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LET'S THINK ABOUT HOG SUPPLIES AND PRICES!

It still looks as if we're headed for hog price and production troubles in the next few years. If so, the time to think and plan is now—ahead of time. Here are some alternatives you may want to think about and discuss.

by Geoffrey Shepherd, Don Kaldor and Francis A. Kutish

HOG PRICES for the first several months of 1959 averaged about $4 lower than a year earlier. The reason: Hog slaughter was up 16 percent. This more than offset the effects of a smaller beef supply and higher consumer incomes. And hog prices are likely to be still lower when the spring crop come to market next fall.

The pig crop report last December estimated that the '59 spring pig crop would be 13 percent larger than the '58 spring pig crop. The March 1959 report for the nine Corn Belt states estimated that the spring crop in those states would be 10 percent larger than the year before. These increases will depress hog prices this fall. Prices this fall are likely to average $2-$4 lower than a year ago. And, if there's dry weather in the West and a flood of beef cattle liquidations, hog prices could be even lower.

We expect a further boost in hog production in 1960. So hog prices could be down to the 10-12 cent range by fall then. In the span of 2 years, there's a distinct possibility that hogs will have dropped from their $20 national average far more price level in '58 to $10 per 100 pounds. If hogs do get down to a dime, there'll be strong pressure to "do something" right at election time.

But the time to think about and discuss problems like these is now—ahead of time. The more thought and planning now, the better a program will be able to work if it should be called for by unduly low hog prices in the near future.

A Real Problem...

Variations in hog production and prices create problems all along the line—from hog producer to pork consumer. Pork customers lost when pork supplies are short may be hard to win back when pork becomes plentiful again. Hog production, processing and distribution equipment and labor are partly unused when hog production is low. They're overburdened when hog output is high. This increases costs which come out of the prices paid to producers and, eventually, from consumers, too. This has an impact on the economy as a whole and warrants social action to prevent it.

Can you as an individual farm operator do anything about this? Some attempt to meet this situation by cutting their hog production when total hog supplies are large and prices low. Then they increase production later when total supplies are low and prices high. This is operating against the cycle rather than going along with it. These producers have the most hogs to sell when prices are high; the least, when prices are low.

Other producers don't change their production from year to year. They produce the most efficient number for their particular physical farm setup year in and year out.

Can producers as a group, or the nation as a whole, do something that individual farmers can't? That would be to smooth out the cycles in hog production and prices so as to remove them as a problem for individual producers.

Corn Storage Attempt...

The corn storage program was one attempt to do this. It was originally set up in the belief that stabilizing the flow of corn into consumption would also stabilize livestock production and prices. This stabilizing effect was expected to be most pronounced for hogs. The bulk of the nation's hogs is produced in the Corn Belt on corn-producing farms, and corn makes up about 80 percent of their feed.

There's some evidence that the corn program has had a stabilizing effect on corn prices and consumption. It's able to cushion hog production against the irregular shocks from variations in corn production caused by irregular variations in the weather. But it doesn't appear to have had a stabilizing effect on the cyclic movements of hog produc-

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![Image of hogs]
tion and prices which vary from 4-6 years in length. Chart 1 shows that hog prices vary cyclically now much as they did before World War II—chiefly in response to changes in the hog-corn price ratio. A major cyclic increase in production and decline in prices took place in 1955-56. And another is forecast for 1959-60.

At least one USDA analyst believes that the partial stabilization of corn supplies and prices has increased the tendency for hog prices and production to move in cycles. The cycle is more free to perpetuate itself unhampered by irregular variations in corn supplies.

There’s evidence also that the “elasticity” of the demand for hogs is less now than it was 20 years ago. Before World War II, a change of 10 percent in hog slaughter caused an opposite change of about 15 percent in hog prices. In recent years, it has caused a change of about 25 percent. So the effect of any variation in hog slaughter on prices now is greater than it used to be. And there’s further evidence that hog production responds more to a given price change than formerly.

It’s becoming apparent, therefore, that a feed-grain stabilization program can stabilize hog production against variations in feed-grain production. But it can’t stabilize hog production against cyclic variations resulting from like variations in hog prices. This calls for measures which deal directly with hog prices.

**Stabilize Hog Prices?**

The cyclic behavior of hog production results from producers’ errors of expectation or estimation of hog prices. Most producers seem to base their expectations on current prices. The length of the cycle is determined by the time involved before farmers change their hog production in response to prices—plus the time of gestation and the growing period for hogs.

Most producers wait until hog prices have remained high or low for several months or a year before they decide to produce more or fewer hogs in response to high or low hog prices. Then 10-12 months go by from the time the sows are bred to the time when pigs from the sows can be marketed. As a result, hog production and prices tend to move in about 4-year cycles. That is, high hog prices cause high production a year or two later; this high production causes low hog prices; these low prices cause low hog production a year or two later, and so on.

