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SOME IMPLICATIONS OF MARKET ORIENTED FARM POLICIES

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Introduction

Current U.S. agricultural commodity programs are not preventing American farmers from failing financially. Farm bankruptcies are increasing. Prices for wheat, feed grains, rice, and cotton are near their loan rates, and soybean prices are below \$6 a bushel. Foreign crop production is increasing while the United States operates acreage reduction programs, and U.S. exports are level or falling. Direct U.S. government payments to farmers reached \$9 billion in 1983 and \$8 billion in 1984.

Proposals have been advanced which supporters claim would enable U.S. agriculture to react to changing conditions in world markets. While the proposed options vary, most suggestions for "market oriented" farm policies include a transition period to price and income supports tied to market prices rather than estimates of cost of production or farm income goals.

In the United States, target prices and loan rates would be tied by formula to averages of past market prices. Deficiency payments, acreage reduction programs, and dairy price support payments would be phased out. Loan rates would fall below market clearing prices, and programs to stimulate exports would be continued.

What might occur if such a set of market oriented farm policies is adopted? I will begin by presenting baseline assumptions for 1986/87 to 1991/92, and indicate the outlook for our major program crops if current farm programs are maintained. I will then outline the major provisions a more market oriented farm bill might include, and show what changes might occur in U.S. crop markets if such a bill were adopted.

1985  
Agricultural policies

## Current Programs

In the absence of new farm legislation, target prices and loan rates for the major program crops could remain at levels near those of 1985/86 (table 1). If current support levels are maintained during 1986/87 through 1991/92, the maximum deficiency payment rate on wheat would continue to be \$1.08 a bushel, rice \$3.90 a cwt, corn \$0.48 a bushel, and upland cotton \$0.26 a pound. The minimum soybean loan rate would continue to be \$5.02 a bushel. With these support levels, acreage reduction programs and cash land diversion programs similar to those of 1984/85 and 1985/86 would continue to be necessary. Wheat and cotton plantings would probably need to be limited to no more than 70 percent of a farmer's base acreage, rice plantings to no more than 50 percent, and corn acreage to no more than 80 percent.

A continuation of current programs, with loan rates set above market clearing levels for wheat, rice, and cotton, would result in rising surpluses. As an example, total use of wheat could rise only slowly during 1986/87 to 1991/92 from about 2.1 billion bushels to 2.3 billion. Wheat exports might fall to 1.2 billion bushels, down from the 1981-record of 1.8 billion. The \$3.30 a bushel loan rate, combined with a strong dollar, will encourage foreign

Table 1.--Baseline program assumptions

Crop	Target	Loan	Acreage reduction program	Cash land diversion
	Dollars		Percent	
Wheat	4.38	3.30	20	10
Rice	11.90	8.00	20	30
Corn	3.03	2.55	12.5	7.5
Soybeans	--	5.02	--	--
Cotton	0.81	0.55	20	10

producers, world economic growth during 1986 to 1991 will probably be less rapid than it was in the 1970's, and the U.S. dollar may depreciate only slowly, if at all, during the 1980's.

During 1972/73 to 1981/82, U.S. and foreign wheat exports generally grew at the same rate; in 1981/82, the U.S. share of world wheat exports was the same as it had been in 1972/73. However, since 1981/82, U.S. wheat exports have dropped to 35 percent of world wheat exports, down from an average of 46 percent from 1972/73 through 1981/82. The loss of world market share for U.S. wheat reflects fundamental changes in the world economy and the competitive position of the United States in world markets--the rise in the value of the dollar, foreign currency needs in third world countries, and the rise of the U.S. loan rate in terms of foreign currency. During 1986/87 through 1991/92, almost all the growth in world wheat trade will likely go to foreign wheat exports if U.S. farm programs continue as assumed.

Under the baseline assumptions, U.S. wheat production could rise slightly from 2.6 billion bushels in 1984 to 2.7-2.8 billion by 1991--despite continuation of acreage reductions. Wheat acreage could drop to between 70 to 75 million acres, down from 80 million in 1984. But wheat yields are expected to rise from 39 bushels an acre in 1984, to 42 to 44 bushels an acre in 1991. This represents a continuation of the root cause of the American farm "problem"--yields rising faster than use, ending stocks rising, and real prices falling.

The outlook for other crops, assuming a continuation of current programs, is similar to wheat. Stocks of rice could rise from 64 million cwt in 1984/85 to 350 million cwt in 1991/92. Rice exports will probably decline, since the loan rate of \$8.00 per cwt is roughly twice world market prices. The introduction of new semi-dwarf rice varieties could push yields from 4,926 pounds per acre in 1984 to 6,450 pounds in 1991.

