

ECONOMICS USA

PROGRAM #4

PERFECT COMPETITION AND INELASTIC DEMAND:
CAN THE FARMER MAKE A PROFIT?

AUDIO PROGRAM TRANSCRIPT

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PERFECT COMPETITION AND INELASTIC DEMAND
CAN THE FARMER MAKE A PROFIT?

(MUSIC PLAYS)

Announcer: Funding for this program was provided by Annenberg Learner.

FRANK STASIO: This program was originally recorded in 1985. Though times have changed, the basic economic principles presented here remain as relevant today as they were when this series was produced. Also, please note that individuals interviewed on this program may no longer hold the same titles they held when this program was recorded.

ANNOUNCER: Funding for this program was provided by the Annenberg CPB Project.

(MUSIC PLAYS)

FRANK STASIO: Economics U\$A, one of a series of programs designed to explore twentieth-century micro and macroeconomic principles. The subject of this edition is Perfect Competition. Our guest is Wayne Rasmussen, Chief Historian for the U.S. Department of Agriculture. I'm Frank Stasio.

NEWSCASTER: "The stock market is up to 1322 on the Dow Jones Industrial Average, up nearly five points yesterday and the volume picked up, too. A big loser was AMR, the parent company of American Airlines prudential base... (fades out)."

FRANK STASIO: One of the greatest challenges for any business is making decisions in the face of uncertainty. A firm can try to predict trends, sales, costs, the strength of the economy, etc., but there are no guarantees. Farmers, perhaps more than anyone else are the captives of forces beyond their control. First, there is the weather. But while nature's

capriciousness can prove troublesome, a farmer is really helpless in the face of a more powerful force, the market. When a farmer harvests his crop he does not tell the buyer how much he'll charge. Instead, the farmer is paid the going price, a price set through an impersonal process involving thousands of buyers and thousands of sellers. It's an example of economists call perfect competition. Once the price is set, both farmers and consumers are left with only one choice. They can take it or leave it. Perfect competition is unusual in any economy. In fact, farming is one of the very few industries in a perfectly competitive market. Wayne Rasmussen is the Chief Historian for the U.S. Department of Agriculture. Wayne Rasmussen explains that each farmer is in competition with every other farmer growing the same crop.

WAYNE RASMUSSEN: "An individual farmer says 'well, okay, I'm gonna cut my production.' A thousand farmers say 'we're gonna cut our production. We've got a Co-op that controls say 10 or 15 percent of the production in the United States, and they say, we're gonna cut our production.' It doesn't make one bit of difference on the market. There are too many other farmers there who say, 'hey, those guys are going to cut production. This is time for me to put that extra quarter section into production because prices will be going up.' "

FRANK STASIO: Farmers are at the mercy of the market because they face so many other competitors and because it's usually impossible for them to distinguish their product from that of another grower. Wheat from Farmer Brown's field will be the same as that from Farmer Smith's field. Economists would say the demand for wheat is perfectly elastic. That is, the buyer could substitute Farmer Brown's wheat for Farmer Smith's without any hesitation. Also, consumers tend to buy about the same amount of wheat product whatever the price. Demand for bread would not increase significantly just because prices go down. So that if farmers produce too much wheat they cannot depend on higher sales to absorb the surplus and push the price the price back up. The way sales react to changes in price is called price elasticity. The price elasticity for many farm products is low because consumers tend not to change their buying habits with

fluctuations in price. Some farm products have greater price elasticity than others. Beef for instance. If beef prices rise to a certain level, consumers will begin to buy substitutes like chicken or fish or other cheaper forms of protein. But while consumers may have different ways of reacting to changes in the supply of farm products, farmers have only one basic reaction to their markets. Whatever the price, farmers are encouraged to produce more and more.

WAYNE RASMUSSEN: Once you've committed yourself to buying a new quarter section of land, say at a hundred dollars an acre, and you have a twenty-year mortgage on that, you have to produce enough that's going to permit you to pay for that land. If you bought new machinery to work that land, a new set of high-priced, high quality machinery, then you've got to pay for that."

