than I have hinted at this possibility. Christofer Leman and Robert Paarlberg have concluded that "When measured on a per-farmer basis, aid to agriculture has been on the rise rather than in decline" (see *The Continued Political Power of Agricultural Interests in Agriculture and Rural Areas Approaching the Twenty First Century*, Iowa State University Press).

Michael Franklin, retired permanent secretary to the British Ministry of Agriculture, has observed that consumers in

Europe have not in general complained about the cost of food, being thankful for the security of supply. He concludes also "It is doubtful they will do so in the future, now that the cost of the raw material is a declining share of the total cost of food as retailed, and now that expenditure on food is a declining proportion of total consumer expenditure" (see *rich Man's Farming: The Crisis in Agriculture*, a Chatham House monograph published in the U.S. by Routledge).

My impression is that agricultural economists while focusing primarily on the possible decline of political support are leading farmers to think they will soon 'be more on their own'. My point is that there is a more than trivial probability that the opposite can occur when we focus on future transfers on a per-farmer basis. I think we will serve farmers well by making some estimates of that probability.

## Farm Fundamentalism Support

**From: Luther Tweeten and Brenda Jordan**  
*Ohio State University and Oklahoma State University*  
**Re: The Authors Respond**

Marvin Julius may be right—government transfer per farm may rise over time. But farm supports could fall if the U.S. follows the recent example of New Zealand.

Diminishing farm fundamentalism could reduce public support for commodity program transfers. However, the level of transfers to farmers is a function of a host of socio-political and economic forces. The demand for transfers to farmers depends on severity of farm problems and intensity of farmers' political-economic rent-seeking activity. The supply of such activity depends on wealth of the nation to provide supports, by farm fundamentalist attitudes, by fear of food shortages if aid is not provided, by pressures to fund other national needs, by how Congress is organized and accessible to farm interests, and by many other factors.

Public support for farm commodity programs remains strong in the United States. We can't help but wonder, however, what would happen to transfers if national income and the tax base stagnate while nonfarm welfare needs intensify; if a large proportion of the public recognizes that farm families are not unique socially and politically but are pretty much like other families; that commercial farm family income, wealth, and rate of return on resources are at least as high as for families in other sectors and would be (after adjustment) even without commodity programs; that commodity programs have not preserved family farms; that most noncommercial farm families make most of their income from off-farm sources; that food supplies would be plentiful and costs lower in the absence of commodity programs; that commodity program recipients on average have higher income and wealth than the taxpayers who provide them; and that other far less costly government programs would do a better job of preserving family farms while providing food security.



**From: Roger B. Long**

*University of Idaho*

**Re: Gardner and Huffaker's Cutting the Loss  
from Federal Irrigation Water Subsidies**

Gardner and Huffaker reflect the attitude of many about western irrigation. Their analysis, however, focuses only on the costs of water and completely ignores the benefits. In addition, both theoretical and applied problems exist from their many broad, over-generalized, assumptions.

I will make some brief observations with regard to the costs and ignored benefits from irrigation, and at least one basic theoretical issue. Gardner and Huffaker imply that the Central Valley Project (and all federal projects) is an economic failure when they state that "subsidized reclamation projects squander valuable capital by benefitting farmers far less than taxpayers pay", and "most of this subsidy has been sunk into physical capital that cannot be economically recovered". According to the annual report of the Bureau of Reclamation, the Central Valley Project (CVP) of California produced \$2.8 billion of crops in 1985 from 2.2 million acres for an average return of \$1,268 per acre. Since 1943 the CVP alone has produced \$34.86 billion in gross crop values. Clearly, the ignored benefits are substantial.

Consider a few facts. In 1985, gross crop income from all

## Water Subsidies

Bureau of Reclamation (BOR) lands was \$7.4 billion, while the total investment since 1906 was only \$8.6 billion. Crop values from BOR lands from 1906 to 1985 totaled \$113.8 billion. In addition, BOR lands produce livestock values of at least \$3 billion each year. Compare also the \$8.6 billion investment in BOR projects since 1906 with the \$25 billion currently spent to subsidize U.S. agriculture each year. Annual subsidies to irrigators do not begin to compare with subsidies to wheat, corn, and cotton farmers. Water resource expenditures are a mere drop in the bucket and the private and public benefits have been enormous. An economic analysis is incomplete when one considers only the costs and completely ignores the benefits involved. The high prices for irrigated land in California have to reflect the magnitude of the benefits. Hydropower, flood control, recreation and food processing are other important benefits.

The costs of water claimed by Gardner and Huffaker also need to be placed in proper perspective. They claim water supplied by the BOR costs \$300 per acre foot and farmers only pay \$20 per acre foot and therefore receive a subsidy of \$280 per acre foot. When one multiplies \$300 per acre foot times the 30 million acre feet of water supplied by the BOR in 1985, the total cost is \$9 billion per year. Total BOR investments in water projects between 1906 and 1985, however, were only \$8.6 billion. If one takes the total \$8.6 billion investment and amortizes it over 100 years of project life at 5 percent interest, and then divides by 30 million acre feet, the principal and interest costs are about \$15 per acre foot per year. Add the variable O & M costs of \$5-9, and the cost of water runs between \$20 and \$24 per acre foot per year. What irrigators pay (\$20 per acre foot) is more in line with the actual costs than are Gardner and Huffaker (\$300 per acre foot).

Gardner and Huffaker also make the statement that "In sum, most reclamation projects have provided far less farmer net benefits than they have cost taxpayers". Regardless of the accuracy of this statement, I question its theoretical foundation. The authors are comparing net benefits from farming with total tax expenditures. Such a comparison defies basic logic and common sense. When two things are compared, the comparison only makes sense when a common single standard is applied. The authors compare farmers and taxpayers with two standards (taxes and net benefits), not one common standard. Comparing net benefits from farming with total tax expenditures is meaningless and misleading. Such a comparison is very useful when one wishes to leave a negative impression! This is especially true when a competitive industry, such as agriculture, cannot (by some definitions) create net benefits.