Corn ending stocks might rise from 1.2 billion bushels in 1984/85 to 3.1 billion by 1991/92. This would leave the stocks-to-use ratio for corn near 0.35 in 1991/92. Corn exports will probably rise only slowly from 1.7 billion bushels in 1985/86 to about 2 billion bushels by 1991/92.

Soybeans ending stocks could stay between 200 and 400 million bushels. Soybean exports are expected to rise slowly, perhaps to about 1 billion bushels, but increased soybean production in Brazil will probably prevent U.S. exports from expanding rapidly.

Ending stocks of cotton could exceed 7 million bales during the late 1980's. Increased production of short staple cotton in China and Pakistan is reducing the export market for cotton from Texas and Oklahoma, and exports could fall as low as 4 million bales. Textile imports will probably cause U.S. mill use to continue down.

#### A More Market Oriented Farm Program

Some advocates of market oriented farm programs suggest that U.S. loan rates should equal 75 percent of national average farm prices during 3 preceding years, and that target prices should equal a declining proportion of average farm prices during the 3 preceding years. Payment yields should equal a moving average of actual yields, although payment yields could be adjusted upward following disaster-affected harvests. Also, each farm's base acreage should equal a moving average of actual planted acreage, taking into account established crop rotation schedules and other factors the Secretary of Agriculture deems necessary. Finally, to be eligible for deficiency payments and non-recourse loans on all major crops but soybeans, farmers might be required to limit their plantings to no more than 85 percent of their base acreage in 1986, 90 percent in 1987, and 95 percent in 1988.

Advocates of these kinds of policies believe that loan rates should be set below market prices to insure that U.S. products are competitive in world markets. They believe that deficiency payments are to be phased out over several years, thus providing a transition period, but eventually forcing farmers to look solely to market prices for income. Advocates think that all program variables should be tied by formulas to actual market prices, yields, and plantings. This means that all program crops will receive the same level of income support relative to market prices. The formulas also sever any remaining links between target prices, loan rates, and costs of production. This might make it more difficult for future Congresses to raise support levels. By substituting fixed rules for discretion in agricultural policy, it is thought that farmers will learn to react to price expectations rather than to anticipated government programs.

#### Effects of a Market Oriented U.S. Farm Program

Adoption of a farm bill similar to the one described above, would cause target prices and loan rates to fall from their current levels. Farm prices would fall, at least initially, but exports and domestic use will rise.

The loan rates for wheat and rice would each fall by more than 20 percent in 1986/87, using projected prices for 1985/86 and a 3-year moving average formula (table 2). Furthermore, farm prices for both crops will probably continue down during most years, as the loan rates fall during 1987/88 to 1991/92; the loan rate for wheat could eventually fall below \$2 a bushel, rice near \$4 a cwt. The loan rate for corn might initially fall about 16 percent from the current level, and the cotton loan rate could drop about 18 percent. Even the soybean loan rate could fall, although this would not likely happen in 1986/87.

The target prices for rice, wheat, and cotton could drop 20 to 30 percent the first year, but corn less than 10 percent.

Table 2.--Possible loan rates and target prices under a market oriented program, 1986/87

	Loan <u>1/</u>		Target <u>2/</u>	
	Baseline	Adm.	Baseline	Adm.
Wheat	3.30	2.55	4.38	3.40
Corn	2.55	2.15	3.03	2.80
Cotton	55.00	45.00	81.00	61.00
Rice	8.00	6.35	11.00	8.50
Soybeans	5.02	5.02		

1/ 75 percent of 3-year moving average of farm prices.

2/ 100 percent of 3-year moving average of farm prices.

#### Production Response

The elasticity of acreage with respect to crop prices is low, estimated between 0.2 and 0.3 for all the program crops. By 1991/92, acreage devoted to wheat, rice, corn, cotton, and soybeans would probably be only 5 to 10 percent lower with the loan rate and target price formulas used above than if current programs are continued. However, planted acreage could actually be higher under a new market oriented program if acreage reduction programs are eliminated.

Using cotton as an example, the baseline assumptions for 1986/87 are a target price of 81 cents, a loan rate of 55 cents, a 20 percent acreage reduction program, and a 10 percent cash land diversion program. These would probably account for 4.2 million acres of cotton base, and planted acreage in 1986 might be 9.7 million (table 3). Total acreage devoted to cotton would be a little less than 14 million. With a 15-percent set aside in 1986/87, a

target price of 61 cents, and a loan rate of 45 cents, the set aside would probably account for only 1.5 million acres. Planted acreage could rise to about 11 million, even as acreage devoted to cotton falls to 12.5 million.