How can this cycle be broken? The United States is primarily a price-directed economy. So a possible point of attack would be to stabilize hog prices in the belief that this would stabilize hog production. Stabilization programs for corn and other feed grains have helped stabilize the denominator (the price of corn) in the hog-corn ratio. What’s needed now is to stabilize the numerator (the price of hogs).

**Government Purchases?** One way to stabilize hog prices would be for the federal government to step in when hog prices were cyclically low and buy enough pork, lard, or both to bring hog prices up toward desired levels. This was done on a large scale in 1933-34. The government bought about 6 million little pigs and bred sows to bolster hog prices.

But public criticism of this action was so great and lasted so many years that it’s doubtful if the government would want to try it on a large scale again. Government purchases were made on a very small scale when hog prices were low in 1956, but the effects on prices were too small to measure.

The big problem is what to do with the pork or lard after it’s purchased. Small quantities can be handled domestically through the school lunch and other distribution programs. But if substantial quantities were purchased and returned to the market, they’d depress prices to the same point as if the government hadn’t stepped into the market in the first place.

Exports to foreign countries could be increased to some extent by subsidizing them. But most of our farm exports are subsidized already, and more of it might lead to further disturbances of competing suppliers abroad. Lard exports usually account for about 20 percent of our lard production, but lard makes up only about 20 percent of hog carcass weight. Pork exports usually account for only about 1 percent of our total pork production.

Taken altogether, it appears that government purchases and exports could be used only to a small extent to support hog prices.

**Marketing Quotas?** Another possible way to stabilize hog prices would be to use marketing quotas—to control hog production directly and keep it from increasing much above average when hog prices rise to a cyclic peak.
This method deserves intensive study. It would involve a good many thorny administrative problems and require the close regulation of producers. Also, it would take considerable time before the effects of such a program could show up in the market; it could hardly be effective this year, for example. In addition, it would reduce feed-grain consumption and thus add to feed-grain surpluses.

**Direct Payments?** A less difficult and quicker-acting method for stabilizing prices would be direct payments related to prices. So long as hog production continues to vary cyclically, variations in hog prices are necessary to clear the market. Stable prices are needed to guide hog producers to stable production, but, at the same time, varying prices are needed to clear the market.

These two things could be accomplished at the same time if prices were left free to vary and clear the market but hog producers were, in effect, guaranteed a fixed price announced in advance. Then if the market price fell below the level, the difference would be made up by a direct payment.

The guaranteed price, for example, might be a U.S. farm average price of $15 per 100 pounds. If the actual average price fell to $12, then $3 per 100 pounds would be paid to each producer who sold hogs that month. This would bring the return to the average producer up to $15.

Each producer would have as much incentive as ever to get the best price he could when he sold his hogs because he'd get a payment of $3 per 100 pounds, regardless of the price for his particular sale. He'd simply have to present some authoritative evidence of the total weight of the hogs he'd sold—a copy of his sales slip, for example—and receive payment at the rate of $3 per 100 pounds.

**What Purpose?** The effects of direct payments and their cost would depend mainly on the level of the base price and how producers responded to direct payments. The base price level would depend on the purpose of the program. The two chief objectives in most people's minds appear to be (1) to raise the long-run incomes of hog producers or (2) to reduce cyclic variations in hog production and prices.

(1) If the objective were to raise the long-run level of incomes, the base price would need to be set higher than the long-run level of market prices. But this would result in increased hog production—in response both to the higher prices and to less price uncertainty. This would tend to drive hog prices down, making larger direct payments necessary. And the payments would have to be made on increasing numbers of hogs. This would continue until public criticism of the size of the payments forced a reduction in the base price.

(2) If the objective were only to reduce cyclic variations in hog production and prices, the base price should be set a little lower than the long-run average price. This is because most hog producers would produce more for a guaranteed price of, say, $15 than they would for an uncertain price that later turned out to be $15.

The long-run income-raising objective doesn't seem practical for hogs. It would be similar to the experience with corn and other feed grains. The original corn price-stabilization program was converted into an income-raising program by setting the loan levels above long-run average prices rather than a little below them. That the income-raising objective is incompatible with the stabilization objective is seen in the accumulation of huge stocks and in the dropping of percentages of parity prices as bases for corn loan rates last November. It doesn't seem reasonable to go through the same process again with hogs.

**What Levels?** There are several different methods we might think about for use in setting the level of the base price.

Parity prices: The parity price for hogs on Feb. 15, 1959, was $21.60. Parity prices have been above the actual market prices of hogs most of the time since 1949. If parity prices had been used as the base price below which direct payments would have been made, hog production would have increased considerably. And market prices would have fallen so low that payments would have had to increase substantially.

This probably would have caused a drastic lowering of the base price and perhaps abandonment of the whole program. Percentages of parity substantially below 100 might work better. But parity prices take changes in technology into account so slowly that other alternatives should be considered.

