

FARM AND RANCH BULLETIN

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LAND VALUE DEPENDS UPON INTENDED USE

Land is a versatile commodity, points out the Economic Research Service. It can be used as a farm or as the site of a summer home, a suburban development, a shopping center, or a new factory. The value of the land varies according to the way in which it is used or the way it may be used in the future.

The ERS says that more than a little guesswork is involved in determining the future value of any particular tract of land. Some of the general forces that have helped set trends in land values are quite clear, however. The trend setters include the following: (1) the growth in population, (2) the impact of the general rise in prices, (3) developments in the technology of farming, and (4) a "psychological factor."

Population Growth

Many people assume that since the supply of land is fixed and the population is not, the price of farmland almost has to rise. More people will need more food and fiber, and additional land will be required to produce these necessities. However, domestic demand for food and fiber has increased at the rate of 1.7 percent annually, a figure that is substantially less than the potential rise in farm output. The technological "explosion" of the past decade probably will continue to contribute to higher yields at a faster rate than population growth.

There is sufficient land in the United States to meet domestic needs, but the economic supply of land becomes less certain when future

export requirements are considered. The current world need for food, combined with the increasing population, points to a continuing rise in U.S. agricultural exports. Shipments have about doubled in the past 15 years, to reach a total of \$6.7 billion in fiscal 1966.

Impact of the General Price Level

History lends strength to the proposition that the price of land will keep pace with prices in general. However, history deals in averages, and the rule applies primarily to land with a marked potential for nonagricultural uses. If the principle were to be valid for farmland too, net income per acre would have to keep pace with the general price level.

Another complication in predicting future land prices is the presence of the long-term investor. This type of buyer is likely to be in the upper income bracket. He prefers investments such as land or common stocks which pay off in terms of capital appreciation that is taxed at a lower rate than that of ordinary income. As long as he holds some of the land, the supply available for sale is reduced. This situation places further upward pressure on land prices.

Another pressure on land prices is the spread of suburbia. Although the market indicates that land near large cities will continue to be in great demand, future land use may not be as extensive for residential purposes, according to the ERS. In more and more instances, high-rise apartments are taking the place of the single-family unit. Because of its favorable

location, land in downtown areas is likely to be "reused." Approximately 40 percent of all new dwellings being built today are multiple units.

Technology

More efficient tractors, larger supplies and better qualities of fertilizers and seeds, and greater know-how all become a part of the capital worth of farmland, primarily because of the existence of farm programs. By maintaining prices, such programs help build the value of the improved technology into the value of the land. Without support programs — in a free market — an increase in production tends to reduce the price of the commodity, says the ERS. Land would tend to provide the same net return after a yield increase as before, and land prices would not advance. Since land generally is the limiting factor in increased farm output, land values increase as the production potential rises, as long as prices are maintained.

Technology can affect land prices in another way. The larger operator, using the best farming methods, generally realizes higher-than-average returns per acre. When he buys additional land, he can afford to pay a relatively high price for the land. The smaller farmer has to pay the same price, even though his earning potential is not nearly as great as that of the larger operator. As a result, many farm units become overvalued in relation to the earning potential of the small farmer.

The Psychological Factor

Many people simply like to own property. Today's rising incomes mean that more persons can afford their own "piece of land." In economic terms, land has become a durable consumer good, and its value is quite apart from the land's ability to produce income. The ERS says that this kind of value has again widened the gap between capitalized values, based on conventional earnings, and market prices.

As few as 25 or 30 overwintered boll weevils per acre in seedling cotton can produce as many as 5,000 to 10,000 weevils per acre by the following fall, points out Texas A&M University.

Second Increase for Wheat Allotment

On August 8, 1966, Secretary of Agriculture Freeman increased the 1967 national wheat acreage allotment by 8.9 million acres to a total of 68.2 million acres. With this boost added to the 7.7 million acre increase announced on May 5, the allotment is now almost one-third above that for the 1966 production.

