1997

CC363 1997 Agriculture Outlook and Policy Issues

Lynn Lutgen

Follow this and additional works at: http://digitalcommons.unl.edu/extensionhist

http://digitalcommons.unl.edu/extensionhist/3461

This Article is brought to you for free and open access by the Extension at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Historical Materials from University of Nebraska-Lincoln Extension by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.
1997 Agriculture Outlook and Policy Issues

Agricultural Economics Department

Coordinated by Lynn Lutgen

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Kenneth R. Bolen, Director of Cooperative Extension, University of Nebraska, Institute of Agriculture and Natural Resources.

University of Nebraska Cooperative Extension educational programs abide with the non-discrimination policies of the University of Nebraska-Lincoln and the United States Department of Agriculture.
University of Nebraska-Lincoln
Institute of Agriculture and Natural Resources

IANR Divisions

Agricultural Research Division
College of Agricultural Sciences & Natural Resources
College of Home Economics

Conservation and Survey Division
Cooperative Extension Division
International Programs

Extension Programming Units
Agricultural Economics
Outlook Reports

Introduction

Gary D. Lynne  Introduction ................................................................. 3

Overall Outlook

Richard K. Perrin Nebraska Agriculture and the World Food Outlook for the year 2030 .......... 4
Roy Frederick Farm Income Factors in 1997 and Beyond .............................................. 5

Government and Structure

Larry Bitney Freedom to Farm - Management Challenges ............................................. 6
James Kendrick Freedom to Farm - Marketing Challenges .............................................. 7
H. Douglas Jose Farmers Respond to Changes in the Crop Insurance Program .............. 8
Jeffrey S. Royer USDA Report on Agricultural Concentration ........................................ 10

Land, Water and Machinery

Bruce Johnson Agricultural Land Leasing: Trends and Outlook ...................................... 11
H. Douglas Jose
John Cole
Osei Yeboah Streamflows and Irrigation in the Frenchman Creek Basin ...................... 13
Maurice Baker
Glenn Helmers
H. Douglas Jose
Glenn A. Helmers Machinery Replacement ..................................................................... 16
## Commodity Outlook and Issues

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allen C. Wellman</td>
<td>Feeder Cattle Outlook - 1997</td>
<td>17</td>
</tr>
<tr>
<td>Allen C. Wellman</td>
<td>Slaughter Cattle Outlook - 1997</td>
<td>18</td>
</tr>
<tr>
<td>Allen C. Wellman</td>
<td>Slaughter Hog Outlook - 1997</td>
<td>19</td>
</tr>
<tr>
<td>Lynn H. Lutgen</td>
<td>Grain Outlook for 1997</td>
<td>20</td>
</tr>
<tr>
<td>Chyi-lyi Liang</td>
<td>Seasonal Dry Bean Prices: The Storage Lottery</td>
<td>22</td>
</tr>
<tr>
<td>Dillon M. Feuz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R. Garth Taylor</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Financial and Quality-of-Life Indicators—The Bottom Line

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gary Bredensteiner</td>
<td>Farm Financial Analysis</td>
<td>24</td>
</tr>
<tr>
<td>John C. Allen</td>
<td>Nebraska Ag Producers: How Are They Doing Compared to the Past?</td>
<td>27</td>
</tr>
<tr>
<td>Amy M. Smith</td>
<td>Past? What Do They See For The Future?</td>
<td></td>
</tr>
</tbody>
</table>

## Authors

<table>
<thead>
<tr>
<th>Author(s)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>29</td>
</tr>
</tbody>
</table>
Introduction

Economics is about transactions among people in which everybody affected is a voluntary participant. This is what a free market is all about, and most Americans (and our worldwide cousins) appreciate and want this freedom. Yet, we all know that even a free market for it to work at all must rest on well-defined property rights and duties, and on rules about such things as what is meant by a standard unit of transaction like a "bushel." A market also needs good and high quality information, protection for those not a part of the transaction, and, most importantly, trust. We cannot voluntarily participate unless we trust. We might say there is a moral dimension in the foundation of a free market, something that must be built.

This 1997 outlook report starts by addressing the play of the market for world food (modest price increases expected) and overall farm income factors. It moves to examining how government, which has been a major factor in helping people put a foundation under the free market for decades, is now a much less important part of agriculture. The move is to more voluntary participation, i.e., to markets. Concentration, while having its benefits, could also reduce voluntary participation and be a negative force: there are always tradeoffs, with opportunities lost and gained. Attention is then turned to the inputs — the land and water, so crucial in Nebraska — and how to think about machinery decisions. Commodity price and production outlook follows: how and why prices react (really, how and why people in the markets act and react) need to be understood. Our 1997 report concludes with a section on The bottom line: what kind of debt load and rates of return are Nebraska farmers experiencing? Perhaps most importantly, we end with some research information collected in our new rural poll (in which many of you participated: thanks!) on how farmers and rural residents see their quality of life, and the future.

The pace of the move to markets is rapid in the United States. Witness also the major changes especially in Europe, but also in Asia, Africa and Latin/South America: The market is becoming an ever stronger force across the world. These are exciting economic times. Our goal here (and our continuing goal) is to help you make sense out of them. We write what we do because economics is a behavioral science which tries to explain voluntary participation within a moral dimension, as well as the main science underlying family, business, community and public decisions. Only you can make these decisions. We hope these will be better decisions because we have been helpful in improving your understanding.

I will appreciate receiving any comments you have about this report, or any other part of our educational program. Drop me a note, give me a call, or e-mail me at agec001@unlvm.unl.edu — I look forward to hearing from you. Thank you for your interest in and support of our program and efforts.

Gary D. Lynne
Agricultural Economics Professor and Department Head
Nebraska Agriculture and The World Food Outlook for the Year 2030

Richard K. Perrin

World population is certain to rise substantially over the next 35 years, and with it the demand for food. The United Nations makes three growth rate projections: 0.9 percent (a 30 percent increase by 2030), 1.2 percent (a 50 percent increase) and 1.5 percent (a 65 percent increase). Therefore, food shortage appears to some to be inevitable, accompanied by increases in grain, food and land prices. I want to examine some reasons to believe otherwise.

**Higher resource productivity.** An increase in productivity is an increase in output from a given set of inputs. If world agricultural productivity increases by 0.9-1.5 percent per year, the expanded population could be fed with the current agricultural base, at no increase in food prices. Is this plausible? I think so. Between 1960 and 1990, U.S. agricultural productivity rose twice this fast (an annual rate of 1.9 percent). In nine other industrialized countries, productivity growth for 1973-1989 was measured at about 1.8 percent per year. In China, India and a number of other countries agricultural productivity fell in the '60s and '70s but rebounded in the '80s to levels comparable to those above. A world-wide agricultural productivity growth rate of 1 percent seems quite plausible.

**More resources are available for production.** If productivity growth should fall behind population growth, we can expect food prices to rise enough to attract more resources into production. Would the additional resources be available at modest price increases?

**Land**

In the '80s, cropland reductions in the United States and the former Soviet Union almost exactly offset increases in cropland in the rest of the world. If over the next 35 years these idled acres were returned to production and net forest conversions were to continue at recent rates, the average rate of cropland increase would be about 0.7 percent per year, slightly below the minimum projected population growth rate. A return of idled cropland would incur environmental consequences, but probably less severe than in the past because of more environmentally-friendly production technologies. Conversion of tropical forests presents a more serious challenge for the scientific community to discover environmentally-friendly technologies, for it seems clear that if productivity fails to provide, we will surely allow these forestlands to be converted rather than see people starve.

**Water**

Agricultural irrigation constitutes about 40 percent of the total human uses of water. If we can provide food needs with productivity, we won’t need more irrigation. If human use increases with the rate of population, we would exhaust about 70 percent of the accessible runoff by 2030, compared to about 54 percent today. There is concern that such an increase could result in a severe faltering of aquatic ecosystem services. These consequences might be avoided if greater efficiencies were achieved in irrigation water use, but despite technological opportunities for this (drip irrigation, recycling, etc.), it has not occurred because there has been little incentive for producers. An end to the subsidies of many irrigated areas would stimulate water efficiency without increasing food prices. The twin prospects of greater runoff capture and better water efficiency provide some assurance of increased production if productivity growth should prove inadequate to meet food needs.

