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HALFWAY TO THE FREE MARKET:

Voluntary Supply Control With Biddable Income Support

by Lloyd D. Teigen

The "farm problem" for most of this century centers on low income and excess supply. Many approaches to the problem have been tried, but the search for a solution continues. Direct purchase programs were used in the 1920s, acreage allotments and nonrecourse loans were introduced in the 1930s, export promotions and the soil bank began in the 1950s, marketing certificates were used in the 1960s, deficiency payments in the 1970s, and PIKs, ARPs, and EEPs in the 1980s. Over time, the level and volatility of the budget costs of these programs increased.

Criticisms of current programs are widespread. Program benefits go to the largest producers and inflate the value of land and other resources. Mandatory program provisions restrict operator freedom. The production targets aren't very explicit and weather often masks actual supply control effects. Program incentives contradict market price signals and often imply false scarcity of the commodity, land, or other resources. Generally, programs meddle with the free market.

If the free market might solve the farm problem, how can we get there from here? This proposal is one such way. Producers bid for decoupled income support payments based on past output and fair exchange prices. Supply control is achieved by rejecting high bids beyond a targeted national amount. All farmers allocate their marginal acreage using expected market prices, not program incentives. If the supply control is effective, prices rise enough to eliminate Federal budget exposure.

The Proposal

In the "voluntary supply control proposal" all commodity programs would be replaced by a single program with these features:

- National production targets by commodity;
- "Fair exchange prices" by which all target prices and loan rates are expressed;

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- Decoupled income supports where each producer bids for his target price with only the lowest bids accepted, and only on part of the crop (less than the target);

- Reduce all national production loan rates to 50 percent of the fair exchange price.

This proposal differs sharply from existing programs. Each bidder has his own target price, rather than one national target price. But, too much greed earns the bidder unwanted publicity. Payment is based on past output, rather than current production. Not every bid will be accepted, in contrast to the guaranteed access under current programs. Farms must plant a minimum share of acreage to the crop, with no maximum. However, all current output is priced in the market, not by the program. Those with bids "in the money" also get a check based on their target price and past production. Loan rates set at 50 percent of fair exchange prices no longer substantially affect the market, but cover most variable costs.

➤ **This plan for voluntary supply control weans agriculture from the Federal treasury and reduces the Government's role in crop production. Producers bid for their personal level of income support from the government, but not all bids are accepted. The Government accepts only the lowest bids from those who, in total, have produced less than a national target of production. Payments are based on average past production and are not linked to current or future production. Farmers produce for the market, not the program, since expected market prices guide planting decisions, not program payments. Thus, production should mirror that under free market conditions.**

The bidding process reduces excess benefits to low-cost producers and lowers Government outlays compared to current programs. The reduced program benefits and market pricing of commodities slow the increase of land values.

The structural adjustments motivated by the program are unique. It is designed to produce a "leaner, meaner," and more competitive agricultural sector. It transfers income to low-cost producers (at least, low-bidding producers) and withholds support for high-cost producers who bid high. The financial stress felt most by high-cost producers encourages their exit. Discretionary income in the hands of low-cost producers helps them bid for the resources owned by the higher-cost producers.

The bidders' higher incomes raise the potential price they are willing to pay for the resources of the departing farmers. Thus, exiting farmers gain from the program, even if they receive no direct payments from it. Low-cost buyers would transfer their technology to acquired resources, expanding the capacity of the industry.

Particulars Of The Proposal

Fair Exchange Prices. "Fair exchange prices" (FEP) are moving average prices, adjusted for input price inflation. George N. Peek introduced the concept and terminology in his pamphlet *Equality for Agriculture* (1922). In particular, the FEP is a commodity's 10-year average market price multiplied by the ratio of (1) current prices paid to (2) the 10-year moving average of prices paid by farmers. The ratio of a current index value to its 10-year average varies with the changes measured by that index. Given recent farm input price changes, this ratio stands near 1.08. With the 1980-89 wheat price averaging \$3.40, its fair exchange price would be \$3.67 per bushel. The income support bids are expected to converge on a target price near the FEP.

The proposal offers commodity-specific safety nets to all producers in the form of (nonrecourse) loan rates set at 50 percent of the "fair exchange price." I would prefer using the variable cost per unit on the least-cost farms whose output totals the national production target. Fifty percent of FEP is easier to obtain than the production cost estimate. This loan rate will rarely interfere with the market price.