A better comparison would be one of the total tax money invested in BOR projects relative to total taxes paid by irrigators who use the water. Consider the following for the \$8.6 billion invested in BOR projects. If each project had a 100 year life and served the 148,000 actual irrigators, each of these farmers would only have to pay back \$581 annually in taxes for the life of the project in order to repay the U.S. Treasury for the irrigation investment. This same concept holds for public investments in human education. In both cases, the U.S. Treasury more than gets its money back. Whether irrigators repay the U.S. Treasury in terms of taxes or direct payments for water is irrelevant. The money goes to the federal government either way. The distribution of economic rents is another issue.

In theory, I agree with Gardner and Huffaker's position on water marketing. At the margin, free and competitive water markets should increase social welfare. It should be pointed out, however, that water is not an easy commodity to market because of its physical properties. At many times and places

market prices do not and could not exist for water. Furthermore, stream flows in the west would be nearly impossible to market, if it were not for dams and storage reservoirs (many built by the BOR). Reservoirs create a supply of water that is available when demand is greatest.



**From: Robert T. (Tom) Mills**

*Ag Pilot*

*Brawley, CA*

**Re: Gardner and Huffaker's "Water Subsidies"**

Gardner and Huffaker's article was most timely and thought-provoking. As a taxpayer and businessman in the Imperial Valley, I have mixed emotions regarding this issue. Future handling of western water is going to impact agricultural and urban users heavily since there are limited supplies available.

Your observation of creating instant wealth for farm landowners is correct. Is the situation any less for urban landholders? Will the continued paving of California's coastline be an environmentally acceptable use of the water? Who will feed these masses and at what costs, if western agriculture is sacrificed for the building craze?

More specifically, what will my home and business be worth if my farmer customers sell their water?

Applying true costs to all benefits might provide a hard jolt to the military, postal, and certainly many government workers. However, better management of western water will provide benefits to all taxpayers and water users alike. The Imperial Valley is entering an historic era in water management. But, heaven forbid direct sales that would close vast areas of farmland and the resulting shock on those who live and work in the area.

With the recent activity in the acquisition of large corporations that control food production and marketing, should we become concerned about keeping agricultural production as free and open as possible? Perhaps part of our societal wealth in America is one of the finest food supplies in the world.



**From: Dean R. Kittel**

*Executive Vice President*

*Colorado Farm Bureau*

**Re: Gardner and Huffaker's "Water Subsidies"**

Congratulations to *CHOICES* and Gardner and Huffaker for taking a look at a long term solution to a problem that is not going to go away if it is not dealt with. As American agriculture looks to worldwide trade relationships that are hopefully established on a non-subsidized basis, it surely will be required that we look at production cost subsidies other than direct federal farm programs (water, power, tax equity, transportation, etc.)

As we begin brainstorming this issue and prepare to enter the working model phase, I think it's only fair to point out that western states feel strongly that there ought to be a reduction in other government subsidies that taxpayers participate in all across the nation, not just the water cost issues.

Ownership beyond just the water but of the delivery systems and OEM facilities might create efficiencies that could lower costs to irrigators in addition to decreasing taxpayers burdens.

It is also hoped that other users such as fishermen, hunters, water skiers, picnickers, emergency storage value, environmental benefits, minimum stream flow, etc., be looked to for adequate participation in the revenue formula when costs of water from projects are determined. As a general rule, the public tends to

look at these values as a cost free contribution, but if we are going to treat taxpayers equitably, and agricultural producers are among those, then these values must also be charged for in cost determination formulas. They may still be paid for in taxes but to not subtract these general societal values from producer water costs is not equitable.

With the federal deficit being what it is, it is time for all of us to "get in the tub" and begin the process of returning the calls for production to the market place.

Clark Edwards' article on falling real prices to agricultural producers in this same issue has to pose the question of whether federal subsidies really benefit those they are intended for in the long run, including production stimulated by water that is priced at artificially low levels.

In my opinion, most users of project water are willing to look at the issue as long as we look at the whole picture. They ask that the public recognize the need to tackle the whole range of federal subsidies that have become institutionalized during the past 50 years.

◆  
**From: William E. Martin**

*The University of Arizona*

**Re: Gardner and Huffaker's "Water Subsidies"**

Gardner and Huffaker state a fact recognized by almost all agricultural and resource economists—reclamation irrigation projects in the West have been and continue to be highly subsidized. In some cases, even the real costs of operation and maintenance are not repaid. They suggest that society's losses could be cut by issuing permanent property rights to existing irrigators so that water would be transferred out of subsidized uses and into economically efficient uses in an economically efficient manner. I have little quarrel with the overall thrust of their observations and suggestions, but do wish to examine some specific statements and assertions. Gardner and I both have been close observers of western water development and management over the past 25 or so years, and we sometimes observe things slightly differently.

First, I distinguish between the terms "economically infeasible" (Gardner and Huffaker) and "economically nonbeneficial." Clearly reclamation projects have been economically feasible in that someone has been able to pay for them, even if that someone has not been the presumed beneficiary—the farmer. This distinction is not trivial when one attempts to discuss reclamation projects with the public and their political representatives. The discussion rarely centers about whether specific beneficiaries can or should pay the costs, but rather about where can the necessary money be obtained. "Economic feasibility" to me means "financial feasibility," which is also really synonymous with the other term used by Gardner and Huffaker, "political feasibility." A project is feasible if politicians can put together a financial package to pay for it, regardless of the project's net economic benefits, and the distribution of those benefits.

