

# MARKETING INCENTIVE PROGRAMS IN THE RED RIVER VALLEY: THE AGRIBUSINESSMEN'S PERSPECTIVE

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North Dakota farmers have experienced reduced incomes in recent years. Major factors affecting farmer's net income include weather, production expenses, carryover stocks, import-export trade, federal government farm programs, and the U.S. dollar's value in foreign markets. In response to the farm income situation, the federal government instituted the Payment-in-Kind (PIK) program in 1983 to reduce carryover grain stocks. Farmers received grain as payment for not planting acreage typically utilized for food and feed grains. Nearly 5.8 million North Dakota acres (25 percent of 1981 planted acreage) were not planted in 1983 as a result of the PIK program (Crop Reporting Board, 1984; Agricultural Stabilization and Conservation Service, 1983).<sup>1</sup> Farmers were required to only maintain weed control and plant a cover crop on PIK acreages. This greatly reduced farmers' input and machinery requirements. One result was that farm input and machinery purchases were greatly reduced from previous levels.

Low farm income and the PIK program resulted in a significant decline in demand for farm inputs in general, and specifically equipment and machinery. Reduced demand for agricultural inputs has a significant impact on the Red River Valley economy, as a large share of all retail sales and employment is directly related to agricultural production. Financial institutions, manufacturers, wholesalers, and retailers faced the prospect of economic downturns as a result of the farm situation. Manufacturers of farm machinery and equipment quickly developed marketing strategies to compensate for a potentially significant reduction in demand for their products.

Creative marketing incentive programs were initiated to maintain sales levels during this situation. Most of these programs were developed by manufacturers, but many local retailers tried their own promotions. A wide

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<sup>1</sup> North Dakota acres taken out of production include set-aside, paid diversion, 10-30 percent PIK, and whole-farm PIK. No major government agricultural programs were actively reducing planted acreages in 1981.

variety of marketing incentive programs was created and tested, primarily aimed at farmers. This study identified and analyzed marketing incentive programs from the agribusinessmen's perspective to determine the relative effectiveness of such programs for increasing farm sector sales.

## Recent Trends In Farm Income and Input Purchases

Farmers have experienced dramatic net farm income fluctuations over the last few years as production expenses increased and prices were volatile. Production expenses of North Dakota farmers increased 33 percent from 1979 to 1982 (Table 1) while total realized gross farm income (gross income excluding inventory changes) increased at a much slower rate (21 percent) (North Dakota Crop and Livestock Reporting Service, 1983 and 1984). Net farm income in 1980, 1981, and 1982 was 168, 69, and 90 percent, respectively, of the 1979 level (North Dakota Crop and Livestock Reporting Service, 1983 and 1984). Generally, production expenses have increased while net farm income has declined in recent years.

**Table 1. Production Expenses and Farm Income, North Dakota, 1979 to 1982.**

Year	Total Production Expenses	Total Realized Gross Farm Income	Total Realized Net Farm Income	Realized Net Income Per Farm
	----- million dollars -----			dollars
1979	2,089.4	2,588.3	498.9	10,638
1980	2,212.7	2,927.1	714.4	17,860
1981	2,620.7	2,908.1	287.4	7,370
1982	2,777.5	3,142.2	364.7	9,598

SOURCE: North Dakota Crop and Livestock Reporting Service, *North Dakota Agricultural Statistics 1983* and *North Dakota Agricultural Statistics 1984*, Ag. Statistics No. 52 and 53, Agricultural Experiment Station, North Dakota State University and Statistical Reporting Service, U.S. Department of Agriculture, Fargo, June 1983 and June 1984.

Fluctuating crop prices, export levels, and value of exports, compounded with production cost increases, have contributed to the cost-price squeeze confronting farmers in recent years. An average price index for all North Dakota-grown crops indicates that farm prices were 21 and 18 percent higher in 1980 and 1981, respec-

## Marketing Incentive Programs

tively, and 2 percent lower in 1982 than during 1979 (North Dakota Crop and Livestock Reporting Service, 1983 and 1984). The quantity of U.S. agricultural exports in 1980 and 1981 was 16 percent higher than the 1979 level with 1982 exports only 3 percent above 1979 levels (Economic Research Service, 1981 and 1984). However, the value of U.S. grain exports in 1982 was about the same as in 1979 while 1980 and 1981 export values were 25 to 35 percent higher, respectively (Economic Research Service, 1981 and 1984).