**Implications for Nebraska:** Because of the prospects for continued productivity improvements, world food prices should increase only modestly, if at all, providing only weak incentives for an increase in resources devoted to agriculture in Nebraska. Additional land may be brought into production, and additional water efficiency will be achieved, but the face of agriculture in Nebraska will not change much between now and 2030, despite changes in production techniques and patterns.
Early indications are that 1996 may turn out to be a year of record income for Nebraska farmers. If that's the case, excellent crop yields and good crop prices will have been primarily responsible.

Unfortunately, good crop prices translate into high feed costs for livestock producers. It's difficult, perhaps impossible, for all Nebraska producers to prosper at the same time.

As we look to 1997, several factors are likely to affect the profitability of Nebraska agriculture. Key question: Is the 1996 experience the standard for the future or a brief flash in the pan?

Record high corn and wheat prices during the spring and summer of 1996 were caused primarily by low production in 1995. This reduced carryover stocks to extremely low levels at the end of the 1995-96 marketing year. While carryover of most commodities will be up at the end of the 1996-97 marketing year, it would still not be surprising to see a "weather market" during the next growing season. Supplies of major commodities remain quite low relative to potential usage.

From 1994 to 1996, U.S. agricultural exports rose from $43 billion to approximately $60 billion. (Much of the increase that occurred during the past year was because of higher commodity prices, not increased volume.) The export market continues to be extremely important to Nebraska's farmers. However, it probably is unrealistic to expect a repeat of recent growth in the next couple of years. Larger 1996 crops in Russia and China are part of the reason. Greater availability of commodities from competing exporters and a strengthening dollar (which increases the price to foreign buyers) also are factors.

New production technology offers considerable potential for crop producers. Production of genetically-engineered corn and soybeans apparently went well in 1996. (Primary applications were corn that is resistant to European corn borer and herbicide-resistant soybeans.) Increased numbers of farmers also are experimenting with precision farming, which means micromanaging input applications, including seed, fertilizer and pesticides, within a single field. As has been the case in the past, technology adaptation will proceed fastest when there is an economic incentive (high commodity prices) for applying it. Both biotechnology and precision farming have the potential to spur big changes in Nebraska agriculture during the next decade.

One other area that bears watching is nonfood uses of agricultural commodities. Some products, including ethanol, have depended, in part, on government subsidies. But in the summer of 1996, even subsidies weren't enough: Several of the state's six ethanol plants either reduced or halted production because of high input (primarily corn) prices. As in livestock feeding, high corn prices can become too much of a good thing.

When one considers the importance and diversity of Nebraska agriculture and the final markets that are available to our producers, perhaps the following perspectives are worth considering:

- We need to keep production moving ahead to meet diverse demands of domestic and international markets.
- It would be ideal if growth in demand occurred at about the same rate as our ability to increase production through new technology.
- Commodity prices should be fairly stable from year to year, but increase, on average, at least in line with inflation.

Whether or not we will ever approach these goals is, of course, an open question.
Freedom to Farm — Management Challenges

Larry Bitney

The Federal Agriculture Improvement and Reform (FAIR) Act of 1996 was signed into law on April 4, 1996. Most provisions of the new law will be effective for seven years, 1996-2002. Sign up for the program, which was completed in mid-August, was nearly 100 percent. This is a transition program — a transition to no government feed grain and wheat payments after the year 2002. While some producers question whether this will really happen, most are not willing to bet the farm on some form of government farm income support beyond 2002.

While the FAIR Act provides producers more freedom in what they can plant, there are no deficiency payments or planting restrictions. We will likely see more volatile market prices for crops over the next seven years. Without the income-leveling effect of deficiency payments, producers will experience more year-to-year variation in their net income. While this operating environment provides opportunity for profits, risks will be higher. A “business as usual” approach to management and marketing may not be good enough for survival in the next few years.

In addition to price volatility, producers will face a more competitive operating environment. Government payments have averaged 26 percent of net farm income in Nebraska over the last 5 years, and 35 percent over the last 10 years. Will the “market” (domestic and foreign) give producers additional income to fill the void left by declining government payments, or will there be fierce competition, with only the low cost producers surviving? These questions remain to be answered. As an example of the adjustments that producers will face, let’s look at irrigated corn production. The market price was greater than cost of production in only four of the last 10 years. The 10-year (1986-95) average cost of production was $2.46 per bushel (Nebraska Farm Business Association), while the weighted average market price for the same period was $2.31, indicating a loss of 15 cents per bushel. But that was ok, as deficiency payments more than made up the difference. But, what about the next ten years?

In the long run, if there are no government payments, the market price will tend to equal the average production cost of all producers. In the absence of any significant cost-reducing technologies, either the market price will need to adjust upward, or we will see a decapitalization of land, resulting in a lower corn production cost. The latter will of course impact highly leveraged and high cost producers most severely.

The high commodity prices of 1996 have postponed the financial impact of the new farm program for most Nebraska producers. Some outlook sources feel that we have arrived at a “$3 plateau” in corn prices. This would certainly minimize the need for adjustments. Others feel that we could see $2 or $2.25 corn again. If producers want to position their business to survive this price roller coaster, a new approach to business management and marketing may be needed. Producers who want to survive will need to use the management and marketing tools that the top 5 percent have been using. This is an opportune time to develop a strategic plan for the next 5-10 years.

The management team needs to have a clear understanding of the direction they want to go (goals). They must realize that changes will likely be necessary. Complete records and financial analysis take on an even greater role in decision making. Knowing unit costs of production and enterprise profitability is necessary in order to make wise decisions on marketing and enterprise selection. Producers who do not like to keep and analyze records should hire someone to do it for them — it’s that important. All producers, including those who hire their record keeping and analysis done, will need to understand what the analyses are telling them, and make business decisions based on their actual performance.

Their marketing challenges, as discussed by Jim Kendrick in the next article, need to be an integral part of the management team’s decision process.
Freedom to Farm — Marketing Challenges

James Kendrick

My comments build on Larry Bitney's discussion of the management challenges of the FAIR Act of 1996. There, he observed: a) Over the past 10 years, Nebraska irrigated corn producers had a higher cost of production than the price they received for corn at local elevators; b) On average, any “profits” in corn production were obtained from governmental payments which accounted for 35 percent of net farm income; c) While governmental payments are still being made to producers, those payments are scheduled to terminate in 2002; and d) Given the previous points, prudent farm management dictates increased emphasis on reducing costs of production and establishment of reasonable goals for the farm business.

My conversations with producers suggest that some counter Bitney’s conclusions by assuming: a) Prices received by producers have permanently moved to a higher level where reasonable profits can be obtained without governmental transfer payments; b) Over the coming years, prices received in the open market will be more stable than in years past; and c) If prices were to temporarily fall from present levels, the governmental “safety net” would cushion the financial pain.

Responding to these arguments of denial in reverse order, I note the FAIR Act has placed the 1996 “marketing assistance loan” for corn at $1.89 per bushel. Given the cost of production of many producers, this seems akin to placing the safety net for a high wire trapeze artist about two inches above the stage floor. Furthermore, other forms of governmental assistance (i.e., welfare payments) seem destined to shrink given the current mood of the body public.

Price stability has two dimensions: within a crop year and between crop years. While seasonal price patterns are generally predictable, next year’s prices have a good chance of being either higher, lower, or about the same as this year’s. Stability is increased if there exists stored stocks in excess of present needs. Price fluctuations were somewhat muted when the government was aggressively stockpiling grains in an attempt to lever prices higher. Now, with the government withdrawal from the storage business, storage is undertaken by the “commercials” who will hold purchased grain only until they find a buyer. With the cushioning effect of “surplus stocks” removed, one could conclude that price instability, both within and between years, will be greater in the future than in the past. Producer storage of grain is unlikely to be effective in leveraging world prices higher or in dampening year-to-year price variability. Producer storage of grains between crop years is not generally a profitable enterprise even if next year’s prices were higher since the “opportunity cost” of unsold grain normally exceeds any increase in price.