Second, I agree with Gardner and Huffaker that economies of size exist for irrigated farms in the West, and previously have suggested that enforcement of the pre-1982 acreage limitations would raise production costs. But given the current limitation of 960 acres as the size of a farm that can receive subsidized water, there seems little reason to expect product costs to be affected significantly by the "full cost" water-pricing rule. I know of no published evidence that economies of size anywhere in western irrigated agriculture continue beyond 800-1,000 acres. The literature of ten years ago suggested that in most areas

economies of size bottomed out at 640 acres or below. Little additional work on cost-size relationships has been published since that time, but I would not expect large changes in the estimates. Further, farmers have always worked around such rules. Thus, I cannot agree that the current water-price rules per se will "prevent the most efficient farm size and structure."

Third, while the comments of Gardner and Huffaker about irrigation development making "some people wealthy" are true, the operative word is "some." As a contrary example, recent analysis by my colleagues and me comes to the conclusion that even at highly subsidized water prices for newly developed Central Arizona Project water, most current farmers will be worse off than they would be without the new water supply. Land values, if based on agricultural use, should fall rather than rise. The problem is that most farmers have an alternative groundwater source that is less expensive than the new subsidized supply. Unfortunately for the many farmers who are members of irrigation districts who have signed contracts to accept the new water, the new water must, by law, be treated as an alternative rather than as a supplemental supply. In addition, repayment of irrigation district bonds to build distribution systems to get the water from the main reclamation project canal to the farms will in some cases cost as much as the land was worth before the project was built. In these cases, the farmers apparently got so caught up in the political and financial feasibility of the project that they neglected to make a careful personal economic benefit analysis. Of course, it is entirely possible that the government will find it necessary to lower the price of water further in the face of farmer resistance to the current subsidized price. Clearly the price will not be raised. As Gardner and Huffaker state, the water simply would go unused. For water to sit unused in a newly built 300-mile long canal would embarrass almost everyone.

The above comments are mere quibbles with Gardner and Huffaker's general description of reclamation development and policy. My final observation is of a more serious nature. It is based upon our differing perceptions of whether or not "Substantial increases in societal wealth would be the result" of their proposed policy of granting property rights to existing irrigators, and permitting marketing of those rights without restriction so long as existing rights are not impaired. I have no particular objection to their suggested policy on either economic or ideological grounds. I just do not believe that substantial increases in societal wealth would be the result.

My interpretation of the available analyses, and my perception of reality, is that the values of water "at the margin," where transfers take place, are fairly close together in agricultural and urban uses. Water already is transferring from marginal agricultural use to marginal urban use as the marginal urban values rise. It is true that reducing transactions costs might further facilitate this process, but it is not clearly evident that the costs of radically changing the system would be substantially less than any benefits obtained.

It is somewhat ironic that Gardner, who has strong ideological attachments to the economic efficiency advantages of markets in general, believes that imperfections in the water market are so great that people who really desire and can afford additional water cannot obtain it. I, on the other hand, whose ideological attachments to markets have always been somewhat less than Gardner's believe that people find a way to make the market work when they really have the desire and the economic means to do so. They overcome imperfections that may exist.

In the reclamation industry, the most substantial increases in societal wealth will be achieved through honest estimation of

real marginal costs and marginal benefits for any future water development or allocation scheme. Further, the beneficiaries should be expected to pay the associated costs. As Gardner and Huffaker state, sunk costs (dams and canals) are gone forever.



**From: B. Delworth Gardner and Ray G. Huffaker**

*Brigham Young University and University of Tennessee*

**Re: The Authors Respond**

We welcome this opportunity to respond to Roger Long's critique of our *CHOICES* article on federal water subsidies. In the West, one often hears the views that Long espouses, but generally not from professional economists. They are usually advanced by defenders of subsidized federal water development, including politicians from the region. Long's principal criticism is that we "completely" neglected the benefit side of subsidized irrigation water development. We plead not guilty to this charge. We agree that a legitimate question can be asked about how benefits are adequately measured or calculated. Where competitive markets exist, the price of any input should be a reflection of its value of the marginal product. It is true that the average value product may be higher if economic rents are earned on all the supramarginal quantities. The discrepancy between average and marginal products will depend on the elasticity of the demand curve for the input. But this point is not the substance of Long's criticism as will be clear later.

We recognized that competitive markets seldom exist for irrigation water and thus some other valuation technique was needed to measure water's value. Our assumed figure of \$50 per acre-foot was selected as representative of the San Joaquin Valley on the basis of a number of studies that utilized optimization techniques to estimate the marginal values of water. Generally, the duals in various classes of programming models indicate these marginal values. We could cite any number of studies and we believe that these estimates are the best available. They are also roughly similar (but almost always higher than) those market transfer values for agricultural water available from studies of other areas such as the Lower Sevier River in Utah and the Big Thompson project in Colorado. We deliberately chose high values for water since we wanted to be conservative in our claims of resource misallocation.

Furthermore, as the example in our article clearly shows, we utilized an indirect method of valuing water by capitalizing into land values the difference between what the farmer paid for water and what it was assumed to be worth to him. This gave us land values that are typical of those in the area. If water had been worth considerably more to the farmer, land values would have been much higher than those actually observed.

So what does Long propose as a substitute method for valuing water? He suggests that we look at the gross value of crops produced on irrigated farms. He calls these the "ignored benefits." Buy by any stretch of the imagination can this be valid? If water were the only costly factor of production, perhaps so. But what about all the labor, machinery, management, chemicals, and other resources that also contribute to agricultural production? Do they have no value or opportunity cost? Said another way, do they contribute nothing to the value added involved in the process of crop production? How can we impute to one input, water (surely a minor one in terms of per acre cost), all of the value of output produced by the jointly contributing factors? We trust that the fallacy of such a procedure is obvious.

Thus, the so-called facts which Long recites on the values of gross crop income from Reclamation projects are completely

irrelevant to the problem of valuing water. And what does it prove to argue that the subsidies to wheat, corn, and cotton farmers are even larger than the reclamation subsidies? Yes, we should do something about them also, but our paper was about irrigation subsidies. Also irrelevant is the argument that water projects produce other goods such as hydropower, flood control, recreation, and food processing. Of course they do, but we were dealing only with the irrigation component and considering only the separate costs for irrigation facilities. If the irrigation water benefits cannot exceed even these separable costs, then the project would be more attractive without the infeasible irrigation features. Society cannot be made wealthier by adding project features whose benefits are less than their costs.