Farmers have reduced production expenses in recent years by curtailing capital investments and repairing rather than replacing older machinery. Average farm machinery investment per North Dakota farm was \$84,156 in 1982 (Reff, 1984). Major equipment sales were depressed that year. Tractor sales in 1983 were less than one-half, while windrower sales were less than one-sixth of the 1973 to 1977 average (Table 2).

**Table 2. Tractor, Combine, and Windrower Sales in North Dakota, 1979 to 1983.**

Year	Tractors	Combines	Windrowers
1973-1977 Average	4,088	1,165	2,283
1979	a	1,383	922
1980	2,575	1,014	588
1981	2,772	1,352	762
1982	2,062	910	472
1983	1,845	682	319

<sup>a</sup> Not available.

SOURCE: Erlandson, Gordon W. and Keith A. Crawford, *Trends in Farm Machinery Purchases in North Dakota*, Agricultural Economics Miscellaneous Report No. 41, Department of Agricultural Economics, North Dakota Agricultural Experiment Station, North Dakota State University, Fargo, January 1979; and *Implement and Tractor*, Intertec Publishing Corporation, Kansas City, Missouri, 1979-1984.

### Red River Valley Survey

Personal interviews of 19 financial institutions and farm equipment manufacturing and retail firms serving farmers in the Red River Valley were conducted during the summer of 1983 to evaluate different agricultural marketing incentive programs and their effectiveness. The sample size was small compared to the population for two primary reasons: (1) time and monetary constraints, and (2) very similar responses were received, regardless of the type of firm being interviewed or brand of product marketed.

Interviews with owners, managers, lenders, or sales managers were based on open-ended questions to allow respondents to talk extensively about their particular situation. Those surveyed were knowledgeable about sales incentive programs and their relative effectiveness. Representatives from financial institutions were interviewed because of their insight into farmers' responses to marketing incentive programs.

Many marketing incentive programs were initiated in 1983 to stimulate farm equipment sales. Most programs were sponsored by machinery and equipment manufacturers, although incentive packages were used by other businesses as well. Incentive programs varied among businesses but generally were of six kinds: rebates, interest concessions, extended warranties, gifts, enhanced services, and incentives to salesmen.

Rebate programs involved the manufacturer offering a cash discount to the purchaser (either dealer or final purchaser). These varied greatly from company to company but were basically similar. The parent corporation would initiate and advertise the program extensively. The main difference in the rebate programs was the payment recipient — rebates might go to the final purchaser, or to the dealer, or be applied (as a discount) to the purchase price. Rebate size varied widely from company to company, but all offered larger rebates on more expensive items. Machinery and equipment included in rebates programs varied among companies, although all included such "big ticket" items as combines and tractors. Farm machinery rebate programs were patterned after the automobile industry marketing programs of the late 1970s and early 1980s.

Interest concessions included interest rate reductions and interest-free periods. Interest rates were extremely high during 1983, and few farmers were borrowing money to purchase machinery and equipment. Manufacturers believed an interest-free finance period or interest rate reductions would entice more purchases. Interest rate levels and length of interest-free financing periods varied among companies, and some programs allowed a combination of the two concessions. Some interest concession programs were in conjunction with manufacturer's rebate packages, while other suppliers ran the two marketing programs independently. Interest reduction programs were developed, installed, and administered by the parent manufacturing company, although many of the loans were under the jurisdiction of a sister finance company.

Another sales incentive program extended warranty periods. This program suggested that dealers had a high quality, durable product. One major manufacturer offered a three-year "super warranty" on its larger tractors, which included oil, filters, belts, etc. in addition to normal warranty items. Extended warranty programs were used by a few farm machinery and equipment manufacturers, who limited them to new "big ticket" items. Many local dealers used their own extended warranty plans to sell used machinery. Dealers felt that extended warranties were the most successful program for stimulating used equipment sales.