Finally, is it a “given” that product prices have been ratcheted upward to a new plateau? Most producers would concede that U.S. agricultural products are sold on a global market. One school of thought concludes that if world production of foodstuffs remains unchanged, rising incomes in the less developed areas of the world will translate into greater demand for U.S. agricultural products and thus higher prices for producers. I raise two cautionary flags to this thought process. First, the FAIR act and the tighter restrictions on acres entering the CRP program could mean expansion of harvested U.S. crop acres in the coming years. Second, both the number and productivity of foreign acres in agricultural production seem to be rising. Ultimately, in a generally competitive market, the long-term price trend will move to a higher level, trend lower, or remain where it is, depending on the trend in global cost of producing foodstuffs. This linkage between price and cost implies that “extra generous” profits will be short-lived.

Where does this place the prudent manager of agricultural production? It places the manager in a competitive environment where the success or failure of the farm firm will be highly correlated to the manager’s ability to: a) Establish reasonable goals given resources available; b) Tightly control production costs; and c) Realize that price fluctuations are probably the norm and to use historic seasonal patterns to set the price received (or paid) at advantageous levels. Mostly work, little play, no freebies, but rewards to those who can readily adapt to changing conditions.
Farmers Respond to Changes in the Crop Insurance Program

H. Douglas Jose

There have been a number of changes in the crop insurance program that affect growers in Nebraska. The Federal Agricultural Improvement and Reform (FAIR) Act, better known as "Freedom to Farm," requires that producers either have multi-peril crop insurance coverage or sign a statement waiving eligibility for any disaster-type programs for any losses. This requirement does not apply to emergency loans or benefits in the non-insured assistance program. It does apply to eligibility for the Market Transition Payments, commodity loans or FmHA loans.

**Crop Revenue Coverage (CRC).** This was the major change in crop insurance this past year. CRC provides a revenue guarantee based on planting time price. It is available on a pilot basis in Nebraska for corn, soybeans and wheat. The revenue guarantee will increase if the harvest time market price is above the base or planting price. These prices are established by specific futures market contract prices. For example, the base price for corn is 95 percent of the average closing prices for the DEC contract during the month of February. The harvest price is 95 percent of the average closing prices for the DEC contract during November.

**Group Risk Plan (GRP).** GRP coverage, which is based on county yields, has been available for a couple of years for corn and soybeans. In 1997 it is also available for wheat in 93 counties. It minimizes record keeping and works well in a situation where farm yields follow the same year-to-year pattern as the county yields. The absolute yields may differ. The critical factor is how the two yield series track.

**1996 Participation.** The table below shows the participation in multiple peril crop insurance in Nebraska in 1996. It is interesting to compare the Actual Production History (APH) and CRC programs for corn and soybeans during 1996, the first year CRC was available. CRC policies were in effect on 43 percent of the total commercial corn acres insured and 42 percent of the soybean acres insured. With APH corn, farmers paid an average premium of $3.27 per acre compared to $9.10 per acre for CRC policies. There are two important factors to consider in comparing these premiums. The APH acreage includes many acres that were only insured at the catastrophic (CAT) coverage level (50 percent of established yield and 60 percent of the maximum price or 30 percent of expected revenue). No premium was charged for this coverage except the $50 fee per crop per county. CAT was not available for CRC policies and hence farmers paid a premium for all acres insured. The maximum price election available for APH corn for 1996 was $2.55 per bushel while the base price for CRC was $2.93. With the same coverage levels, the premium for the CRC policy would then be 15 percent higher than the APH policy based on price differences alone. In addition, the added revenue protection portion of the CRC policy is not subsidized. The CRC policy carries the same subsidy as the APH policy on a per acre basis for equivalent coverage.

By any measurement, there was a significant response to the CRC program by Nebraska growers. The concept of providing revenue protection to stabilize income and support forward pricing of grain is an attractive alternative. The performance of the program over the next few years will be closely monitored.
## Crop Insurance Statistics, Nebraska, 1996 Crop Year

<table>
<thead>
<tr>
<th>Category</th>
<th>Net acres</th>
<th>Liability</th>
<th>TP&lt;sup&gt;1&lt;/sup&gt;</th>
<th>PS&lt;sup&gt;2&lt;/sup&gt;</th>
<th>FF&lt;sup&gt;3&lt;/sup&gt;</th>
<th>FPL&lt;sup&gt;4&lt;/sup&gt;</th>
<th>FPTP&lt;sup&gt;5&lt;/sup&gt;</th>
<th>FPPA&lt;sup&gt;6&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>APH Corn</td>
<td>3,956</td>
<td>606,925</td>
<td>27,487</td>
<td>14,559</td>
<td>12,928</td>
<td>2.13</td>
<td>47.03</td>
<td>3.27</td>
</tr>
<tr>
<td>CRC Corn</td>
<td>2,991</td>
<td>685,933</td>
<td>38,867</td>
<td>11,641</td>
<td>27,226</td>
<td>3.97</td>
<td>70.05</td>
<td>9.10</td>
</tr>
<tr>
<td>APH Soybeans</td>
<td>1,296</td>
<td>158,579</td>
<td>6,842</td>
<td>3,336</td>
<td>3,506</td>
<td>2.21</td>
<td>51.24</td>
<td>2.71</td>
</tr>
<tr>
<td>CRC Soybeans</td>
<td>935</td>
<td>154,529</td>
<td>8,205</td>
<td>2,502</td>
<td>5,703</td>
<td>3.69</td>
<td>69.51</td>
<td>6.10</td>
</tr>
<tr>
<td>APH G.Sorghum</td>
<td>830</td>
<td>85,139</td>
<td>5,299</td>
<td>2,414</td>
<td>2,885</td>
<td>3.39</td>
<td>54.44</td>
<td>3.48</td>
</tr>
<tr>
<td>APH Wheat</td>
<td>1,923</td>
<td>122,943</td>
<td>10,198</td>
<td>4,825</td>
<td>5,373</td>
<td>4.37</td>
<td>52.69</td>
<td>2.79</td>
</tr>
<tr>
<td>APH Drybeans</td>
<td>171</td>
<td>38,074</td>
<td>3,208</td>
<td>1,354</td>
<td>1,854</td>
<td>4.87</td>
<td>57.79</td>
<td>10.87</td>
</tr>
</tbody>
</table>

Source: FCIC 1996 Crop Year Statistics as of 09/30/96, nationwide summary by state.  

1 Total Premium in '000 $  
2 Premium Subsidy in '000 $  
3 Farmer Premium (Total Premium- Premium Subsidy) in '000$  
4 Farmer Premium per $ 100 Liability  
5 Farmer Premium as a percentage of Total Premium  
6 Farmer Premium per acre
USDA Report on Agricultural Concentration

Jeffrey S. Royer

On February 14, 1996, Secretary of Agriculture Dan Glickman appointed an Advisory Committee on Agricultural Concentration and charged it with investigating concentration in the agricultural economy. The committee was asked to report its findings and its recommendations for addressing concentration and any adverse impacts of concentration by June 7, 1996. Appointment of the advisory committee resulted from mounting public concerns about increased concentration and vertical integration in agriculture, particularly in the red meat and poultry packing industries.

According to the committee's report, the issues involving agricultural concentration and vertical integration are complex and highly charged—eliciting strong views and concerns about the balance of economic power, the use of governmental power, and personal freedom. On one hand, concentration and vertical integration are associated with positive results, including more efficient production, risk management, international competitiveness, product quality improvement, and food safety advantages. On the other hand, concentration and vertical integration can create problems and concerns, including distorted price discovery, unequal access to vital market information, environmental degradation, and dysfunctional interactions among producers, handlers, packing plants, distributors, and retailers.