Secretary Freeman says that program changes were needed for 1967-crop wheat because:

- The former wheat surplus has been put to use, making increased production desirable.
- Wheat stocks this year are being reduced below a desirable reserve level.
- With feed grain stocks declining, the need for adequate wheat holdings is even more pressing.
- Domestic and world demand for wheat continue to be strong.
- Export expansion can continue if we have adequate supplies at competitive prices.
- Grain requirements for foreign assistance programs, while not completely predictable at this time, are almost certain to continue to be large.

Klein Grass Shows Promise

Studies at Texas A&M University's Coastal Bend Experiment Station, near Beeville, reveal that cattle made good gains on a Klein grass pasture last winter. Ten steers were grazed on a 13-acre Klein grass field from November to March; no supplemental feed was given. The animals gained an average of 1.1 pounds each per day.

Bill Conrad, researcher in charge of the Texas A&M tests, says that Klein grass may prove to retain some of its nutritive value into the winter and thus eliminate the need for hay. Klein grass is a perennial, warm-season bunch grass which was introduced from Africa. It is adapted to a wide range of soil types and climatic conditions in Texas. At present, Klein

grass grows from the Lower Rio Grande Valley through the Gulf Coast and Blacklands to the Panhandle.

The grass begins growth in the early spring and remains green until late fall. On small plots, it has grown well and has maintained a high leaf-to-stem ratio. In addition, it has shown a high degree of tolerance to cool weather. In the Beeville test, the top of the grass was cured by a freeze, but the bottom remained green throughout the winter. Steers ate the cured forage along with the green growth without any noticeable selectivity. Texas A&M researchers are accelerating tests with Klein grass in the hope that the favorable results will continue.

Hog Cholera Down Sharply

The number of confirmed outbreaks of hog cholera in the United States was reduced almost one-half during the 1966 fiscal year. Only 582 instances were reported during this period, compared with 1,110 a year earlier. Presently, 22 states (which account for one-third of the Nation's hogs) have advanced to the final two phases of the four-phase campaign to eradicate hog cholera. The target date for a "free" United States is 1972, according to the U.S. Department of Agriculture.

Tranquil Tomatoes

Food technology continues to advance, and although the idea may sound farfetched, several companies think there is a bright future in shipping produce under a form of heavy sedation. Mrs. Gwen Clyatt, Extension Consumer Marketing Specialist with Texas A&M University, says that, in the future, one may hear of a truckload of tomatoes that has been "put to sleep," a load of cabbage that "holds its breath," or lobsters that are shipped in a state of "suspended animation."

Until the present time, refrigeration has been the basic method of delivering fruits and vegetables to markets. A new system has been developed, however, which not only prevents deterioration of the produce but also retains more of its flavor. Nitrogen can be released into the loaded carrier in order to lower the

oxygen level and curtail the "breathing" process — the major cause of deterioration — of the produce. The effects of the sedation wear off in about 2 days, at which time normal respiration and oxidation are resumed. The produce then may be eaten without change in taste or nutritive value, and without possible ill effects.

Wool Referendum To Be Held

Secretary of Agriculture Freeman has announced that a referendum among wool and lamb producers will be held September 12-23, 1966, in order to determine approval or disapproval of a new agreement with the American Sheep Producers Council, Inc. The agreement provides for the Secretary of Agriculture to withhold a part of the producers' wool payments on the 1966-69 marketings.

The payment deductions would be used by the Council to finance advertising and promotion programs for wool and lamb. The new agreement would authorize payment deductions of up to 1.5 cents per pound on shorn wool and 7.5 cents per hundredweight on unshorn lambs. These figures compare with payment deductions in the past of 1 cent per pound on shorn wool and 5 cents per hundredweight on unshorn lambs.

