

CORNHUSKER ECONOMICS

University of Nebraska–Lincoln Extension

A New Tool for Analyzing Cooperative Equity Plans

A computer program designed to aid Nebraska cooperatives in making financial decisions will be released this month by University of Nebraska–Lincoln Extension. The NebCAST program will enable directors and managers of any cooperative to assess the effects of their equity management decisions on the organization and its members in a manner consistent with the decision-making processes cooperatives typically follow. NebCAST, which stands for University of Nebraska–Lincoln Extension Cooperative Analytical Simulation Tool, was developed by Darrell R. Mark, Jeffrey S. Royer, and Rik R. Smith of the UNL Department of Agricultural Economics.

The NebCAST program simulates future cash flows for a cooperative and its members based on a set of user-defined parameters. Given information on income tax rates, expected rates of return to equity, planned growth, and discount rates, NebCAST can be used to project the impacts on the cooperative's income statement and balance sheet, its member equity accounts, and member after-tax cash flows of various equity management decisions. Among the decisions that can be analyzed are those on the proportion of patronage refunds to be paid in cash, the form that the distribution of patronage refunds will take, and the share of net margins that will be retained as unallocated equity. Simulations can be conducted for either 15-year or 50-year periods, and an interactive feature allows users to change parameter settings at any point during the first 15 years of a simulation.

An important feature of the NebCAST program is its ability to simulate the operation of either a first-

Market Report	Yr Ago	4 Wks Ago	4/14/06
<u>Livestock and Products,</u>			
<u>Weekly Average</u>			
Nebraska Slaughter Steers, 35-65% Choice, Live Weight	\$91.83	\$85.49	\$83.93
Nebraska Feeder Steers, Med. & Large Frame, 550-600 lb	136.80	135.36	132.11
Nebraska Feeder Steers, Med. & Large Frame 750-800 lb	114.41	102.94	106.06
Choice Boxed Beef, 600-750 lb. Carcass	155.03	145.11	140.01
Western Corn Belt Base Hog Price Carcass, Negotiated	70.30	55.33	53.17
Feeder Pigs, National Direct 45 lbs, FOB	69.82	54.13	53.44
Pork Carcass Cutout, 185 lb. Carcass, 51-52% Lean	68.26	61.46	59.07
Slaughter Lambs, Ch. & Pr., 90-160 lbs., Shorn, Midwest	105.00	75.00	68.00
National Carcass Lamb Cutout, FOB	260.60	212.98	224.30
<u>Crops,</u>			
<u>Daily Spot Prices</u>			
Wheat, No. 1, H.W. Imperial, bu	2.75	3.76	3.98
Corn, No. 2, Yellow Omaha, bu	1.83	1.82	2.07
Soybeans, No. 1, Yellow Omaha, bu	6.08	5.23	5.34
Grain Sorghum, No. 2, Yellow Columbus, cwt	2.60	2.63	2.89
Oats, No. 2, Heavy Minneapolis, MN, bu	1.82	1.94	1.98
<u>Hay</u>			
Alfalfa, Large Square Bales, Good to Premium, RFV 160-185 Northeast Nebraska, ton	115.00	130.00	130.00
Alfalfa, Large Rounds, Good Platte Valley, ton	62.50	65.00	65.00
Grass Hay, Large Rounds, Good Northeast Nebraska, ton	57.50	55.00	55.00
* No market.			



in/first-out revolving fund plan or an age-of-patron equity plan. The first-in/first-out revolving fund plan is the method of equity management used by most cooperatives that systematically plan for the accumulation and retirement of member equity. Under the revolving fund plan, a cooperative retains a proportion of the patronage refunds it issues members each year. These retained patronage refunds are added to the revolving fund to provide equity capital and to be redeemed eventually in turn. The oldest equities are redeemed first, usually at the discretion of the board of directors and according to the financial needs of the cooperative. Under an age-of-patron equity plan, equity allocated to an individual member and held by the cooperative is eligible for redemption once the member reaches a certain age, often 65 years.

Most Nebraska farm supply and marketing cooperatives operate age-of-patron plans. Because many of the largest equity holders in these cooperatives are nearing the age at which their equity will become eligible for redemption, directors and managers anticipate that attempts to continue redeeming equity according to the age-of-patron plan will place their cooperatives under enormous financial pressure within the next few years. Consequently, cooperative decision makers are expressing renewed interest in the revolving fund plan. NebCAST offers cooperatives a means for comparing the expected performance of the two plans or for tracking the transition of a cooperative from an age-of-patron plan to a revolving fund.

In addition, NebCAST provides cooperative decision makers the capability to compare the use of qualified and nonqualified written notices of allocation in the distribution of patronage refunds to members. For a patronage refund distribution to qualify for deduction from a cooperative's taxable income, at least 20 percent must be paid in cash and the member who receives the distribution must agree to include the entire amount in his or her taxable income. If either of these two conditions is not met, the noncash portion is considered a nonqualified distribution and the cooperative, instead of the member, must include that portion in its taxable income. Once the cooperative eventually redeems the noncash portion in cash, it receives a deduction and the member treats the redemption as taxable income. Both of these methods of distributing patronage refunds may provide advantages in certain situations, and NebCAST provides users the ability to explore these advantages. NebCAST also can be used to examine different

strategies based on retaining cooperative net margins as tax-paid unallocated earnings.

NebCAST follows the 2004 release of NU CAST, another computerized decision-support system for cooperative directors and managers. NebCAST represents some significant improvements over NU CAST based on feedback received from directors and managers during meetings held in York and North Platte in August 2004. In addition to possessing new features, such as the ability to simulate the operation of an age-of-patron equity plan and the conversion from an age-of-patron plan to a revolving fund plan, the NebCAST program is fully integrated so that it operates entirely within a spreadsheet, unlike NU CAST. In addition, NebCAST does not rely on computer-generated historical data. Rather, it permits the user to enter information into the member equity accounts by year, by patron age, or by both year and age, depending on the amount of specificity that can be supported by the cooperative's records.

NebCAST is available on CD-ROM and will operate in Microsoft® Excel 2002, or later versions, on a computer running the Microsoft® Windows^{XP} operating system. In addition to the NebCAST program file, the CD-ROM includes an instruction guide and a sample data file that allows first-time users to view the program's tabular and graphics features. Copies of the NebCAST CD-ROM will soon be available through your county extension office or the Institute of Agriculture and Natural Resources website at ianrhome.unl.edu. The development of NebCAST was supported in part by a Fund for Excellence grant from the Nebraska Cooperative Council.

Jeffrey S. Royer, (402) 472-3108
Professor of Agricultural Economics
University of Nebraska–Lincoln
jroyer@unl.edu

Darrell R. Mark, (402) 472-1796
Assistant Professor of Agricultural Economics
University of Nebraska–Lincoln
dmark2@unl.edu