Production Targets. National production targets for each supported commodity would be expressed as the three-year average total disappearance (domestic plus exports), excluding any change in stock levels. Three years is an arbitrary averaging period, short enough to reflect current conditions and long enough to average out a single year's events. Disappearance reflects market demand rather than the effects of vagaries of the weather or production.

Alternatively, a fixed level for each commodity could be specified. For example: 7.0 billion bushels corn, 1.9 bil. bu. soybeans, 2.4 bil. bu. wheat, 11 million bales of cotton, 130 bil. lb. of milk, 60 mil. lb. wool, 13 mil. lb. mohair, 22 mil. tons sugar beets, 28 mil. tons sugar cane, etc. Such targets could either encourage or discourage production of the commodities. The wool program ostensibly is an incentive to encourage domestic production, while other programs often restrict supply. The target based on total disappearance would encourage wool production, since much of its consumption is imported.

Income Support Bids. All producers can bid for income support, stating the target price they want for a commodity (stated as X percent of the "fair exchange price"). If the bid is accepted, the per-bushel payment is the difference between this target price and the commodity price in the first 5 months of the marketing year. The farmer's total payment is the per-bushel payment times his bid quantity, which is 1.1 times his 3-year average production of that commodity. The factor 1.1 reduces the chance that farms receiving support produce more than the current production target.

Bids are accepted, lowest first, until the total quantity bid equals the national production target. Bids based on target prices higher than the "fair exchange price" could be accepted if the bidders' name, address, bid amount (fraction of FEP), and payment history were made available to the public. But, the Government is not obligated to accept bids exceeding the "fair exchange price." The Government could also reject high bids if needed to control expenditures.

Each successful bidder must plant at least 95 percent of his 3-year average acreage in that crop (with no upper bound on planting). This ensures a minimal production of the crop, cushioning the effects on input and commodity markets. It also protects non-program crops, by somewhat limiting producers' abilities to shift among crops.

VOLUNTARY SUPPLY CONTROL PROPOSAL

For every commodity, at the national level:

1. Establish Fair Exchange Price concept in Law as:

- Inflation-adjusted moving average price = 10-year average market price times the ratio of the current Prices Paid Index to its 10 year average.
- The inflation adjustment ratio is near 1.08, given recent input price changes.
- Using 1980-89 price averages, for example:

Wheat	3.40	*	1.08 = 3.672 per bu.
Rice	8.03	*	1.08 = 8.672 per cwt.
Corn	2.48	*	1.08 = 2.678 per bu.
Soybeans	6.25	*	1.08 = 6.750 per bu.
Cotton, upland	.607	*	1.08 = .656 per lb.

2. Set Loan Rate at 50 percent of Fair Exchange Price, for all commodities.

- Offer nonrecourse loans to all producers.
- Won't interfere with market price.
- Protects only variable costs, not overhead.

3. Set National Production Target as 3-year average disappearance (domestic + exports).

- Less than actual production during most years for most commodities.
- Would target more wool (a supported import) than actually produced.

4. Establish a Biddable Income Support Program with the following rules:

- No commodity may have a price or income support program different from this bidding process.
- No bid is guaranteed acceptance — this is not an entitlement.
- Farmers bid for their personal target price, expressed as a fraction of the Fair Exchange Price.
- The income support payment for each farmer equals his deficiency payment, times 1.1, times his 3-year average production.
- The deficiency payment for each farmer is the difference between his personal target price and the market price during the first 5 months of the marketing season.
- Bids exceeding the Fair Exchange Price may be accepted only if the producer's name, address, payment history, and bid are published.
- Lowest bids must be accepted first.
- Bids may be accepted from producers whose cumulative production history is less than 90.9 percent (1/1.1) of the production target.
- Producers whose bids are accepted must plant (or milk) at least 95 percent of their 3-year average acreage (number of cows) to that crop, but have no upper limit on this year's production.
- Producers need not bid for income support with every commodity for which they have a production history.

How And Why It Works

Market conditions determine prices, and the expected market price induces that last bushel of output. Support is only offered on quantities in balance with market demands. "Excessive" production in high-cost areas is not unduly encouraged. The program rejects the highest bids, likely from the highest-cost producers—forcing a market valuation of their resources and product. Supporting all commodities by the same kind of program reduces allocative distortions.

Publishing bids for prices exceeding "fair exchange price" would deter producers from bidding above that level, and estab-

lish a (modal) limit point in the distribution of bids. Estimated budget cost shouldn't exceed the product of the expected deficiency payment and the production target.