Speaking of subsidies, Long completely misses our point on what the water subsidy is. Assume as we did that Bureau water (and we made it clear that the water at issue was that from the *newer* Bureau projects only) costs \$300 per acre-foot and that farmers pay \$20 dollars. We didn't allege that farmers receive the difference of \$180 as a subsidy. We went to great pains to argue that farmers receive only the difference between the value of water (\$50 per acre-foot) and what they pay for it. That was perhaps the most important point of the paper. The difference between what water cost the taxpayer and what it was worth to the farmer was a sunk dead-weight loss in canals, ditches, pumping plants, etc., that probably never could be recovered. That is the reason we believe that the newer Reclamation projects were squandering precious social capital.

We do not condemn all water development as being economically inefficient, even all federal development. There may be projects here and there in the history of the Bureau that could pass a rigorous benefit-cost test. Much of the early private development was undoubtedly expected to be feasible or the investors would not have attempted it. They paid all the costs and they got the benefits. Our focus was on the newer federal projects that have been built and those that are now being built or proposed by the Bureau. The data are there for all to see. The separable irrigation water costs for the likes of Auburn Dam, New Melones, the expansion of Shasta, the Central Arizona project, and the Central Utah project are above \$300 per acre-foot of water delivered, some far above. How can we as a society be wealthier if these projects are built unless the water is worth more than these costs?

Finally, there is no valid point either in comparing the taxpayers' resources utilized to produce irrigation water with the taxes collected from the producers who use the water. A bundle of inputs combine to produce crops and livestock. A tax on net income implicitly taxes all these inputs, not just water. Most of the inputs utilized in a project would have been used elsewhere in the economy and would have produced tax revenues in their alternative uses. A possibly relevant question would be to ask what the tax take by the government would be with and without the irrigation project. If the tax revenues were shown to be greater with the project than without, then the additional tax revenues might be validly compared with the taxpayers' resources utilized to build the project. It is our position, however, that if resources are misallocated in water development as alleged in our article, that tax revenues will likely be lower with the project than without. Even the government coffers are emptier because of the project.

In sum, it continues to be our view that uneconomic water development from the national viewpoint may well have resulted in more wealth in the reclamation states than would have existed without that development. There are more people living there. But it is probably true that *on average* these same people



and all others in the country have less per capita wealth and lower standards of living as a result of the uneconomic development.

A couple of issues are raised in Tom Mills' letter that deserve further attention and clarification.

The first is his belief that if farmers sell their water the local economy that is fueled by irrigation will suffer wealth losses. Specifically, he is worried that the value of his own business will decline, since he is an aerial sprayer. This is the old problem of secondary effects wrestled with by economists for several decades. Mills is no doubt correct that changes in the use and location of water will produce shifts in the distribution of income and wealth. Besides, the people who benefitted secondarily from the original development of water in an area may not be the same people who would lose in the event that water use is changed. These wealth effects, which are deemed inequitable, are the very reasons why political obstacles are often, if not always, placed in the path of resource shifts to more valuable uses. Furthermore, the political contest between the existing losers and the prospective gainers is never efficient. The losers generally know who they are, what their expected losses are, and can easily put political stratagems in place to block transfers. The gainers are mostly prospective and much less favorably positioned politically to resist. That is why these obstacles turn out to be so costly and durable.

But it should be of some consolation to Mr. Mills to realize that if the water moves to a more productive and valuable use that newly created primary and secondary income streams will probably be greater than the old ones. Even he might be in a position to capture a portion of these greater economic rents if his business is adaptable.

A second point that recurs in a couple of places in Mills' letter is the fear that transfers of water would somehow eliminate western agriculture and remove an important source of our food supplies. This is certainly not our view. One of our major points was that enough water has already been developed, with costs already sunk in dams, pumping stations, and ditches, and available at our advocated market-clearing prices, to insure the viability of irrigated agriculture. After all, irrigated agriculture consumptively uses such a high proportion of available water in the West that only marginal adjustments would have to occur to satisfy the demands of other uses. Being from the Imperial Valley, Mr. Mills must know that Los Angeles has proposed only to buy the irrigation water from the Imperial Irrigation District that is currently lost through leaky irrigation facilities and thus could be reclaimed by repairing those leaks without any loss of water to the agricultural sector.

Mr. Kittel of the Colorado Farm Bureau urges that as a society we take a look at all subsidies and not just those to irrigation water. We completely and emphatically agree! Most subsidies are very costly in wasting resources. We would welcome the opportunity to discuss some of the other subsidies in agriculture at some future date, but they were not the topic of our last *CHOICES* article.

We interpret the letter from Martin as being generally supportive of the positions taken in our article. We find that comforting since there are few students of western water so experienced and knowledgeable as Bill Martin. But let us respond to a couple of his points.

Martin seems to believe that raising the acreage limitation to its current level of 960 acres that can receive subsidized water solves the acreage limitation problem. We are not so sanguine. Martin admits that the economies-of-size studies on which he relies for empirical support are old. But because new studies have not been done, both he and we are guessing about the cur-

rent situation. We can point out, however, that the new rule which applies the limitation to leased as well as owned acreage constitutes a major change in the rules. It is our speculation that thousands of operations in California and Arizona alone will reduce the sizes of their operations since they cannot receive subsidized water on operated acreage above 960 acres and thus cannot successfully compete for land with farms that are growing to that size. Only time will tell whether we or he is right, but the data will furnish the proof if the rules of the Reclamation Reform Act of 1982 continue to stand and are rigidly enforced.

We would not challenge Martin's claim that farmers receiving water from the Central Arizona project are worse off because they were inveigled into signing contracts with the Bureau that are not in their best interest. But surely this cannot be used as evidence that landowners in general have not benefitted from subsidized water development in the West. The plain fact is that irrigated land values have risen sharply. Would Martin really have us believe that this would have occurred to the extent observed without subsidized water.