In testimony before the committee, a number of producers stated that they believed formula pricing, captive supplies, and various forms of vertical integration lead to thin markets and the potential for price manipulation detrimental to farmers and ranchers. Contract growers indicated that vertical integration and contracting arrangements provided them financial stability, reduced risk, and the ability to attract loans allowing them to stay on the farm or enter production. But contract growers also suggested that trends in vertical integration raise two important long-term issues—an imbalance of power between integrators and producers and environmental problems associated with extreme concentrations of animal and processing waste.

The committee found that growing concentration in both agricultural and nonagricultural industries implies that increased monitoring of the economic and social consequences of concentration is necessary. Although evidence indicates that increased agricultural concentration has not been associated with overt market power or the existence of monopoly and monopsony profits, the potential has increased. The committee also concluded that captive supplies and other forms of vertical integration and coordination are potentially detrimental to both competition and price discovery.

The committee's recommendations include the following:

- Stepping up antitrust enforcement of current regulations under the Packers & Stockyards Act.
- Permitting price differentiation based only on differences in quality, verifiable differences in procurement costs, and time of delivery.
- Establishing a disclosure policy under which information on prices and terms of trade for both market and contract transactions would be disclosed by both buyers and sellers.
- Taking steps to ensure equitable sharing of risks and rewards in vertical chains and to avoid exploitative behavior.
- Implementing consistent and effective rules for animal feedlots that address water, air, and odor pollution problems.
- Enabling producers to bargain with first handlers and processors collectively through producer cooperatives and networks.
Agricultural Land Leasing: Trends and Outlook

Bruce Johnson, H. Douglas Jose, and John Cole

The leasing of agricultural land is as old as agriculture itself. There are accounts of leasing and tenancy throughout the histories of virtually every culture.

The institutional norms and patterns of agricultural land leasing historically have been stable. Change has generally been evolutionary, not revolutionary. Yet, as we move towards the 21st Century, here in the U.S. Heartland change is certainly underway in the leasing of agricultural land. These changes will hold important implications for the state’s agricultural sector in the years ahead.

It appears the most pronounced trend is towards more formal business contractual arrangements. Several factors are contributing to this change.

First, today’s tenants tend to be the competitive producers in the area, using leasing as an economically-sound method of controlling the land base needed for today’s farming scale and efficiencies. In Nebraska, tenants are leasing parcels from an average of three landowners. In short, they are professional farmers/ranchers who find a more formal business orientation to leasing quite appropriate.

Second, much of the leased land is owned by individuals with limited and diminishing direct ties to production agriculture. Nearly half of Nebraska’s agricultural land base is now leased; and the owners are of all ages and occupations scattered throughout the entire U.S. For them more formal arrangements, perhaps even with the hired services of a professional farm manager, will be increasingly important.

Third, government policy and regulations as well as general liability questions regarding the environment are requiring more accountability on the part of both landowners and their tenants. This means documentation of all activities associated with each parcel of agricultural land. Leasing activity is quickly moving from an early 20th Century rural culture to 21st Century business sophistication.

Another trend is for agricultural land leasing to move towards more economic refinement and frequency in negotiating rental agreements. Both landowners and tenants are moving the process in this direction, realizing that economic equity and fairness is the basis of profitable, long-term economic partnerships. Recent changes in share-rental arrangements are evidence of this. For example, the shift in farming practices from mechanical weed control to chemical weed control applied by custom operators or input suppliers has led many landowners to renegotiate their input shares to not include the custom application expense. Another example involves new seed varieties being developed with incorporated pest control attributes. In this case, tenants may want to renegotiate with their landlords if seed costs are not now shared in the share rental contract.

As for cash lease, contracts, there is growing interest among participants to either renegotiate periodically — every year or two, or consider longer-term leases based on long-term commodity trends. The interest in recent months has been indicative of this. Favorable crop

(Continued on next page)
prices and recent shifts in the government farm program have been a "wake up call" to crop-land owners to reexamine their cash leases. As a result, 1997 cash rental rates for cropland may well be 8 to 12 percent higher than year-earlier levels. However, when commodity prices edge downward and farm program payments subside, the cash rents for succeeding years will likely decline as well. The fact that rental rate adjustments need to be both upward and downward depending on the circumstances currently evident in the grazing areas of the state, where tenants are now urging for some downward movement of grazing land rents. With the ranching economy still in a slump, 1997 rental rates could be down somewhat from 1996 levels.

In short, we can expect greater and more frequent adjustment in cash rental rates in the years ahead as both sides of the negotiating table grow in economic sophistication. Even within cropshare leasing, appropriate adjustments to shares will be made to better reflect the relative contributions which each party brings to the contract.

Finally, a trend of recent years which is likely to continue is that of keen competition for rental properties. The structure of agriculture continues to move towards farm consolidation into larger, more efficient operations. Leasing allows the ownership of land to remain in relatively small parcels while at the same time providing the consolidation of these holdings into larger, more viable-sized production units. The implication is obvious. The successful tenants in this environment will be the professional tenants who offer a higher quality of services to landowners than those of their competitors. Not only will the land be profitably farmed but the land resource will be properly stewarded. There will be "truth in leasing" and a high degree of professionalism. In turn, a multi-year partnership with the land owners will tend to emerge to the benefit of both parties.
Streamflows and Irrigation in the Frenchman Creek Basin

Osei Yeboah, Maurice Baker and Glenn A. Helmers

There has been considerable discussion about the impact of irrigation development on streamflows in the Republican River Basin. This interest has intensified with Kansas arguing that Nebraska is failing to meet the terms of the Republican River Interstate Compact which allocates the basin water between Colorado, Kansas and Nebraska. The compact allocates water by subbasin; therefore, any analysis must consider each subbasin. One of these is Frenchman Creek.

Recorded streamflows at Culbertson (near the mouth of Frenchman Creek) have declined from approximately 40,000 cubic feet per second (cfs) annually in 1950 to approximately 14,000 cfs in 1994. We analyzed the causes of this decline for factors for which there were data. One factor examined was the number of registered irrigation wells in Frenchman drainage area. For example, registered wells in Chase County increased from 134 in 1961 to 1,422 in 1994. During the 1970s, the number of wells increased 131 percent from 541 in 1970 to 1,252 in 1980. Statistical analysis indicates that the streamflow declined an average of 69 cfs for each registered well located in townships which are not adjacent to the stream but were unrelated to the number of wells close to Frenchman.

Many wells close to the stream are used to supplement surface water supplies from the irrigation districts supplied from Enders Reservoir. The pumping capacities of these wells may be less than those farther from the stream. Any return flow from the close wells quickly reaches Frenchman Creek so the stream flow is not reduced as much. There may be other factors which partially explain reduced streamflow. One frequently mentioned is improved precipitation retention on cropland; however, data are not available for this factor.

Water availability clearly has an economic impact on Nebraska since it could affect the number of irrigated crop acres in the basin. Acres of irrigated corn in Chase County, for example, increased from 1,400 in 1950 to 125,000 in 1994. Much of this growth took place in the 1970s, when irrigated corn acres nearly tripled, increasing from 38,000 in 1970 to nearly 111,000 by 1980. Reductions in the available water supply may have a minor economic effect if the same number of acres can be irrigated by being able to maintain output with low cost improved irrigation efficiency. If reduced acreage is required, not only will there be a reduced income for producers but also for input suppliers and output handlers.

The situation in the Republican River basin requires careful analysis and provides an opportunity to discover the possible impact not only in that part of the state but elsewhere. A better understanding of the situation will lead to more informed policy decisions.
Changes in custom harvest rates over the years reflect changes in the price structure in the agricultural economy and technological changes in machinery. Every two years, the Department of Agricultural Economics has collected information from custom operators in Nebraska. This information is not drawn from a random sample of custom operators, but consists of people who may provide machinery services. These people have been identified by Extension Educators and others familiar with local activities. It is interesting to view the results of these surveys over the past 20 years and note what policy implications may be drawn from the changes that have occurred.

It appears that some custom rates are slow to change in spite of significant changes that have occurred in machinery, labor, and fuel costs during the past 20 years. Table I presents custom rates for selected field operations and indexes for components of custom services from 1976 to 1996. For example, the average charge per acre in Nebraska for moldboard plowing increased from $6.19 in 1976 to $10.23 in 1996 (Table I). That is a 65 percent increase. But cost indexes for powered machinery, other machinery, wages and fuel have increased over 100 percent during the same period. The moldboard plow change can be contrasted with drilling small grains. This drilling activity increased from $2.78 per acre to $7.04 which is a 153 percent increase.