Prospects of relatively large decoupled income-support payments encourage participation. Producers can bid to participate in any number of commodity programs with no risk other than rejection of their bid. Compliance merely requires a production history and entails no additional cost. But, producers whose bids are rejected must rethink their decision to grow that crop and may produce less.

Production on participating farms will not likely exceed the production target. When the 3-year average acreage is planted, yield must increase more than 6 percent per year to produce 110 percent of the 3-year average of total output. Since most crop yields have increased about 2 percent per year, output could only expand via additional acreage, and that at the expense of less output from other commodities. Nonparticipating farms might increase their output if they expect the program will raise market prices, but not enough to replace the reductions on participating farms.

Consequently, the program-induced "short" on the market would raise prices—perhaps above the "fair exchange prices" on which most deficiency payments would be based. Budget exposure would fall, and the market would move toward equilibrium. Higher market prices raise subsequent years' "fair exchange prices" and higher levels of consumption or exports increase the production targets and the allowable bids.

Numerical Examples

The effects of the program on a farmer and an administrator of the program are shown in these examples.

A Farmer's Example. Consider a farmer with 200 acres of cropland, planted equally in corn and soybeans. His 3-year production averages are 14,000 bushels of corn and 4,000 bushels of soybeans. He could borrow slightly more than \$32,000 for production expenses, based on loan rates of \$1.34 for corn and \$3.38 for soybeans, to be repaid at harvest. Suppose that his bids for target prices of \$3.00 for corn (112 percent of FEP) and \$6.50 for soybeans (96 percent of FEP) were accepted. He must plant 95 acres to each crop and allocate the remaining 10 acres as he sees fit. If the market price for corn turns out to be \$2.90 and the price of soybeans at \$6.60, he'd receive a deficiency payment for corn, but not for soybeans. His check for the corn payment would be \$1,540 (10 cents on 110 percent of 14,000 bushels), regardless of his current crop. Since the target price he bid for soybeans is less than the market, he receives no payment. To produce the amount for which he's paid requires exceptional yield growth. Producing 15,400 bushels of corn on 95 acres requires a 162 bushel yield, 16 percent higher than his average. If he planted 105 acres to soybeans, he'd need a 42 bushel yield to produce 4,400 bushels.

An Administrator's Example. If the national production target is 7.0 billion bushels of corn, accept bids from farmers whose production history is 6.36 billion bushels. Pay them based on 7.0 billion bushels, regardless of this year's production. Since the deficiency payments depend on market prices, total production must be estimated. Participants probably won't produce more than the production target. If they plant exactly their 3-year average acreage and the yield increment is 2 percent per year, they would produce 6.556 billion bushels. To produce 7.0 billion bushels with a 2 percent yield increment, they must plant 106.8 percent of their average acreage. Output of nonparticipants is harder to estimate. If their bids are rejected, will they plant the

Low Bidding versus Smart Bidding

This article has discussed low bids and high bids, but smart bids must also be examined. Smart bids are low enough to be accepted, but high enough to likely be in the money. Low bids that are accepted but out of the money are worth little. Likewise, bids apt to be in the money but too high to be accepted are worth nothing. Smart bidders submit the highest acceptable bid. Smart bidders gain more under this program than other "low bidders". The skills of a smart bidder should translate into other forms of business acumen and operational efficiency.

These prospects have obvious implications for program administrators to avoid "communicating" in words or actions the level of bids that they will accept.

same, no corn, or less than indicated by their pre-bidding expected prices? If they'd planned on the minimum corn acreage in the program, they are now free to plant even less. If other crops are viable options, they could switch to or expand those commodities. Figuring the response of nonbidding corn growers entails understanding why they didn't bid. If another crop appears much more profitable, they might possibly plant no corn or much less than average this year.

If, as I expect, participants' output changes more than nonparticipants', the supply control will be effective. Production should match demand, real prices should come out near recent levels, and nominal prices exceed the Fair Exchange Prices. Since I expect few bids above the Fair Exchange Price to be accepted, the budget cost should be very small. However, because it's voluntary, this supply control is somewhat loose, and budget cost might rise. Still, this program's cost remains well below the cost of existing farm programs.

In Closing

The free market has often been offered as a solution to the farm problem, generally with no transition from existing policies. This proposal provides that transition. It results in free-market production levels, while providing a modest level of income support. The support comes freely to those not wanting too much. The decoupled income supports act like put options on prices, worth more to farmers' risk-averse lenders than to the farmers themselves.

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