Finally, Martin disagrees with our assertion that societal wealth would be increased if institutional impediments to water transfers were removed. This is not a question of ideology but of correct interpretation of what is going on in the real world.

Martin interprets the evidence (we do not accuse *him* of ideological bias) as being that values of water at the margin are fairly close as between uses and areas, and thus that transfers would produce little additional wealth. In many areas where few impediments to transfer exist we would agree. We also agree that entrepreneurs are often ingenious in circumventing impediments. But consider San Diego's attempt to purchase water from farmers on the Little Snake River near Baggs, Wyoming. Would Martin disagree with our estimates that new raw water would be worth over \$500 per acre-foot to San Diego and somewhere around \$10 to \$20 to the farmers growing alfalfa, wild hay, and small grains in Wyoming. San Diego's alternatives from the California State Water Project, ground water mining, or from the Imperial Valley are very costly and may not be attainable at any price. All the farmers in Wyoming had to do was let the water run down the Colorado in exchange for a very attractive price. What an opportunity for a Pareto optimal trade! But it never happened. Why? Because of institutional impediments standing in the way connected to the Colorado River Treaty and fears in the Wyoming legislature that California was about to dry up Wyoming. The differences in the marginal value of water in this instance are so great and similar possibilities are so pervasive in the West that we can't believe that such trades would not produce significant increases in societal wealth.

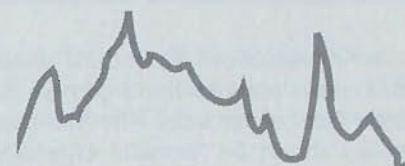


#### From: Walter Greenspan

Associate Director of Research  
International Trading Group, Ltd. Great Neck, NY  
Re: Edwards' Real Prices CENTERFOLD

Clark Edwards skips a bit too lightly over the issue of increased productivity when he jumps to the conclusion that farmers "face ... a continued longrun (sic) cost-price squeeze, as they have done for over a century."

Using the real wheat price since 1800, without



adjusting for the increased productivity that Mr. Edwards cites, understates considerably the real trend in farm revenues.

A truer measuring device, in my opinion, should be the real price of an acre's production of wheat. If a farmer can obtain more wheat, corn, soybeans, etc., from an acre than could be harvested 5, 10 or 20 years ago, then this should be part of the analysis.

Please, Mr. Edwards, how about another price graph showing the real price of an acre's production of wheat, soybeans, corn, cotton, sugar, etc., in a future CENTERFOLD article?



**From: Clark Edwards**

*Economic Research Service*

**Re: The Author Responds**

Walter Greenspan is right in saying there is more to farmer's well being than prices. He suggests that a truer measuring device should be the real price of an acre's production of wheat. But even such a measure oversimplifies the factors affecting farm income. Income varies with relative prices which I talked about, productivity which Greenspan talks about, and scale of operations which neither of us has mentioned. In addition, income per farm depends on all of the above plus the number of farms.

Wheat yield now is triple what it was five decades ago and the number of acres per farm growing wheat is up tenfold. But the terms of trade are down by half.

For some decades now, increases in productivity, enlarged scale of operations, and fewer farms have strengthened the farm income situation. My focus was on the factor that has been working against the farmer—falling real prices.

Martin and Brokken examined the real price of wheat in the February 1983 American Journal of Agricultural Economics and found a statistically significant downward trend. They conclude from these data, as I do, that the Malthusian specter is not yet upon us; population pressure on the food supply does not result in long term scarcity because farmers worldwide have considerable capacity to increase output through increases in technology, incorporation of more resources, regional adaptations, and changes in the structure of agriculture and its institutions.

The past century is one of worsening terms of trade for farmers, brought on in part by farmers' very capacity to increase production. Those who think farmer's prices will rise relative to prices paid in coming decades, either from economic forces or from Government intervention, are calling for a fundamental change in the long run trend. The same goes for those who expect little change in long run prices.

It would appear more reasonable to expect farmers (and help them when the farm sector comes under stress as it did early in this decade) to continue to find ways to make a living in the face of a continued long run cost-price squeeze, as they have done for over a century.



**From: Ann Y. Robinson**

*Soil Conservation Coordinator*

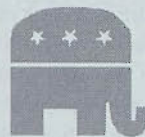
*Izaak Walton League of America*

**Re: Delano's "Food, Farm and Resource Policy"**

In "A Republican View: Build on the 1985 Farm Bill," Robert B. Delano outlines the argument that increased exports will solve farm sector woes. After two pages promoting the view that policy should be "demand expanding," he acknowledges that

the country also needs to conserve soil and protect groundwater resources. It is a relief to hear such concerns coupled with the preceding export fervor, since a headlong rush to increase agricultural exports is often accompanied by accelerated resource degradation.

Balance is the key to preventing such a scenario. Balance, and inculcating a habit of keeping one eye cocked to the long view. While this may be self-evident, it is worth restating considering the current political milieu.



Maintaining the conservation provisions in the 1985 farm bill will be important, as Delano says, but even now these measures are not sufficient to protect farmland resources. After three years of living with the conservation provisions, we are still losing soil, wetlands, and wildlife in agricultural areas, and polluting our above- and below-ground water supplies. It is questionable if the Conservation Reserve Program will achieve its goal of protecting 45 million acres of environmentally sensitive cropland. Wetlands continue to be drained for crop production despite swampbuster. Conservation compliance only protects our most erosive land and it has been weakened to the point where it will bring much less erosion reduction than originally estimated. The commodity program's tight "base" system still works against conservation and groundwater protection by discouraging soil-enriching rotations that can reduce pesticide dependence.

