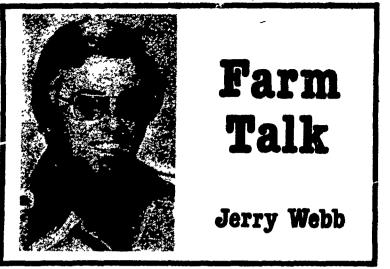
## C40-Lancaster Farming, Saturday, May 9, 1981



## A look into ag's crystal ball

The small family farm, operated full time by a young owneroperator, is on a path to oblivion, according to agricultural economists. If past trends continue, there will be none left by the end of the 1980's.

This and other projections were made recently in response to a request to the Department of Agriculture to take a hard look into the agricultural crystal ball toward the year 2000.

In essence, the experts predicted two agricultures developing in the U.S. by the turn of the century. They include a system of some 50,000 "superfarms" and an increasing number of small, parttime farms.

By the turn of the century, the economists think large farms will produce two-thirds of the nation's total output. Many of these will be family farms in the sense of an operator and family making the major production decisions, but they will not be family farms as we have known them. Most of these will also be corporate farms, hiring over half of their labor.

Modern farms will be using sophisticated management systems. We will see computers tied into a central facility providing management information to hundreds of farms at a time. These systems are already developing. The experts predict on-farm computer printouts of management alternatives that can be piped from a central source to the farm office or living room. This could be some type of televised system, with a viewing screen showing markets and futures in-





formation — it will be received and viewed on an ordinary television set.

Eventually, the small farm will become the ulimate suburb. Parttime farms will be the most numerous, although by far the least productive, when measured by conventional economic measures. These persons may even be willing to pay to live the life of a part-time farmer.

Based on population in the world and food supplies, the U.S. will have a tighter supply and demand situation for agriculturial products than we have faced in any recent decade. This problem is especially perplexing because we are now eating better than we ever have but we are not storing reserves. This doesn't mean we will see a buying panic or major food shortages, because we are better educated in managing our foodstocks.

This Spring's wheat and grain crops will be of critical concern, because the world supply will be almost down to pipeline stocks that is, just what is in the market for sale by the time they are harvested.

This has been caused primarily by crop failures in Russia. That nation's target was 235 million metric tons of grains last year, but it only produced 180 million metric tons — the difference is about equal to our entire wheat crop.

When this happened in 1972, the U.S. had 60 million acres of land on set-aside programs that were brought into production. Today we have none.

Economists have examined the situation and agree that the food supply will increase more slowly than demand in the last two decades of this century. We will experience intermittent periods of excess supply, but the trend — as we are already noticing — will be toward excess demand and increasing real food prices.

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TION AND ELIMINATION

For the first time in the history of our nation, agriculture will become a growth industry. That means that agriculture will become an increasing part of the gross national product.

In the early days of American farming, agriculture made up 90 percent of our gross national product. But it declined to the current level of three percent. Farm products are now turning this situation around.

Exports raise the value of the American dollar and make imports cheaper. When this happens, the exports become more valuable, causing a decrease in total exports. This causes prices to fall, and the overall effect is to reduce general price levels.

This year, our agricultural exports will be worth 40 billion dollars, which pays over half of our oil import bill. Thus, agriculture may play an important part in stabilizing the nation's runaway inflation.

Labor-management conflicts will have more impact during the next two decades. As the number of full-time farms grows fewer, but larger in size, labor-management conflicts will have more effect on production. Union and transportation problems will have increasing effects.

Equipment will continue to They will be especially need improve. We will see more fourwheel drive equipment, some even management and production.

larger than we now have. But we're still a long way from robots or other such exotic mechanized equipment.

We may be at the edge of a major eruption in biological research although many people think we are at the end of our rope on biological technology. Some experts say genetic engineering offers unlimited potential for food production. Ideally, genetic engineering means scientists would be able to design plants according to specification.

We are now on the threshold of this technology, but we won't hit full pace until after the turn of the century, unless our research efforts are intensified.

There is no question but what we will have adequate energy sources to operate farm tractors. Increasing fuel prices will constrict uses of petroleum fuels on nonstationary machinery, but farming will have its share by necessity for food production, if for no other reason.

The whole process of our food production industry will require an increasing number of skilled people. Land-grant universities have traditionally supplied skilled personnel to agriculture and will continue to do so in the future. They will be especially needed as farms grow more sophisticated in management and production.

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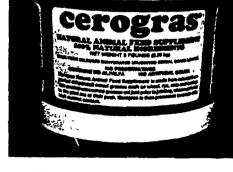
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Thiamine (Vitamin B-1)	3 17 mg per lb
Riboflavin (Vitamin B-2)	5 35 mg per lb
Niacin	. 19 98 mg per lb
Vitamin C (Ascorbic Acid)	300 00 mg per lb
Vitamin E	102 00 mg per lb
Vitamin K (phylloquinone)	15 00 mg per Ib
Choline Chloride	1,186 00 mg per lb
Magnesium (Mg)	018 %
Manganese (Mn)	0 0095 %
Cobalt (Co)	0 002 %
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Zinc (Zn)	0 031 %
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