Gifts were used as a means of enticing farmers into retail purchases. Giving gifts with a purchase is not a new idea, as many manufacturers and retailers in other segments of the economy have used this approach for many years. Gift promotions during recent years included such items as caps, pickup trucks, trips (usually to

Las Vegas), and tours (normally to manufacturing plants). Few manufacturers or retailers were offering sizable gifts, and no major trip promotions were in effect at the time of the survey.

Another sales incentive program was enhanced services. Many dealer representatives had difficulty distinguishing between enhanced services and extended warranty programs. Programs varied among dealers, but most started with an inspection of equipment (usually combines or tractors) with needed repairs (including parts and labor) being completed at reduced rates. Retailers supplying agricultural inputs other than farm equipment believed enhanced services were an integral part of customer service and were not considered a special program. Enhanced service was promoted almost entirely by the local retailers.

Salesman incentive marketing programs often were run jointly by the manufacturer and the local retailer. Almost all businesses were using a salesman incentive promotion at the time the survey was taken. Rewards to salesmen included bonuses, gifts, and trips. Salesman incentive programs were usually run in conjunction with other promotions, typically rebates, to increase the effectiveness of each.

### **Program Evaluations**

Respondents were asked to evaluate the effectiveness of marketing incentive programs and how successful the promotions were in stimulating agricultural input sales. This was a unique time to analyze marketing promotions. Farmers were faced with low commodity prices and a reduced need for machinery and equipment as a result of the PIK program. This combination placed extreme pressure on manufacturers and retailers to stimulate sales.

Rebates were perceived as the most effective in stimulating sales. Programs differed with respect to whom were given rebates. They were sent either to the dealer or to the final purchaser, or applied as a discount to the purchase price in which case the dealer received the rebate. Retailers indicated that all farmers applied their rebates to their purchases. Managers felt that farmers were having cash flow problems, and that rebates effectively lowered prices to a point where farmers could afford the purchases. The rebate program was rated as "fairly successful" in stimulating sales.

Several problems resulted from the rebate programs. Attractive rebates on new machinery resulted in dealers' lots being filled with late model used equipment, some of which was difficult to sell (e.g., used combines). Some promotion programs were complex and required a significant amount of time to administer by local retailers. Also, rebates led some farmers to believe that manufacturers had excess profits built into their pricing policies. Retailers felt that rebates were an effective means of stimulating sales, but would have preferred that the manufacturers reduce the list prices. Reducing retailers' costs would allow them to sell equipment at a lower price and would give dealers more flexibility in

dealing with farmers. Most retailers believed the manufacturers used the rebate program rather than a price reduction for three reasons: (1) consumer acceptance for this type of program; (2) farmers were familiar with programs because of extensive advertising; and (3) most competitors had initiated a rebate package of some type.

Retailers rated interest concessions as the second most effective marketing program. Financial institution representatives believed these programs were the most effective, perhaps because they offered direct competition to their loans. Interest-free periods and interest rate reductions both were included in this evaluation. Interest rate reductions were more effective in stimulating sales during periods of high interest rates, but interest-free periods had a greater impact on off-season sales. Interest-free periods allowed farmers to make necessary machinery purchases off-season with no interest charges until the use-season. Interest concessions programs were popular with retailers as they were specific, easy to administer, and resulted in few problems. Major responsibility was with the manufacturers or their sister finance companies who were responsible for the loan after the original sale was made. Farmers responded to interest concessions, since almost all sales went to some form of manufacturer finance program to take advantage of low rates or interest-free periods. Very few loans were made by conventional lenders during this period.

Other marketing incentive programs (extended warranties, gifts, enhanced services, and salesman incentives) were not viewed by local retailers as being effective in stimulating farm machinery and equipment sales. Extended warranties and enhanced services generally were viewed as helping sell used machinery but were of little value in helping sell new equipment. Most of these promotions were initiated by local retailers. Gift incentives were believed to be of no value to increasing agricultural equipment sales. All reports on this program were negative, reflecting a situation of farmers seeking lower production costs rather than gifts or trips.