A second interesting feature of the rates is the cyclical nature of the changes. In years when the agricultural economy is strong in Nebraska rates tend to rise. In contrast, during periods of economic distress, the rates may stay constant or even decline. This has occurred even though the indexes of cost, except for fuel, have risen steadily throughout this 20-year period. The best example of the cyclical nature of Nebraska custom rates occurred in 1986 when many custom rates declined from the comparable 1984 rates. The agricultural economy was in severe recession during this period.

Why are prices of the custom fees not consistent with changes in cost indexes? There are several explanations that have been suggested as plausible reasons for this situation. Some observers suggest that farmers may perform many custom operations for relatives or close neighbors so they may not charge full cost to them. Others suggest farmers may charge only part of the cost because they are trying to spread the fixed cost of an expensive machine over more acres and are willing to accept only modest returns above operating cost to do so. Still others suggest that the publication of these data freezes rates because landlords point to the published rate as the competitive rate that should be charged.

While these plausible explanations have some merit, it is most likely that rates change more slowly or more rapidly than cost indexes because of technological change and the proportion of the indexes that make up a particular custom operation. Just because wages, for example, rise more rapidly than the custom fees should not imply that wage cost per acre should rise at all. Introducing larger or faster equipment may result in falling labor cost per acre even though wages rise. The improvement in fuel use per horsepower hour, the size and the speed of equipment are other examples of the impact of technology on the custom fees per acre. For example, larger machinery may result
Table I. Selected Custom Rates and Cost Indexes: 1976-1996.

<table>
<thead>
<tr>
<th>Year</th>
<th>Custom Rates</th>
<th>Cost Indexes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Plow</td>
<td>Seed</td>
</tr>
<tr>
<td>1996</td>
<td>$10.23</td>
<td>$7.04</td>
</tr>
<tr>
<td>1994</td>
<td>10.34</td>
<td>6.94</td>
</tr>
<tr>
<td>1988</td>
<td>9.00</td>
<td>5.81</td>
</tr>
<tr>
<td>1986</td>
<td>8.64</td>
<td>5.32</td>
</tr>
<tr>
<td>1984</td>
<td>9.18</td>
<td>5.45</td>
</tr>
<tr>
<td>1982</td>
<td>9.08</td>
<td>5.02</td>
</tr>
<tr>
<td>1980</td>
<td>7.93</td>
<td>4.30</td>
</tr>
<tr>
<td>1978</td>
<td>6.36</td>
<td>3.31</td>
</tr>
<tr>
<td>1977</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1976</td>
<td>6.19</td>
<td>2.78</td>
</tr>
</tbody>
</table>

Sources: *Nebraska Farm Custom Rates*, NebGuide G75-207, 1976-1996 and *Revised Prices Received and Paid Indexes, United States*, Bulletin 917, National Agricultural Statistics Services, USDA.

1Plow = Dollars per acre for any moldboard plow up to 1992 and one without plow packer for 1994 and later years.
Seed = Dollars per acre to drill small grains with any drill up to 1986 but only drills with disc openers for 1988 and later years.
Cult = Dollars per acre to cultivate row crops with any cultivator up to 1990 but with only conventional cultivator for 1988 and later years.
Bale = Dollars per bale to bale hay in large round bales.
Combine = Dollars per acre to combine soybeans; flat rate only.

2Indexes of prices paid by farmers with a base of 1997 = 100. Power = tractors and self-propelled machinery; Machines = other machinery.

Increased rate charged may be justified due to the increased service provided. Care must be taken in the use of indexes because the products that are measured for a price index may change over time as new technologies replace old ones.
Machinery Replacement

Glenn A. Helmers

Machinery replacement is one of the most complex issues facing agricultural crop producers. Traditionally this has been directed at questions of optimum trading time, leasing vs. ownership, and the necessary acreage sizes to achieve cost economics each in relation to a specific machine. However, machinery replacement is even more complex when machinery is considered as a set. Machines are increasingly linked to each other so that decisions on one machine may involve other machines. For example, planters, cultivators, and combine heads must be synchronized in terms of four- vs. six-row units. Hence, decisions such as moving from eight-row to twelve-row production may involve more than one machine.

Related is the question of the economics of multiple power units. This issue revolves around how much operating efficiency increases when using a small tractor for small power requirements, medium for medium sized tasks, etc. compared to, for example, using one large tractor for all tasks.

For firms which have no growth plans the optimum combination of machines and sizing of power units to other machinery is difficult because among other factors, crop choice and available labor affects that choice. These decisions are even more difficult where the firm expects to expand and is contemplating major machinery changes at some uncertain future time. We break this down into questions of 1) flexibility and evolving sets and 2) multiple power units.

Flexibility and Evolving Sets

A convenient and useful manner of thinking related to an efficient machinery set is to focus on an “ideal” set were one to purchase each component “fresh” rather than the set currently in place. Yet the ideal set can be elusive particularly if the firm expects to grow. Further, even if an ideal set can be determined for a particular time point in the future, the best sequence of changing machines to achieve that set is complex. One approach is to replace machinery as needed with that future set in mind rather than waiting to make several major adjustments at that future point. This can obviously result in some machine overcapacity. The ownership cost of overcapacity may not be as large as commonly perceived. Often depreciation is viewed as a cost which is incurred regardless of use. Hence, overcapacity is sometimes viewed as costly because of high perceived depreciation costs. Increasingly, however, depreciation is viewed as more use related than age related. Overcapacity does involve an increased capital investment cost, however. A major question is how large this cost of additional invested capital is under conditions of overcapacity.

Another approach for dealing with the problem of sequencing machine replacement is to use machine leasing to increase flexibility and delay long-run ownership decisions until arriving at the desired acreage size. Where custom machine services are available, this is another alternative provided that the service is available in a timely manner.

Multiple Power Units

A similar issue to that discussed above is “overcapacity” in terms of multiple power units. Generally it has been common to economically view multiple power units critically. Perhaps one reason for this is a perceived high depreciation cost resulting from multiple tractors. However, if as discussed above, depreciation is considered as largely use based, wear-out costs per year could be similar for two compared to one power unit (or three vs. two, etc.). While capital investment costs generally will be higher with two power units compared to one, the operating cost efficiencies of matching power requirements to power sources may outweigh the increased capital cost. While it is difficult to be specific, some principles are:

1) Where there is a wide range of power needs, advantages exist for multiple power units.
2) Multiple power units are more efficient in labor situations involving more than one person.
3) Types of agriculture make a difference. Where width can be easily added to towed machinery, single-powered units tend to be more efficient compared to multiple units.
The July 1, 1996 U.S. total cattle inventory was estimated to be 112 million head, down 1 percent from a year earlier. This is the first reduction in total U.S. cattle inventories since 1990.

The number of heifers being held as beef cow replacements on July 1 was reported 4 percent smaller than last year’s, and 9 percent below July 1994 levels. Heavier beef cow-herd culling and reduced numbers of beef cow replacements will lead to a smaller 1997 calf crop. Beef production will likely continue to grow until mid-1997.

Feeder cattle and calf prices are likely to stabilize in 1997, although range and forage conditions can move prices either up or down. Returns to cow-calf operations in 1997 will likely be negative, the third year of red ink. There is a chance that prices may be better than in 1996. The condition of the feed grain crop will influence feeder cattle prices by mid-year and into the fall.

**Feeder Cattle Supplies**

The July inventory of steers over 500 pounds and calves under 500 pounds was equal to that of the previous year. The number of heifers not kept for replacement increased 1 percent compared to last year. The total supply of feeder cattle is up slightly from a year ago. the number of cattle outside feedlots and not kept for breeding is up about 1.4 million head from 1995.

Feeder cattle imports during the year will increase feeder supplies. Shipments of feeder cattle from Mexico and Canada will add nearly a million head to feeder cattle numbers.