The higher deductions provided by the new agreement probably would amount to approximately \$3.6 million a year. This sum would finance moderately expanded promotion programs for both wool and lamb. The Council's present wool promotion is on a national basis in cooperation with other segments of the industry which provide additional or matching funds.

Atomic Energy Used To Test Soil Moisture

Agricultural scientists at Texas A&M University's Livestock and Forage Research Center, at McGregor, are utilizing a fascinating machine which employs atomic energy to measure soil moisture. The rig sends neutrons out into the soil. By the number of neutrons that bounce back into a neutron trap, soil moisture can be determined accurately, says

G. W. McLean, A&M researcher in charge of the tests.

Seamless steel tubes about 1½ inches in diameter are driven approximately 5 feet into the ground. About 200 of the tubes are located throughout the McGregor station. A probe containing beryllium-fluoride is lowered into the steel tubes. The beryllium-fluoride releases neutrons in all directions into the soil. (Neutrons are tiny — about one-billionth of a millimeter.) The neutrons travel out at the speed of light until they hit something, bounce back, and are captured in the neutron trap in the probe.

If a neutron strikes something in the soil which is smaller than itself, it will not bounce back into the trap. If the neutron strikes something that is much larger, it will bounce back too fast to be caught — it passes on through the trap. On the other hand, the neutrons which hit something of nearly equal size, or a slightly larger mass, bounce back more slowly and are captured in the trap. These are the neutrons that are counted.

The captured neutrons mainly bounce back after hitting a hydrogen ion. Water is the major source of these hydrogen ions; consequently, the more water there is in the soil, the more hydrogen ions there are and the more neutrons bounce back slowly enough to be captured. The number of neutrons captured is measured and recorded. This number indicates the amount of soil moisture.

According to Texas A&M University, the rig costs about \$1,600. One especially practical feature of the machine is that it can show exactly when the land should be irrigated. The rig measures the moisture at various depths and eliminates guesswork. Moreover, it provides an accurate record of moisture use of different crops, as well as a record of the moisture used by different crop rotation systems.

Our Senior Citizens

A recent report of the U.S. Department of Health, Education, and Welfare shows that 1 out of every 11 persons in the United States is 65 years of age or over. The total of 18.5 mil-

lion men and women in this group exceeds the aggregate population of the 20 smallest states. In the 20th century, moreover, the percentage of the U.S. population aged 65 and over has more than doubled (from 4.1 percent in 1900 to 9.4 percent in 1965), while the number of persons over 65 years old has increased sixfold (from 3 million to more than 18 million).

According to the report, women outlive men. There are about 129 older women per 100 older men in the Nation. Life expectancy at birth is 73.7 years for females and 66.9 years for males. However, life expectancy for women is still increasing faster than that for men.

Three out of every 10 persons 65 years of age or over live in the four most populous states — New York, California, Pennsylvania, and Illinois — each of which has more than a million older residents. The report indicates that nine states have an unusually high proportion of senior citizens in their total populations: Iowa, Florida, Nebraska, Missouri, Kansas, Massachusetts, Maine, Vermont, and South Dakota.

During the next 20 years, the older population of the United States is expected to increase almost 40 percent to a total of 25 million. The number likely will grow to over 2 million in both California and New York and will reach over 1 million in each of five other states: Florida, Illinois, Ohio, Pennsylvania, and Texas.

The following table shows data on the segment of the population which is aged 65 and over for the states of the Eleventh Federal Reserve District.

State	Mid-1965		Rank ²	Mid-1985 projection
	Number	Percent ¹		
Arizona.....	118,000	7.3	41	248,000
Louisiana.....	264,000	7.5	40	396,000
New Mexico.....	60,000	5.8	48	103,000
Oklahoma.....	267,000	10.8	12	321,000
Texas.....	852,000	8.1	38	1,233,000

¹ Proportion of State's population which is aged 65 and over.

² States are ranked according to percent of the population aged 65 and over in the United States.

SOURCE: U.S. Bureau of the Census.