FRANK STASIO: Historically, one of the problems in farming has been that many farmers will try to increase production at the same time. They see high prices and expand production, sometimes falling deeply into debt to buy more land and equipment. The result of this expansion is over-production and falling prices. It's a cycle that plays itself out over and over again. Wayne Rasmussen describes one such cycle that occurred around the Civil War.

WAYNE RASMUSSEN: "During the 1830s and 1840s, a number of machines had been invented that would be powered by horses--traditionally, most American farm work had been by oxen and by human power--but farmers were reluctant to adopt them. The machines cost money. You didn't know for sure they would work very well, and why risk a whole year's income on the basis that maybe you could increase your income a little bit, but on the other hand you might be risking everything that you were going to make? So it was not until we had an instance where there was a great demand for farm products where prices skyrocketed and it seemed like the demand would continue on and on, and at the same time there was a shortage of labor, that farmers did adopt the new horse-drawn machinery pretty much across the board. This event was the Civil War. As

this demand increased, so prices went up. Farmers then were called upon patriotically and from their own self-interest to increase production. So farmers adopted what machinery was available. There was some being manufactured pretty much through the war, and as they adopted machinery, they found out that they could farm just a little bit more land. After the war was over, more of the young men from the armies went into farming but a lot of them invested in new land, invested in machinery, and even went into debt to do so. So when the war ended, there was much more production available. The war demand had ceased so that prices went down. If prices went down the farmer had to go that much more in order to pay that bill for the farm machinery or the new land that he had bought.”

FRANK STASIO: Farmers could see that their over productivity was cutting into their profits, so they tried to organize, in part to lower their costs and partly to get control of supply and raise prices, but their efforts failed.”

WAYNE RASMUSSEN: “The farmer’s alliances became stronger. They organized co-ops, but many of the leaders of the farmers’ alliances realized that no cooperative could ever control enough of the production of any commodity, except for very limited things such as walnuts or almonds or almons as they say in California, or grapefruit, or something like that where the area where they could be grown is very limited.

Otherwise, no co-op could control a substantial part of the nation’s production of beef or cotton. It was just too easy to grow things like that.”

FRANK STASIO: Farmers continued to ride out the cycles of good times and bad for a half of a century until the end of World War I when farm prices plunged. By 1921, farm prices were half of what they were three years earlier. In Iowa, one of every seven farms went bust and two-thirds of the State’s banks merged or went out of business. Henry Wormley is a lawyer who represented many of the midwestern farmers facing foreclosure back in the Twenties.

HENRY WORMLEY: “They worked thirty-five, forty years to get a farm. They

mortgaged to buy some at a high price and then they lost the whole works, see. They were broke. They were down and they were out. They were frustrated people. They were desperate.”

FRANK STASIO: It was time of bitter ironies. While the rest of the country had begun to enjoy unprecedented prosperity, America’s food producers were losing everything. It was even more ironic that the biggest losers in the 1920s were the big winners a decade earlier. World War I had so disrupted European agriculture that demand for American farm products soared. Once again, many farmers took big risks investing heavily in new technology and more land. Farmers who made those investments reaped huge benefits and became among the wealthiest growers in the country. When the farm economy crashed just after the war, small farmers walked away with only a few bruises. It was the larger more successful farmers who didn’t survive. Historian Lowell Dyson.

LOWELL DYSON: “As long as the price of corn stayed up around a dollar a bushel, this is okay, but then when the price of corn and hogs and oats and other things started dropping to this ten cents or less a bushel for corn, they could no longer pay the interest let alone any of the percentage on their mortgage. They couldn’t pay their taxes on their land. They couldn’t pay off personal loans that they had made to buy fertilizer and seed.”

FRANK STASIO: The sudden shock of losing their farms led to another surprising twist. By the 1930s, midwestern farmers known for their fear of God and respect for the law had turned radical. The rash of foreclosure seemed to create a new order and farmers were ready to fight. Violent strikes and riots would be reported all across the mid-west.

BEN NEWENDORF: “You know what? When so much injustice is done, I believe a man goes a little berserk. The hate in your heart is just overpowering.”