**Range, Forage and Feed Conditions**

High feed grain prices continue to be negative to feeder cattle prices. For example, for 700-800 pound feeder steers, each 10 cents per bushel increase in corn prices raises the projected breakeven by about 40 cents per cwt. Or, to keep breakeven unchanged, feedlot operators would decrease the amount paid for feeder steers by about 60 cents per cwt.

Should 1997 turn out to be a bumper corn year then declining feed grain prices by mid-year could turn prices around for feeder cattle.

**Prices**

Prices for yearling steers in late 1996 were trading $20-22 per cwt. below the average for the 1990-94 period. As long as feed grain prices stay near harvest levels, then early 1997 yearling steer prices may trade in the low $60s per cwt., slightly below year ago price levels. During the last half of 1997, heavy feeder steer prices may trade above 1996 prices if abundant feed supplies are on the horizon.

Prices for 500-600 pound steer calves will have the same potential ups and downs as the yearling steers. Prices on steer calves late in 1996 were averaging near $60 per cwt., slightly below 1995 prices. Early 1997 seasonal strength may hold prices in the $60s but steer calves are likely to be under some downward pressure if feed grain prices stay near the top of the current range. Prices for 500-600 pound steer calves during the last half of 1997 may average near or somewhat above 1996 levels.

Declining feed grain prices and uptrending fed cattle prices could improve the feeder cattle and calf outlook by mid-1997.

Feeder cattle and calf marketing plans should be continuously updated in 1997. Marketing strategies, including retained ownership, should be evaluated as market prices and production costs change.
Slaughter cattle prices during 1996 ranged between $56 and $72 per cwt. The difference between the highs and lows in 1995 was about $14 per cwt. Beef production in 1996 was up in every quarter. Cow slaughter was up sharply in 1996, at times beef cow slaughter was up 25 percent from year earlier levels. Total beef production for the year ended up 3-4 percent above 1995. Returns to cattle feeders in 1996 were negative January through July but then turned positive until nearly the end of the year.

**Supply Forecasts**

Placement of cattle into feedlots and resulting feedlot inventories in the first half of 1997 are likely to run near or slightly below the same period in 1996. Above average cow slaughter, continuing a trend that started in 1992, will add to beef production in the first half of the year but not at the levels experienced in 1996.

Feedlot placements in the last half of 1997 will reflect market conditions at the time the decisions are being made. Declining feed grain prices, somewhat smaller feeder cattle supplies and some optimism for increased international beef trade will likely generate some increase in placements. A long string of negative feedlot closeouts will impact placement decisions by fall.

The slow expansion in total cattle numbers that started in 1991-92 appears to have ended in 1996. Beef production the second half of 1997 is expected to be slightly below year earlier levels.

**Demand Prospects**

Beef continues its long-term struggle for market share. Currently, per capita consumption and demand for beef has stabilized. Retail beef prices declined in 1996—down nearly a dime per retail pound from 1995. Beef and veal exports were running 15-20 percent above a year earlier in late 1996.

It appears that beef promotion will play an important role in shaping consumer preferences. Beef educational programs should be increased to expand the consumers’ knowledge about the wholesomeness of beef. Competition from other red meats and poultry will continue to increase.

**Marketing Plan**

Marketing plans for cow-calf operators, growers and cattle feeders should be formulated and updated as market information changes and more is known about range, pasture conditions and the 1997 feed grain crop. Price risk management strategies should be formulated to handle a wide range of market outcomes.

**Price Forecasts**

First quarter 1997 prices are expected to average near or above year ago levels. Prices averaged $61-62 per cwt. in the January-March period in 1996.

Second quarter 1997 prices are also expected to average above the April-June 1996 prices. Prices averaged $59-60 during the 2nd quarter of 1996.

Prices the second half of 1997 are likely to continue to average near to slightly above 1996 levels. Producers and feeders should always be on the lookout for price hedging opportunities or chances to reduce costs. Feeder cattle prices may stabilize in 1997 and by the second half of the year might be showing a little strength if forage and feed conditions are average or better.
USDA hog inventory reports confirmed that hog numbers declined in 1996 compared to a year ago. Omaha cash slaughter hog prices ranged from near $41 to just over $65 in 1996. Hog prices averaged in the low $50s per cwt., for the year, up over $10 per cwt. from 1995.

Supply Forecasts

Recent hog and pig reports suggest that inventories may decline slightly, about 1 to 2 percent the first two quarters of 1997. It appears likely that hog numbers the last two quarters of 1997 may be up compared to the second half of 1996.

Hog producers will be closely watching corn prices in 1997. Higher feed costs may encourage producers to reduce farrowings or to decrease market weights. Generally, market weights for slaughter hogs continue to increase. Average weights are near 258 lbs. per market hog, up from 240 lbs. ten years ago.

Hog Industry Trends

The structure of the hog industry continues to change. Generally there are fewer and larger hog operations. A recent survey indicated there are 66 hog producers who marketed over 50,000 head per year and 9 firms that marketed over 500,000 head per year.

The average inventory on hog farms has more than doubled in the last 10 years. The number of pigs sold per sow per year has increased an average of 1.7 percent per year since 1935.

In the 1970s over 30 percent of slaughter hogs were purchased at public markets, today it is less than 5 percent. Eighty percent of the hogs were sold on a carcass merit basis.

Marketing Plan

The objective of your marketing plan strategy is to attain monthly-yearly average selling prices that are $3-5 per cwt. higher than average prices reported by the cash market. Producers must watch for forward pricing opportunities that achieve pricing goals and reduce price risk. Price volatility and a $15-20 cash price range should be planned for in 1997.

Price Forecasts

Cash hog prices in 1997 are expected to trade below 1996 levels. Prices in the first half of the year should average in the low- to mid-$50s. Seasonal price strengths could result in summer prices in the upper-$50s. Prices for the second half of the year may average in the upper-$40s. Hog producers' production decisions for the second half of 1997 will depend on production cost and market hog price trends in the first half of the year. At midyear feed grain production and price prospects, supplies of competing meats and pork export levels also will be influencing the market.
The year 1996 was one of turmoil, record setting prices, high expectations, and disappointing fall prices. Farmers saw record setting prices in the spring and early summer for old crop, when corn prices topped $5 based on a tightness of supply with only 426 million bushels projected carry-out for September 1996. Wheat and soybeans also experienced a tightness of supply with projected carry-out of 376 million bushels of wheat and 183 million bushels of soybeans. The market in 1995-96 was a tight supply driven market supported by a fairly strong demand picture, leading to record level prices.

The market for 1996 production will be a demand driven market, which could mean fairly decent prices or a market that will remain stagnant throughout the market year. Either way we will not see the record setting prices that we saw in 1996. Production increased in all three major crops. Corn, despite a troublesome planting season back east, increased from 7.374 billion bushels in 1995 to 9.012 billion bushels in 1996, wheat increased from 2.183 to 2.282 billion bushels in 1996, and soybean production jumped from 2.177 to 2.346 billion bushels for 1996 based on USDA's October supply and demand report. The projected ending stocks for September 1997 was not a overly burden-some increase from September 1996, and normally wouldn't have caused much of a price reaction. The problem was this increase took place at the same time that the market saw a substantially short run decline in demand. The combination of these two factors led to unexpected price declines for new 1996 fall grain.

During the winter marketing months, we can expect a market responding to increased demand and the South American soybean crop. It appears at this time that much of the grain in the U.S. will move into storage and that farmers will be reluctant to sell at the harvest prices. This could very well be a market year where the low prices will occur during the harvest period, with a modest increase following harvest. The recovery in early 1997 will be very dependent on world demand. When reviewing the following supply and demand tables, one should pay particular attention to the projected ending stocks numbers. Note that corn more than doubled and soybeans are approaching the 200 million bushel range.