Table 3.--Possible cotton acreage response to lower set aside requirements, 1986/87

	: Baseline	: Market oriented program
	<u>1,000 acres</u>	
Legislative base	15,950	15,500
Effective base	13,900	12,500
ARP	2,400	1,500
CLD	1,800	0
Planted	9,700	11,000

Yields would probably decline due to reduced input use, especially for corn, sorghum, and cotton. Cotton yields would be affected further by an increase in the proportion of U.S. acreage in the High Plains. The elasticities of yield with respect to crop prices are estimated to range from 0.05 for wheat to 0.15 for cotton. As an example, wheat yields are expected to rise to 43 bushels an acre in the baseline, but only 41 bushels if price supports are lowered.

The combined effect of increased acreage and lower yields would leave production mostly unchanged. The only exception is rice; rice production could be 15 to 20 percent less with a market oriented program.

#### Use Response

Wheat and rice, facing the largest price changes as support levels drop, will exhibit the largest export response (table 4). Lower U.S. loan rates



would increase risks faced by foreign producers, and lower world prices could force policy changes in countries which subsidize domestic production and export resulting surpluses. The lower prices would lead to a larger share of world markets for U.S. wheat and rice, and would also allow wheat to be used as a feed grain. The long run elasticity of U.S. wheat export demand is estimated to lie between -0.75 and -1.50.

Table 4.--Possible U.S. export response

Percent change in exports 1986/87 to 1991/92  
under baseline and market oriented proposals

	<u>Percent</u>
Wheat	20
Rice	25
Corn	10
Cotton	10
Soybeans	5

Corn and cotton exports would probably rise modestly above quantities projected in the baseline. Exports would rise because of lower prices, but the price changes caused by lower loan rates will not be great enough to increase the U.S. share of world trade significantly. Foreign cotton producers, especially China, Pakistan, and Brazil, are committed to supplying domestic cotton to their textile industries. Those countries will be discouraged little by a decline in cotton prices. The elasticity of demand for corn exports is estimated at -0.6 to -1.35; the elasticity of demand for cotton exports is estimated at -0.05 to -1.2. Since soybean prices will be little affected by a new farm bill, soybean exports will change little.

Domestic use of wheat and feed grain would probably increase with lower prices. Feed use of wheat could increase by 200 million bushels, or about 9 percent, and feed use of corn might increase 2 percent. Domestic use of rice, soybeans, and cotton might be essentially unchanged.

The net effect of changes in production and use would be to reduce ending stocks. Wheat disappearance, for example, would increase enough to keep ending stocks near 2 billion bushels or less. This would be an improvement over the baseline where wheat ending stocks are forecast to rise to 3.5 billion bushels by 1991/92.

#### Conclusions

The United States has basically 3 choices in dealing with farm policy:

- 1) maintain current programs,
- 2) revert to mandatory supply management programs, or
- 3) revert to market oriented programs.

Many people in the United States favor the third choice. Some people oppose mandatory programs on philosophical grounds, and do not believe the Government should be able to make production decisions for individual farmers. Some people also oppose mandatory programs because they would cause the United States to become less competitive in world markets. There is evidence to suggest that high levels of price support are capitalized into agricultural land values, thus causing production costs to increase. As a consequence, price supports have to be set ever higher to assist farmers each year. Direct Government payments to farmers in 1984 totaled \$8 billion, but farm bankruptcies are still occurring.

The goals of market oriented farm policies are to establish long term farm programs, lower price supports so farmers will receive signals directly from market prices and so the United States will be more competitive in world

markets, establish programs that are consistent across all program crops, and lower federal expenditures. These objectives could be achieved. Goals that market oriented policies do not address include raising farm income, stabilizing commodity prices, and guaranteeing adequate supplies of food and fiber.

There are no clear cut happy choices for U.S. farm policy. Even under the baseline assumptions of high target prices and loan rates, some people would still be forced out of agriculture because of declining commodity prices, falling land values, and rising production costs. If U.S. income supports are lowered, the process will occur more rapidly. The increase in exports caused by lower loan rates will probably not be enough to make up for the loss of program benefits. The strong dollar, foreign debt and the need to earn foreign exchange, and the spread of production technology world wide, are fundamental factors that will constrain U.S. exports regardless of farm policy. Further, planted acreage is very inelastic. Therefore, the "adjustment to market forces" supporters of market oriented policies talk about means that people, not land, will be taken out of agriculture.

Western agriculture would be affected by programs which reduce support levels in many ways. Acreage will probably shift from program crops into alternative uses. The expected decline in land values and output prices will probably result in less intensive land use. In all probability, less water, less labor, and fewer chemicals will be applied to each acre. Less farm labor will be needed on program crops such as cotton, but increased plantings of fruits and vegetables might cause total demand for farm labor to rise. Livestock numbers will probably increase with lower feed costs. White wheat prices will fall further than prices for other classes of wheat. The 1984/85 stocks-to-use ratio for white wheat is estimated to exceed 0.80, compared to 0.53 for all wheat.