On the closely related front of rural development, resource problems continue to undermine the quality of life that has made these areas appealing. Groundwater contamination is part of the problem. So is nonpoint pollution of surface water, diminishing the attractiveness of rural areas for tourism and recreation. The appalling loss of game and nongame wildlife in farming areas during the last three decades reduces opportunities for wildlife-related activities, an under-appreciated though substantial contribution to rural economies.

An important goal of government farm and food programs may be to foster markets, but other top priorities should include preserving a decent environment and promoting an image of U.S. produced food as high quality. For example, instead of starting a trade war over hormones in beef, the government could help farmers provide what consumers want by finding ways to assist the growing specialty market for chemical- and hormone-free products.

Strongly export-oriented policies are likely to exacerbate existing resource problems unless they are moderated with complementary programs that provide incentives for stewardship, and disincentives for resource abuse. An all-out effort to increase markets in the short-term will gain us little if it means further bankrupting our basic resources and threatening our future food security.



**From: Andrew Schmitz**

*University of California*

**Re: Ravnholt and Hammer's "Sugar Policies"**

Ravnholt contends that the U.S. sugar program is needed, fair, and produces efficient results. On the other hand, Hammer argues that the program is outdated and, if it is not changed, its cost will become excessive and it will fall by the wayside. It is difficult to support the position taken by Ravnholt and Hammer overemphasizes future budgetary outlays with continuation

**SUGAR**

of current U.S. sugar programs.

Ravnholt makes a serious omission. Sugar policy has to be put in the context of other farm programs. As we have pointed out in several previous pieces based on our research, sugar producers are much better treated in terms of protection and government support than are many other agricultural sectors.

In contrast to other government supported commodities, such as corn, there are no payment limitations for sugar producers. This is because there are no government payouts to sugar producers as they receive transfers from the general public as quotas hold prices above world market levels. Therefore, for sugar, the larger the producer the greater are the returns from the U.S. sugar program.

Ravnholt makes interesting comments about the financial strength of the sweetener industry. However, one has to keep in mind that there is also a great deal of financial strength in sugar production, processing, and in the manufacturing of corn sweeteners. There is a high degree of concentration in both sugar production and processing. Also, one has to remember that one of the most successful multinational grain companies manufactures corn sweeteners which are highly substitutable for sugar.

Ravnholt is correct to argue that the world sugar price, or what is called the free market price, is really not a free trade price. However, given the price at which the United States can import sugar, our results show, as do those of many other studies, that the cost to the United States is high from the current U.S. sugar program. Stated in a different way, what U.S. producers gain from the U.S. sugar policy is much less than what the rest of the economy, including consumers, lose from the program. Our results also show that quotas are the most costly policy instrument to transfer income to producers from governments. Many other schemes are much more appropriate and efficient for transferring income.

Some of the empirical evidence presented by Ravnholt reported seem somewhat inconsistent. For example, some of this evidence suggest that the supply schedule for sugar, at least when prices drop, is quite inelastic. In other cases the empirical findings imply that supply is elastic. For example, Ravnholt reports results which show that in a free trade world sugar prices would be in the neighborhood of 20 cents per pound. Using this number, he then argues that the support price in the United States is at the free trade level and, therefore, the program inflicts zero consumer costs—an ingenious argument indeed!

However, Ravnholt also argues that the U.S. supply schedule is price inelastic. To obtain large gains from trade and large price impacts from trade liberalization (e.g., from the current 9 to 10 cents per pound to 20 cents per pound), one generally has to assume elastic supply schedules in sugar importing nations that are protected along with inelastic schedules for exporters.

In addition, there is a high degree of variation in empirically based estimates of the effects of free trade on agricultural prices. For example, estimates of free trade effects on wheat prices vary from zero to an increase of 40 percent. The same is likely true for sugar although, admittedly, empirical studies on sugar are not as abundant as for many of the other commodities. Therefore, the extent to which one has faith in the 20 cents per pound number as a free trade price largely depends on what side of the industry one is supporting.

However, Ravnholt's "20 cents per pound under free trade" raises the question identified by McMinimy in the First Quarter 1988 issue of *CHOICES*, "Should policy analyses use distorted world prices as a gauge of estimated free market prices against which to analyze farm programs?" This topic is still open to methodological debate. As indicated, our earlier results use

world prices as a gauge. Clearly, these prices are distorted by other countries' policies. Obviously, these prices are well below possible world free market prices. Consequently, it is clear that the United States as a whole could reap benefits by buying additional sugar above current levels at prices below the free market levels. In this sense the exporters of sugar would be transferring, relative to a free trade outcome, added resources to the United States. Of course, the United States has been unnecessarily transferring resources to other countries for quite sometime for many export commodities including wheat and corn. For example, under the Export Enhancement Program for wheat, resources are transferred from the United States to importing countries.

Ravnholt's point that there is general support in the United States for the U.S. sugar program is amusing to me. People I talk with do not have the slightest clue about the U.S. sugar program. Therefore, I wonder, how can the general public seriously evaluate the goodness or badness of the U.S. sugar program?

The distribution of quota rents is a point that is not discussed but is very important. Research on this topic is badly needed. For example, in some countries, it appears as if the government receives the quota rents (i.e., the difference between the U.S. domestic price and export price times export volume). In other countries the rents are obtained by the original sugar producer who sold their land and sugar properties to the government. This appears to be the case, for example, in Trinidad. Part of the distribution question is the magnitude of the rents. For example, it appears as if, initially, when the United State introduced its program, exporters were made better off since, even though the quantity of exports fell, the total revenue may have increased because of the higher price of sugar that was actually exported to the United States. However, as time marched on, the major sugar exporters have received significantly less for exports vis-a-vis a free trade situation.

Ravnholt argues that exporters would not gain significantly from a reduction in the support level in the United States. He contends that prices would only increase by roughly 3.5 to 4 percent. If one can boost the price of sugar to 20 cents per pound through freer trade as was argued earlier, then it seems to me like a 30-percent reduction in the U.S. sugar program would increase prices by more than 3 to 4 percent.