<table>
<thead>
<tr>
<th>U.S. Corn Supply and Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>1994-95</td>
</tr>
<tr>
<td>-----------------------------</td>
</tr>
<tr>
<td><strong>Million Acres</strong></td>
</tr>
<tr>
<td>Area</td>
</tr>
<tr>
<td>Harvested</td>
</tr>
<tr>
<td>72.9</td>
</tr>
<tr>
<td><strong>Bushels</strong></td>
</tr>
<tr>
<td>Yield per harvested acre</td>
</tr>
<tr>
<td>138.6</td>
</tr>
<tr>
<td><strong>Million Bushels</strong></td>
</tr>
<tr>
<td>Beginning Stocks</td>
</tr>
<tr>
<td>850</td>
</tr>
<tr>
<td>Production</td>
</tr>
<tr>
<td>10.103</td>
</tr>
<tr>
<td>Imports</td>
</tr>
<tr>
<td>10</td>
</tr>
<tr>
<td>Supply, total</td>
</tr>
<tr>
<td>10,962</td>
</tr>
<tr>
<td>Food/Seed</td>
</tr>
<tr>
<td>1.691</td>
</tr>
<tr>
<td>Feed and Residual</td>
</tr>
<tr>
<td>5,536</td>
</tr>
<tr>
<td>Exports</td>
</tr>
<tr>
<td>2,177</td>
</tr>
<tr>
<td>Use, total</td>
</tr>
<tr>
<td>9,405</td>
</tr>
<tr>
<td>Ending Stocks total</td>
</tr>
<tr>
<td>1,558</td>
</tr>
<tr>
<td>Average Price</td>
</tr>
<tr>
<td>$2.26</td>
</tr>
</tbody>
</table>

*Projections for the 1996-97 crops are USDA's World Outlook Board expectations of supply and disappearance as of October 11, 1996.
### U.S. Soybeans Supply and Demand

<table>
<thead>
<tr>
<th></th>
<th>1994-95</th>
<th>1995-96</th>
<th>1996-97*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Million Acres</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Area Harvested</td>
<td>60.9</td>
<td>61.6</td>
<td>63.4</td>
</tr>
<tr>
<td><strong>Bushels</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yield per harvested acre</td>
<td>41.4</td>
<td>35.3</td>
<td>37.0</td>
</tr>
<tr>
<td><strong>Million Bushels</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beginning Stocks</td>
<td>209</td>
<td>335</td>
<td>183</td>
</tr>
<tr>
<td>Production</td>
<td>2,517</td>
<td>2,177</td>
<td>2,346</td>
</tr>
<tr>
<td>Supply, total</td>
<td>2,731</td>
<td>2,517</td>
<td>2,535</td>
</tr>
<tr>
<td>Crush</td>
<td>1,405</td>
<td>1,370</td>
<td>1,375</td>
</tr>
<tr>
<td>Exports</td>
<td>838</td>
<td>845</td>
<td>850</td>
</tr>
<tr>
<td>Seed/Residual</td>
<td>153</td>
<td>118</td>
<td>115</td>
</tr>
<tr>
<td>Use, total</td>
<td>2,396</td>
<td>2,333</td>
<td>2,340</td>
</tr>
<tr>
<td>Ending Stocks total</td>
<td>335</td>
<td>183</td>
<td>195</td>
</tr>
<tr>
<td>Average Price</td>
<td>$5.48</td>
<td>$6.77</td>
<td>$6.50-7.40</td>
</tr>
</tbody>
</table>

*Projections for the 1996-97 crops are USDA’s World Outlook Board expectations of supply and disappearance as of October 11, 1996.

### U.S. Wheat Supply and Demand

<table>
<thead>
<tr>
<th></th>
<th>1994-95</th>
<th>1995-96</th>
<th>1996-97*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Million Acres</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Area Harvested</td>
<td>61.8</td>
<td>61.0</td>
<td>62.9</td>
</tr>
<tr>
<td><strong>Bushels</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yield per harvested acre</td>
<td>37.6</td>
<td>35.8</td>
<td>36.4</td>
</tr>
<tr>
<td><strong>Million Bushels</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beginning Stocks</td>
<td>568</td>
<td>507</td>
<td>376</td>
</tr>
<tr>
<td>Production</td>
<td>2,321</td>
<td>2,183</td>
<td>2,282</td>
</tr>
<tr>
<td>Imports</td>
<td>92</td>
<td>68</td>
<td>70</td>
</tr>
<tr>
<td>Supply, total</td>
<td>2,981</td>
<td>2,757</td>
<td>2,728</td>
</tr>
<tr>
<td>Food/Seed</td>
<td>942</td>
<td>988</td>
<td>1,008</td>
</tr>
<tr>
<td>Feed and Residual</td>
<td>344</td>
<td>152</td>
<td>325</td>
</tr>
<tr>
<td>Exports</td>
<td>1,188</td>
<td>1,241</td>
<td>925</td>
</tr>
<tr>
<td>Use, total</td>
<td>2,475</td>
<td>2,381</td>
<td>2,258</td>
</tr>
<tr>
<td>Ending Stocks total</td>
<td>507</td>
<td>376</td>
<td>470</td>
</tr>
<tr>
<td>Average Price</td>
<td>$3.45</td>
<td>$4.55</td>
<td>$4.10-4.70</td>
</tr>
</tbody>
</table>

*Projections for the 1996-97 crops are USDA’s World Outlook Board expectations of supply and disappearance as of October 11, 1996.
Seasonal Dry Bean Prices: The Storage Lottery

Chyi-lyi (Kathleen) Liang, Dillon M. Feuz, and R. Garth Taylor

Prices for most agricultural commodities exhibit a distinct seasonal pattern. For grains, prices reach the annual low at harvest and then rise throughout the year to again drop the following harvest. Price increases between harvest should equal storage costs plus an opportunity cost on the foregone interest income that would have been realized from immediate sale of the grain. Because of competitive market forces, the long term average return to storage will be close to a break-even deal. If storage was always (never) profitable then most individuals would (not) store and the market prices would quickly adjust to bid the profit (loss) out of storage.

However, many factors disrupt an orderly seasonal pattern of agricultural commodity prices: (1) unforeseen demands for the product during the year, (2) expectations of crop yields for the following year, (3) changing government programs, and (4) general economic conditions. Large profits or losses from storage are frequently a consequence of one or more of these unforeseen events. The farmer’s decision on the most profitable combination of storage and sales throughout the year is therefore somewhat of a lottery with an expected value of zero.

For dry edible beans, the market disruptions appear to outweigh the orderly seasonal price patterns. Historical prices for Pinto and Great Northern beans were obtained from USDA for the western Nebraska-eastern Wyoming market for the 1983-84 to 1995-96 crop years. Seasonal patterns and price statistics are summarized for Pinto and Northern varieties. The horizontal line is the average price for each month, the box is the standard deviation about the mean, and the vertical line depicts the range for that month over time. The average price line, being close to horizontal, shows very little seasonality in dry bean prices. However, the standard deviation and the range increase significantly throughout the year. Thus there are wide price fluctuations which increase after harvest.

A market plan which calls for routine storage of beans with the plan to sell later in the same crop year will not be profitable on average. However, storage of beans over more than one crop year may be profitable if marketed on one of the monthly price-up spikes that occurs. In analyzing the raw price data these price spikes tend to occur about once every one to four years. The lottery with dry bean storage is that a price spike will occur before storage costs have exceeded the additional revenue obtained from selling on the higher market.
Great Northern Bean Prices
Western Nebraska-Eastern Wyoming, 1983-96

Pinto Bean Prices
Western Nebraska-Eastern Wyoming, 1983-96
Data compiled by the Nebraska Farm Business Association provide Nebraska ag producers an opportunity to analyze their business over time as compared to other producers. Historic trend data may not be a perfect indicator of future economic conditions, but does provide valuable insights to individual operators concerning the relative profitability of their business and its various components. Knowledge of past performance is critical for future management decisions.

Ag production is risky and subject to volatility. 1995 data compiled from 160 Nebraska farmers and ranchers enrolled either in the Nebraska Farm Business Association (NFBA) or Nebraskaland Farm and Ranch Management Education Program (NFRM) provided excellent examples. The spread from high to low of Net Farm Income per operator exceeded $270,000. Operating Expense Ratio (Total Farm Operating Expense - Interest Paid) + Gross Farm Income ranged from less than 40 percent to over 150 percent. Interest as a per cent of Gross Income ranged from 0 percent to over 35 percent. Return on Assets (ROA) ranged from -35.5 percent to +39.4 percent. percent of Debt compared to Market Value of Farm Assets ranged from 0 percent to 114 percent.