Retailers had no consensus of opinion on the value of salesman incentive programs. Most believed sales incentive were a necessary part of the retail trade business and continually ran programs to motivate salesmen. The effectiveness of these programs was hard to determine as rebates and interest concessions were promoted at the same time, and were much more visible. Generally, retailers believed salesman incentive programs had little impact on agricultural equipment sales during financially troubled times.

### **Conclusions**

Marketing incentive programs were used during 1983 to combat the negative effects of low net farm income, cash flow problems, and the PIK program on demand for farm inputs and machinery. Once a manufacturer instituted marketing programs, competitors believed it necessary to follow suit to maintain their market share. The result was a wave of new and innovative programs



aimed at capturing the farmer's attention and persuading him to make purchases.

Two programs, rebates and interest concessions, surfaced as being relatively effective in stimulating agricultural equipment sales. Rebate programs were the most effective at promoting sales, but also caused the most confusion. Interest concessions were second at increasing sales while being a virtual trouble-free promotion to local retailers. Other marketing incentives were considered ineffective means of increasing agricultural purchases.

Retailers believed marketing incentive programs helped them increase sales and survive a low volume marketing year. They felt that the single most effective way for them to increase their sales volume would be for the manufacturer to cut prices, although most used many or all of the promotions. This would allow the local retailer to deal more effectively with farmers. Also, farmers' confidence and trust, which were eroded by the manufacturers' programs would have been preserved. Local retailers welcomed the marketing incentive programs and believed some to be effective in stimulating agricultural equipment sales.

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NDSC(FS)<sub>C<sub>1</sub></sub> and NDSD(FS)<sub>C<sub>1</sub></sub> were developed by one cycle of reciprocal full-sib selection among full-sib families between NDSC and NDSD synthetics released earlier (1). Among approximately 400 sets of attempted crosses, 33 successful full-sib families with corresponding selfed ears were obtained. These were tested at three locations and 15 superior families were identified based on a rank-summation-index which weighted yield 40 percent and 20 percent each for ear moisture at harvest, stalk lodging resistance, and root lodging resistance. Remnant seed from selfed ears from plants which produced the superior full-sib families were planted and intercrossed within both NDSC and NDSD by making full-sib matings and compositing seed within each for the improved synthetics NDSC(FS)<sub>C<sub>1</sub></sub> and NDSD(FS)<sub>C<sub>1</sub></sub>.

#### Agronomic Description and Performance

NDSG(MS)<sub>C<sub>1</sub></sub> plants are tall with ears borne slightly below midplant (Table 1). This synthetic is about the same maturity as NDSC and is taller with higher ear placement. It has lower test weights and more root lodging than NDSC. Compared to NDSG this version is much improved for yield and resistance to stalk lodging. Plants are later and taller than the original NDSG. Maturity is AES200-300 in terms of the North Central Corn Breeding Research Committee classification system.

NDSC(FS)<sub>C<sub>1</sub></sub> plants are taller than NDSC plants but appear unchanged relative to maturity, shelling percentage, test weight, and lodging resistance. However, grain yield has been improved by 26 percent over NDSC. This synthetic also is AES200-300 maturity.

NDSD(FS)<sub>C<sub>1</sub></sub> plants are similar to NDSD plants in plant and ear height, test weight, and lodging resistance. However this synthetic has improved shelling percentages and tends to have higher yields and lower moisture at harvest than NDSD. NDSD(FS)<sub>C<sub>1</sub></sub> is AES200-300 maturity.

#### Seed Increase and Distribution

Germplasm quantities of breeder seed of NDSG(MS)<sub>C<sub>1</sub></sub>, NDSC(FS)<sub>C<sub>1</sub></sub>, and NDSD(FS)<sub>C<sub>1</sub></sub> will be maintained by the Agricultural Experiment Station, North Dakota State University, Fargo. Seed will be distributed in 200-kernel lots to the extent of available supplies. All seed requests should be directed to the author.

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