FRANK STASIO: Ben Newendorf was farming in Iowa through the '20s and '30s. On several occasions he along with many of his neighbors tried to stop farm sales by disrupting the auction. It had become a common practice. Sometimes it worked, but usually the sheriff's deputies prevailed and the sale was completed. Newendorf recalls an afternoon in the Spring of 1933 when he and several hundred farmers from the surrounding area sped off to the county seat, furious after they had failed to stop the sale of a neighbor's farm. The angry mob spilled into the town and rushed the courtroom of Judge Charles Bradley. Ben Newendorf.

BEN NEWENDORF: "They just stepped right over the seats and walked up to the Judge, took him by the shoulders and they said, 'are you gonna agree not to sign any more foreclosures? No,' he said. They lifted him up about the waist and set him down real hard on the bench and asked him again, and 'no.' And when he had done that three or four times, in disgust they grabbed him by the heels and pulled him off the bench and slid him on his butt clear out to the courthouse square out in the street."

FRANK STASIO: One of the largest groups of the period was the Farmer's Holiday Association. About a half a million strong, the Holiday Movement tried to stop farm sales in a number of ways. Holiday leaders came up with something called the Penny Auction. Attorney Ben Wormley helped organize Penny Auctions.

BEN WORMLEY: "I said, 'now, I want you to listen.' I said, 'I don't want you to hit any of those fellows, but when the landlord and the lawyer shows up, you circle them and say, boys, we don't need you and just keep walking till they get out the road and leave. And then you have the sheriff start the sale. The first fellow bids nine cents, the next fellow ten cents, the next fellow eleven. Say, go ahead and sell her--you got three bids. The fellow got his property back 'cause the farmers took up a collection and paid it.'"

FRANK STASIO: How did conditions get so bad that farmers would be driven to violence to save their farms? Clearly, farmers had developed the means to produce more than a normal peacetime economy could absorb. There were the victims of their

own success. Collectively, the more productive farmers became, the lower prices dropped. Individually, they could not afford to plant less, because they needed to pay off their debts, and as we've seen, an individual's decision to reduce his output would have no effect on price. Agriculture Department historian Wayne Rasmussen says the government tried and failed to control production by creating the Federal Farm Board.

WAYNE RASMUSSEN: The federal government in 1929, under the leadership of President Hoover, established the Federal Farm Board. The Federal Farm Board was set up to make loans to cooperatives so that cooperatives could then make loans to farmers to hold production off the market until prices reached a better level. At the same time there were two corporations set up to buy wheat and to buy cotton to stabilize the price of those commodities. Unfortunately, this came in 1929 just as the nation went into the worst depression it has ever seen. So that just the Depression itself would have made this impossible an achievement, but some economists looking at the operations of the Federal Farm Board at the time and since have said that it was doomed to failure because there was no provision in the Act, in the Agricultural Marketing Act, that set up the Federal Farm Board for controlling production in any way whatsoever.

FRANK STASIO: The economic expansion in the '20s did nothing to help farmers. Relatively speaking, Americans have always had enough to eat, so in general they're not likely to spend much more on food as their income rises. The sensitivity of demand to increases in total income is called the income elasticity of demand. As Wayne Rasmussen explains, most farm commodities are income inelastic.

WAYNE RASMUSSEN: "As the nation becomes more wealthy, as you and I become more wealthy, what are we gonna do about our food? Are we gonna eat twice as many eggs as we did before? Well, if we had been cutting back on eggs because of their cost, yes, we might eat twice as many eggs, but that means we will cut back on our consumption of bread or of potatoes or of some other farm commodity. Most of our

stomachs, even though we tend to over extend them a little bit as we get a little older, have a limited capacity. Uh, the population was growing, which provided some increased consumption, but farmers were able to out-produce both the increase in the demand of the increase in population and the demand for higher quality of food that came with the wealth that was being accumulated in the cities in the 1920s.”

FRANK STASIO: In general, government policies have been designed to increase demand or to help farmers limit production. The government also helps farmers obtain credit. Comprehensive relief programs for the farm industry didn’t begin until the Depression under Franklin Roosevelt.