Note the following trends for the average ag producer enrolled in the NFBA financial analysis program:

Continuing the trend of recent years, the average operator supplemented Farm Income with Nonfarm Income to generate adequate income for Family Living and Taxes. In 1995, average Family Living and Income Taxes of $41,616 exceeded Net Farm Income (per operator) by approximately $7,000.

Recent changes in Government Farm Programs, continued market price volatility, weather challenges, as well as capital and operating cost increases all point to the continued need for active financial management in today's production agriculture. Risk protection begins with good records and financial analysis of the business.

NFBA is operated through Nebraska Cooperative Extension, IANR, University of Nebraska-Lincoln. For information about NFBA, contact the Nebraska Farm Business Association, University of Nebraska, 110 Musschel Hall, P.O. Box 830719, Lincoln NE 68583-0719. Or call 402/472-1399.

As mentioned, 1995 data collection was a joint effort with the Nebraskaland Farm and Ranch Management Education Program (NFRM). Information regarding NFRM can be obtained from your nearest Nebraska Community College.
Nebraska Ag Producers: How Are They Doing Compared to the Past? What Do They See for the Future?

John C. Allen and Amy M. Smith

Nebraska's 53,000 agricultural producers have continued to be on a roller coaster ride for profits since the 1980s. Since then, a continued decline in the number of producers presents a potential problem for refilling, at least some of the slots, vacated by retiring producers. While income is an important aspect of farming and ranching, how an individual perceives his or her life also plays a role in whether intergenerational transfer will occur among family members.

Previous research on agricultural producers in the mid-1980s showed that farmers had an overall higher subjective well-being score when compared to non-producers (Molnar, 1985). Other social scientists have also found that farming has been associated with a higher quality of life linked to rural residence, family involvement, and occupational self-determination (Cochrane, 1979). While ag producers rank very low in their expressions of happiness, they have been among the highest in describing themselves as satisfied with their work when compared to non-farmers.

The first baseline Nebraska Rural Poll was conducted in March and April of 1996 to address the question of how Nebraska farmers and ranchers are doing. They were asked to rank how they believe they compare to five years ago, how they compare to their parents, and how they see themselves ten years in the future. A self-administered questionnaire was returned by 2,754 rural Nebraskans (45 percent response rate), with 389 of these rural residents being farmers or ranchers.

The survey respondents were asked three questions about general well-being. They were:

1) All things considered, do you think you are better or worse off than five years ago?
2) All things considered, do you think you are better or worse off than your parents when they were your age?
3) All things considered, do you think you will be better off ten years from now than you are today?

Figure 1 shows the comparison of how farmers and ranchers responded when compared to non-farmer Nebraska residents.

As the figure illustrates, 36 percent of the farmer/ranchers say they are worse off than five years ago compared to 24 percent of the non-farmer-ranchers. When compared to their parents, 49.5 percent of the ag producers say they are better off compared to 59 percent for the non-farmer/ranchers. About 31 percent of the farmer/ranchers say they are worse off compared to their parents, while only 22 percent of the non-farmers reported being worse off. About 20 percent of rural residents regardless of farming status report they are about the same as their parents.

What does the future look like ten years in the future for Nebraska ag producers? Thirty-four percent of the producers expect to be better off in ten years than they are today. About 4 percent more non-farmers believe they will be better off. Thirty-one percent of the producers believe they will be worse off ten years from now, which is about 3 percent higher than non-producers. About 35 percent of rural residents,
regardless of farming status, believe they will be about the same.

This data indicates that, on average, farmers in Nebraska do not believe they are doing better than in the past, nor better than their parents, nor do they believe their overall situation will improve in the next ten years. The historical pattern of farmers having higher levels of satisfaction and well-being when compared to non-farmer/ranchers has not continued in Nebraska. Factors previously reported to influence higher levels of satisfaction for producers include rural residence, family involvement in the business, and occupational determination. These factors may have changed, and this change is reflected in a low overall ag producer well-being level. It should be noted that these findings are a snapshot in time, and that time series data over the next few years will give us a more accurate picture of how ag producers are perceiving their lives. The question still exists whether younger family members are seeing this declining well-being as a reason to not join the ranks of Nebraska ag producers.
THE AUTHORS

John C. Allen
Agricultural Economics Department
58C FYH - University of Nebraska
P.O. Box 830922
Lincoln, NE 68583-0922
(402) 472-8012

Maurice Baker
Agricultural Economics Department
314D FYH - University of Nebraska
P.O. Box 830922
Lincoln, NE 68583-0922
(402) 472-1796

Larry Bitney
Agricultural Economics Department
303A FYH - University of Nebraska
P.O. Box 830922
Lincoln, NE 68583-0922
(402) 472-2047

Gary Bredensteiner
Nebraska Farm Business Association
111 MusH - University of Nebraska
P.O. Box 830719
Lincoln, NE 68583-0719
(402) 472-1399

John Cole
Agricultural Economics Department
312 FYH - University of Nebraska
P.O. Box 830922
Lincoln, NE 68583-0922
(402) 472-9143

Dillon M. Feuz
Panhandle Research & Extension Center
4502 Ave. 1
Scottsbluff, NE 69361-0224
(308) 632-1232

A. L. (Roy) Frederick
Agricultural Economics Department
207A FYH - University of Nebraska
P.O. Box 830922
Lincoln, NE 68583-0922
(402) 472-6225

Glenn A. Helmers
Agricultural Economics Department
205B FYH - University of Nebraska
P.O. Box 830922
Lincoln, NE 68583-0922
(402) 472-1798

Bruce Johnson
Agricultural Economics Department
314B FYH - University of Nebraska
P.O. Box 830922
Lincoln, NE 68583-0922
(402) 472-1794

H. Douglas Jose
Agricultural Economics Department
304C FYH - University of Nebraska
P.O. Box 830922
Lincoln, NE 68583-0922
(402) 472-1749

James G. Kendrick
Agricultural Economics Department
308B FYH - University of Nebraska
P.O. Box 830922
Lincoln, NE 68583-0922
(402) 472-1933

Cyi-lyi Liang
Panhandle Research & Extension Center
4502 Ave. 1
Scottsbluff, NE 69361-0224
(308) 632-1232

Lynn H. Lutgen
Agricultural Economics Department
217 FYH - University of Nebraska
P.O. Box 830922
Lincoln, NE 68583-0922
(402) 472-3406

Gary D. Lynne
Agricultural Economics Department
102B FYH - University of Nebraska
P.O. Box 830922
Lincoln, NE 68583-0922
(402) 472-3401
William Miller  
Agricultural Economics Department  
304B FYH - University of Nebraska  
P.O. Box 830922  
Lincoln, NE 68583-0922  
(402) 472-0661

Richard K. Perrin  
Agricultural Economic Department  
314A FYH University of Nebraska  
P.O. Box 830922  
Lincoln, NE 68583-0922  
(402) 472-9818

Jeffrey S. Royer  
Agricultural Economics Department  
207C FYH - University of Nebraska  
P.O. Box 830922  
Lincoln, NE 68583-0922  
(402) 472-4634

Amy Smith  
Agricultural Economics Department  
58 FYH - University of Nebraska  
P.O. Box 830922  
Lincoln, NE 68583-0922  
(402) 472-8012

R. Garth Taylor  
Panhandle Research & Extension Center  
4502 Ave. 1  
Scottsbluff, NE 69361-0224  
(308) 632-1248

Allen C. Wellman  
Agricultural Economics Department  
208B FYH - University of Nebraska  
P.O. Box 830922  
Lincoln, NE 68583-0922  
(402) 472-2039

Osei Yeboah  
Agricultural Economics Department  
222 FYH - University of Nebraska  
P.O. Box 830922  
Lincoln, NE 68583-0922  
(402) 472-0279