A moving average of market prices over a period of years long enough to average out the effects of cyclic movements might be used. Hog production-price cycles run about 4 years in length. So a 4-year moving average of market prices would be a minimum to average out the effects of the cycle. But there'd still be quite a bit of variation in the 4-year average since each cycle is somewhat irregular within itself. An 8-year moving average might help in this regard. The chief shortcoming of moving averages, however, is that they project the past into a future that's never quite the same as the past.

The current level of the 8-year moving average is higher than hog prices are likely to average in the next few years. The past 8-year period includes several years when hog prices were higher than their normal relation to corn prices; much corn was going under government loan and into CCC stocks rather than into hogs. This can't go on forever, and sometime this movement of corn into CCC stocks will have to stop. The relation between corn prices and hog production and prices then will be different from the relation in the recent past.

Changes affecting both supply and demand are only slowly assimilated into a moving average. So the 8-year average is always at least 4 years behind the times. Needed is a base price which reflects recent and prospective developments in technology and in demand more accurately than 4- or 8-year moving averages.

A 13:1 hog-corn price ratio base: One of the most important factors affecting hog production is the hog-corn price ratio. Normally, when hog prices are high relative to corn prices, hog production is more profitable than when the hog-corn price ratio is low, and hog production expands. Similarly, a low hog-corn price ratio leads to a reduction in hog production, and an average ratio leads to an average produc-
tion. Over time, this ratio has averaged about 13:1 (see chart 2).

The national average farm price of corn in recent months has been a little higher than $1 a bushel. With average weather, it has been estimated that the average price is likely to run at about $1, or even a little lower, in the next year or two. (The price usually runs lower than the loan rate when feed supplies are large—even below the rate available to noncompliers in recent years.) This by itself would indicate that a level of about $13 per 100 pounds would provide about a 13:1 hog-corn price ratio. This is the ratio which, in the past, has led neither to an increase nor decrease in hog production. But it’s still likely that producers would respond more to a guaranteed price than to uncertain prices which might average out the same as the guaranteed level. So it might be necessary to reduce the guaranteed price by some figure such as 10 percent to avoid an increase in hog production from eliminating price uncertainty. This would mean that the base level for hog prices would need to be, not $13, but perhaps $12 to avoid stimulating an increase in hog production.

It could also be argued that the base price for hogs should be kept at $13 under current conditions, with the loan for corn available to all producers. This would remove uncertainty about the returns from the sale of corn as corn, and a direct-payment program for hogs would remove uncertainty about hog prices. A base price for hogs set at the traditional 13:1 ratio to $1 corn ($13 for hogs) might be needed to make feeding corn to hogs as attractive as selling corn as corn. The 13:1 ratio, with uncertainty removed for both corn and hog prices, might have about the same effect on hog production that it used to have with uncertainty existing for both corn and hog prices. That is, the 13:1 ratio now might result in average hog production as it did when both corn and hog prices were uncertain.

Corn is the main item in the cost of raising hogs. But there are also other costs: labor, building replacements, feeders, fences, etc. The hog-corn ratio doesn’t measure these, and these costs have gone up. So a 13:1 hog-corn ratio today probably won’t induce an increase to the extent that it did 20 years ago.

It’s still likely, however, that a 13:1 ratio would make feeding hogs more attractive than feeding other livestock. There’d very likely be some expansion in hogs at the expense of other livestock where uncertainty still existed. So perhaps the ratio used should be about 12:1.

The Cost? The cost of direct payments depends on the difference between the "support" price and the actual price and on the number of units sold. The general magnitude of the costs can be gauged by multiplying the average annual slaughter of about 82 million head by the average market weight of about 235 pounds—about 20 billion pounds. So, for every dollar difference between the "support" price and the actual price, lasting for a year, the cost would be about 200 million dollars.

Some Problems . . .

Several problems need to be solved if direct payments were to work well in practice. Should payments, for example, be made on a seasonal or flat annual basis or just at periods of seasonally low prices? In this article, we’ve used a flat base price ($12 or $13) for hogs. But if direct payments were made on a weekly or monthly basis, the base price should vary seasonally somewhat like the average seasonal variation in market prices. It could perhaps be tied to the average prices of barrows and gilts paid by packers as published both on a weekly and monthly basis by the USDA.

If direct payments were made on an annual basis, a flat price could be used. But this would mean that producers would have to wait from 1-12 months after selling hogs before receiving a payment. It would also be necessary to prevent more than one payment being made on the same lot of hogs as it moved through several hands on the way. As in the case of the wool incentive payment plan, local committees might certify that the hogs were produced by the seller.

Other questions: Could hog production be controlled to some extent by a provision for payments only on some base quota for each individual producer? If so, how could these quotas be set? How would the quotas be policed? And could they be set in effect fast enough to meet immediate problems? Finally, how far in advance should the base price be announced to enable producers to plan most effectively?

This article doesn’t pretend to give "pat" answers. But the time to discuss and to think about problems like these is now—ahead of time. We’ve seen from experience that stop-gap solutions don’t always work as expected and sometimes tend to create even greater problems in the future.