For example, given current world sugar prices of between 9 to 10 cents per pound, a 20 cent per pound free trade price is more than a 100 percent increase. If the United States is not one of the culprits in depressing world sugar prices, then who is? Most prices in sugar producing regions (e.g., Australia) are below the U.S. level; hence, why would the free trade price be approximately equal to the current U.S. support price? Surely, the European Community is not the only price distorting sinner in the world sugar market.

Also, U.S. policies adversely affect the volume and I think the value of sugar exports from developing countries to the United States. U.S. policies lead to larger corn sweetener production in the United States. (However, the effect on corn prices is more like 10 to 15 cents per bushel of corn than the 25 cents suggested by Ravnholt.) I hypothesize that protectionism for sugar producers in the United States and other developed countries leads to losses to developing sugar producing countries that are greater than the potential benefits from international assistance programs.

These relationships suggest that part of the solution lies in freer trade. However, how to bring this about is not clear and certainly the progress to date under GATT has not been encouraging.

Hammer overemphasizes the budgetary outlays needed in the future under the current U.S. sugar program. By so doing he provides a misleading perception on the costs of the U.S. sugar policy. The costs are large, but these are hidden because government expenditures are not involved. As Ravnholt points out, the U.S. sugar policy, because of its emphasis on quotas, does not result in a transfer of money from the government to producers. This is in sharp contrast to exported commodities such as corn and wheat where under the Farm Bill large transfers are made from the U.S. Treasury to producers. Hammer's emphasis is on dynamics. He focuses on prospective government outlays if the current program continues. His estimates imply a substantial supply response in U.S. sugar production if sugar prices are kept high relative to the prices of other commodities. In some areas where competing crops are available, distortionary relative prices generate a significant supply response. However, in other areas, especially in sugarcane production areas, where alternative crops are limited, the supply response is not nearly as great. Given both the current production picture of sugar in the United States and the degree of sugar imports, it will take some time before the United States becomes a major sugar exporter requiring the use of export enhancement type programs and export subsidies in general.

Hammer's major point is that the sugar program has to be changed and that the sugar producers do not need nor should they obtain benefits from society above those received by other major commodity groups. Under the sugar program, it is very clear that the transfers are sizeable, but they are hidden since the government transfers are nonexistent. This is why it is extremely difficult for the U.S. government to replace sugar quotas with deficiency payment programs. Even though a deficiency payment program is much more efficient than quotas, there is the problem that deficiency payment programs require government outlays.

The question remains if the sugar program is to be overhauled, how is it to be done? Lowering the level of support clearly hurts U.S. sugar producers. The effects on beet producers will be less than on cane producers since the former have more production alternatives available. Can ingenious schemes be devised to make the program more efficient without lowering sugar producers' incomes?

Before the new Farm Bill, more work is badly needed to refine the estimates on gains from freer trade and who will be the losers and gainers. In addition, appropriate compensation schemes for losers need to be worked out. In all of this, the methodological issue of what world price to use in the analysis needs to be kept firmly in mind.



**From: Eiler C. Ravnholt**

*Vice President*

*Hawaiian Sugar Planters' Association*

**Re: The Author Responds**

As a perennial critic of U.S. sugar programs, Professor Schmitz ran true to form in his comments on my recent defense of the current program. I am surprised, however, at his elitist suggestion that public support for the program is of no consequence because the public hasn't "the slightest clue about the U.S. program." While they admittedly lack knowledge of the current sugar program, as well as other commodity program details, they do have knowledge of the availability and price of sugar in our market, and that is what's really important.

Professor Schmitz makes the point that the sugar program

must be placed in context with other commodity programs. Granted, but there is no single pattern. Some have loan programs, target prices, and deficiency payments and utilize export enhancement programs or marketing loans and acreage set asides. Others have loan programs or guaranteed minimum prices without acreage or production restraints. While some face reduced loan rates and target prices, one is even assured increases to cover increased costs. Sugar has but a fixed rate loan program which is available only to processors because of the perishability of the beets and cane. Sugarbeets and sugarcane are not only perishable, but economics dictates they must be processed close to where they are grown and that processing facilities operate at near capacity. The symbiotic relationship between grower and processor, therefore, prevents sharp supply response to changing market signals. The sugar program is different because sugar is different. The U.S. is a net importer of sugar, not an exporter as for most of the other commodities. This fact not only explains, but justifies a different approach. Given the paucity of federal dollars available for the direct support of our nation's farmers, producers of other crops welcome the ability to use alternative means to ensure sugar farmers' survival. Moreover, sugar is not the only commodity using import quotas to defend the integrity of its program.

Both Professor Schmitz and Tom Hammer claim that the Food Security Act of 1985 uniquely favors sugar producers over producers of other commodities, a charge not justified by credible evidence. While opponents of the program measure sugar farmers' return over cash expense per acre, such comparisons are almost akin to comparing acres of apples to acres of wheat! The best measurement of fairness is surely the percentage return on full economic cost. By that measure, the return has been less for sugar than for a number of other crops. Moreover, America's farmers, including its sugar farmers, are certainly not doing very well when compared to the giant industrial users of sugar and corn sweeteners who have spearheaded and financed the attack on the current program in their search for ever greater profits. Their continuing use of the phony \$3 billion cost estimate for the sugar program is based, as Professor Schmitz notes, on a world price distorted by other countries' policies. While such countries might willingly subsidize U.S. consumers by expanding their production and continuing to sell us sugar at prices below their costs when U.S. producers are forced out of business, I wouldn't bet the farm on it.