WAYNE RASMUSSEN: “There were two parts of the first agricultural relief program. One was the Agricultural Adjustment Act that guaranteed farmers certain prices for their products if they would cut back on production. Now there were lots of ways in which this was handled but that’s really the key thing. If you will cut back on your production, then the government will guarantee you a certain price of what you raise on the acreage that you do keep in production. Now that’s been kind of the key of price support programs right up to the present time, but at the same time there was a tremendous amount of money put into relief programs to buy food and to distribute it to the needy of the United States. This was a tremendous program that met an immediate need, and I don’t think the value of it could be overestimated that we were finally saying, ‘well, there’s no sense of having food rotting in storehouses when people need it.’ ”

FRANK STASIO: Experts have been debating the effectiveness of those programs ever since they were first introduced. In various ways since the Depression, the government has given incentives to farmers to take a percentage of their land out of production. The farmer is then given cash based on estimates of what he would have received had he planted the crop on that land. Unfortunately, the program is based on

the amount of land that is set aside and doesn't look at whether production actually declines.

WAYNE RASMUSSEN: "Farmers again are capable people and they say, 'hey, prices are going up. I cut back, but I'll cut back the land I took out of production will be my best quarter section of land? No, no, not indeed not. If I'm out there on my farm I'm gonna take that poorest quarter section of land out of production if that's...if I'm taking a quarter out, and if it looks like prices are gonna be pretty good, I'll seed it a little heavier, I may even put a little fertilizer on the...a little more fertilizer on that land so I'll get a little bigger crop.' "

FRANK STASIO: In addition, technological advances have resulted in ever-higher yields despite acreage diversion programs. Another way for the government to strengthen farm prices is to let farmers produce as much as they can, then create a larger demand to absorb surpluses. To do this the government can either subsidize exports to foreign countries or subsidize food sales to the needy in this country. The U.S. currently subsidizes domestic consumption through the food stamp program. The government can also buy the surplus food from farmers and give it away at home or abroad. On its face this seems to be the most sensible approach since it should help keep farm prices strong while providing ample nutrition to people who otherwise would have to do without. These programs are costly however, and the nation is rarely in a mood to give away its hard earned resources. Furthermore, by in effect guaranteeing farmers high prices, such programs do little to discourage production. On the contrary, farmers see great benefits in boosting output which either proves more costly for the government, should it decide to absorb the extra commodities, or it will depress farm prices. The government also helps to provide credit to farmers, which can be very useful especially to young families who want to get started, but easy credit can also lead farmers to become over-extended and make it difficult for them to ride out hard times. There is another way to help the farm economy. The government might simply give farmers the difference between what their crop would fetch on the market and what they need to get by.

WAYNE RASMUSSEN: “The nearest we ever came to it was in 1949 when then Secretary of Agriculture, Charles Brannan, proposed what came to be known as the Brannan Plan. He proposed that the support prices of farm products be set not in relation to the market but be set in relation to what a moderate size family farmer had to have to keep in operation. Uh, this was essentially a direct subsidy to that farmer and after the farmer was paid for the farm products then they would go into the open market and sell for whatever the market would be. It might be a lot less. It might be even more than the farmer got at...probably not more because in that case he would have gone ahead and sold them on his own, but they might be a lot less in the open market than the government would be paying the farmer and then turning them into the open market. Uh, this received quite a bit of publicity and it received serious debate but it was never adopted. Uh, there was a feeling on the part of many congressmen and senators that the American people simply would not stand for the direct subsidy of an important segment of the whole economy.”

FRANK STASIO: While subsidy programs have generally been aimed at limiting production, the government often works in other ways to encourage the greatest amount of food output. Even though history has demonstrated time and again that over-expansion in good times would lead to disaster later on, policy-makers and planners were, as late as the 1970s encouraging farmers to plant as much as they could.