Professor Schmitz is also critical of my stated minimal response of world prices to changes in the U.S. support level. However, greater changes will occur only if a major share of U.S. producers of sugar and/or corn sweeteners are forced out of business, for the inelasticity of total U.S. sweetener demand, in the price ranges contemplated, is broadly acknowledged. World sugar production has been increasing, apparently little influenced by the so-called world price—a recognized dumping price. That price, which averaged 29¢ in 1980, fell to 4¢ for 1985 and is now at about 10¢ a pound, has been accompanied by a 26 percent increase in world cane sugar, a 15 percent increase in world beet sugar, and a doubling of HFCS production since 1980. U.S. sugar acreage increased only 3 percent between 1981 (when the present program was adopted) and 1987. This has been exceeded by the percentage increase in world sugar acreage despite the low world prices. Meanwhile, the EC continues to dump a great deal of heavily subsidized sugar on the world market, at an average annual expenditure for the years 1982 through 1988 of some \$1.85 billion, and has been principally responsible for keeping prices on that market below the production cost of the most efficient producers: This is

achieved by maintaining high consumer prices within the EC countries and assuring their producers returns in excess of U.S. program guarantees.

An interesting challenge is posed by Professor Schmitz: "Can ingenious schemes be devised to make the program more efficient without lowering sugar producers' income?" The U.S. sweetener industry, which has endorsed worldwide subsidy-free trade in sugar, is certainly willing to join in that search. To date, however, the changes proposed would clearly lead to a loss of much of the U.S. sugar and corn sweetener industry to the unique benefit of the large and very profitable industrial user industry under the false premise of helping foreign producers and American consumers, a result we cannot accept.



**From: Thomas A. Hammer**

*President*

*Sweetener Users Association*

**Re: The Author Responds**

Dr. Andrew Schmitz has expressed skepticism regarding the ability of the sugar program's powerful incentives to evoke a substantial supply response in U.S. sugar production and the resultant budgetary exposure from such an uneconomic response.

In my article, I postulated that if the current 18-cent sugar loan rate were extended through the 1995/96 crop, the United States could easily be producing between 8 and 9 million tons of sugar. This assumption is also predicated on a belief that other competing crops will continue to see loan and target prices stepped down by 2-3 percent a year (as is the case under the 1985 Farm Bill) over the same period. In such circumstances, growth in demand for sucrose will be limited by competition from crystalline fructose, lower-priced aspartame, and a variety of new, low-calorie, high-intensity sweeteners. Under this scenario, skepticism about the size of future budget outlays on the sugar program is surprising given recent experiences under the current policy.

Between the 1982 and 1987 crop years, U.S. sugar production rose by 1.5 million tons to 7.3 million tons while HFCS displaced 2-4 million tons of sugar demand. If sugar price supports stay at their current remunerative level, while those for other crops are further reduced in the next farm legislation, the incentives to expand beet and cane production will be irresistible. Moreover, the processing capacity will be there to handle larger crops as existing facilities are refurbished to improve throughput, as processing seasons are lengthened, and as sugar recovery rates continue to rise.

If production rises to 9 million tons, the possibility raised in the article, and the United States turns into a net exporter of,

## Have You Read...

*Farm and Food Policies and Their Consequences*, authored by Kenneth L. Robinson at Cornell University? The book is published by Prentice-Hall, Inc. Englewood Cliffs, NJ 07632. It covers a range of policy issues—the usual areas encompassed by food and agriculture plus others like structural policies and assisting human resource adjustments. The book was prepared by Robinson for undergraduate university students. Others, even those with extensive economic training, will find the book useful in helping them to think about important policy issues.

say, 750,000 tons, export subsidy costs would be significant. World sugar prices would be severely depressed by the 2-million ton swing in the supply-demand balance (from U.S. imports of 1,250,000 tons to exports of 750,000 tons). With a U.S. price of 22 cents per pound of raw sugar and a world price of 10 cents, the government would have to pay an export subsidy of 12 cents per pound, just as the European Community has had to do under its program. That is \$240 per ton or a total of \$180 million annually, or almost \$1 billion over the course of a 5-year farm bill. And before we even got to that stage, the transition from being a net importer to being a net exporter would be both chaotic and costly due to price support loan forfeitures and disruption of normal marketing patterns. This situation will not be sustainable in a highly charged, budget-conscious political environment.

I agree with Schmitz' general view that the sugar program is a costly mistake. However, the answer to his question of how to overhaul the sugar program does not require ingenious compensation schemes or complicated new approaches. As I said in my article, the answer is simply to adopt a lower support price that strikes a balance between the needs of consumers, domestic workers, industrial users, sugar growers, and foreign suppliers.



**From: Harold F. Breimyer**

*University of Missouri-Columbia*

**Re: Irwin's "Untied Profits and Risks"**

It's gratifying that George Irwin, when writing about "untying profits and risks" in the Fourth Quarter 1988 issue of *CHOICES*, carries forward my earlier observation that much economic policy of recent years socializes risk but leaves profit in private hands. Irwin notes, sagely, that the privatization of business enterprise advocated so noisily during the Reagan years was in fact only partial. It was confined to the profit side. Risk was often left socialized.

It's an interesting unbalanced equation, an "irony," Irwin says, that the risk from which government shields private businesses, including farms, often is a creation of government itself. He calls these "macro policy risks," a felicitous term.

Government has a means by which to recover a portion of the private profit accruing from its costly socializing of risk. It's the progressive income and estate tax. Irwin mentions tax policy only in noting the increased tax revenue generated by the grain export boom of the 1970s. Economists generally seem loath even to mention the evil word, tax. But tax policy is a logical companion to the socialization-privatization tandem in what Irwin calls our "mixed economic system."

Moreover, it's tax time again, the avalanche of denials notwithstanding. Among the many sources of revenue enhancement (the euphemism for taxation) being discussed, the income/estate tax gets only occasional mention. Yet, a more progressive income and estate tax system would not only meet tests of equity and fiscal soundness, and tap all sorts of windfall and monopoly-generated income, but would enable society to share in the private benefits of public absorption of risk.

As government created them, it may be right and proper for government to protect private enterprise from macro policy risks, as Irwin says. But having done so, it is justified in recycling back a portion of the income that is generated thereby. Income and estate taxes are the appropriate instrument. **C**

**Socialization**