WAYNE RASMUSSEN: “During the 1970s, early 1970s, then a little dip and then back up again toward the end of the 1970s, there was a tremendous world demand for American farm products. We had a cheap dollar. The price of oil had helped make our dollar cheap, and farmers did pay off a lot of their debts at that time. There are some farmers in good shape today because they did pay off in the ‘70s and didn’t expand. At the same time though, with the looking like there was gonna be farm prosperity forever, there were some farmers, particularly younger farmers who were maybe just getting started, who would go to the Farm Credit or to the Farmer’s Home Administration and

borrow every penny they could get, and go to their local bank and borrow every penny they could get, and to go ahead and increase their production. They'd buy land and they'd buy machinery. Now we might say, 'weren't they foolish? Why did they do that? They should have known better.' At that very time the Secretary of Agriculture was urging farmers to plant as widely as much as they could. The county agents, the State Agricultural Economist in the State at colleges, were saying, 'yes, it's here, a limited demand, high prices. It's gonna go on and on. Plant.'

FRANK STASIO: Plant they did and once again the bottom fell out. Once again, farmers were faced with production costs that were greater than income. Many young farm families were forced to make a difficult choice. Linda Starmer was interviewed by National Public Radio.

LINDA STARMER: "The kids would come from school and we tried to spend some time with them and they had gone to bed, and we had a glass of tea and we just sat down, and Elden looked at me and I looked at him and he said, 'I think we ought to have a sale.' And I looked at him and I asked him, 'are you sure?' And he said, 'I don't see any other way, and I said, 'well, I don't either.' And we both just looked at each other 'cause we didn't really have to say anything."

FRANK STASIO: The number of farm sales and foreclosures in the early 1980s was higher than at any time since the Great Depression. The government was buried under record-breaking food surpluses, which it owned as part of various subsidy programs, and the costs of those programs soared. The laws of perfect competition had conspired once again to keep prices low and output high despite the efforts of farmers and government. Farmers could only command higher prices if they could get control of total supply and that would only happen if fewer farmers controlled larger shares of the market. There are some who argue that federal policies have provided strong incentives for greater concentration in the farm industry.

WAYNE RASMUSSEN: "All of these programs together, the price support programs,

the food programs, and everything else have had the effect of encouraging farm consolidation, encouraging, in a sense, people to leave the farms because if you have a small farm you realize if you're gonna use this efficient machine, you have to buy a little more land or you sell out. If you're middle age, you tend to sell out. So that...and you tend...then you move to town and live off of what you got for your own farm, so that there are fewer farms and much more efficient farms.”

FRANK STASIO: While we have highlighted the uncertainties of competition by focusing on the producer, it's important to understand that the tendency of perfect competition to force an industry to produce at the lowest possible cost is generally considered good for consumers and society as a whole. Perfect competition is general desirable because it encourages the most efficient use of the economy's resources. Let's review the principles of perfect competition. A perfectly competitive market is one in which there are many buyers and sellers, each of whom has very little control over the industry's total output or demand. Since there are so many other producers, the producer in perfect competition may not charge more than the market price for his product. If he tried, a buyer would simply switch to the competitor charging the market price. The responsiveness of sales to changes in price is called price elasticity. If consumption of a product changes a great deal in response to smaller changes in price, that product is said to have high price elasticity. The responsiveness of sales to changes in total income is called income elasticity of demand. The demand for farm products is said to be income inelastic because growth and national income has not resulted in substantially higher food consumption. Farmers have been unsuccessful in controlling output because individually their decisions on production have only a small impact on the market, and if prices do fall they're forced to raise production to meet their costs. Farmers have never been able to form collective organizations large enough to control the amount of output necessary to affect prices. If such a group could be formed and was successful, it's likely that individual members would drop out so that they could raise their production and take advantage of the higher prices. The federal government tries to strengthen farm prices by

restricting supply or stimulating demand. While capitalism is often described as a free-market system, very few markets operate in perfect competition. Many industries have developed ways to reduce or eliminate competition and strengthen their hold on the market. We'll examine those structures in future editions of Economics USA.

(MUSIC PLAYS)

FRANK STASIO: You've been listening to Economics USA, one of a series of programs on micro and macro economic principles. Our guest has been Wayne Rasmussen, Chief Historian at the U.S. Department of Agriculture. Economics USA has been produced by the Educational Film Center in Annandale, Virginia. I'm Frank Stasio.

(MUSIC ENDS)

ANNOUNCER: Funding for this program was provided by Annenberg Learner.