

**EXPAND THE DAIRY HERD?** 

**Roland P. Freund** Farm Management Agent

Out here in Pennsylvania Dutch dairy country, there appears to be a strong interest in dairy herd expansion. We hear of expansion from 60 to 120 cows, 100 to 200, and even 200 to 1,600 as common occurrences.

If we examine history, we see that this is just a continuation of a trend in the industry. But, before we conclude that the only way to survive in the dairy business is to call in the contractor tomorrow and double the herd, it might be advisable to "push the pencil" and examine the alternatives.

This past winter my colleague, agricultural engineer Dan McFarland, and I did just that. We made presentations of our findings at a limited number of county dairy meetings in the region. We hope that this information will be helpful if we share it with you.

## Are You Ready To Expand?

The normal advice of getting better before you get bigger applies here. An unprofitable small dairy will not become a profitable one when it doubles its problems.

Analysis would suggest that unless a dairy is in the top 25 percent in terms of profitability, it is unlikely to gain from expansion. Pre-existing debt must be manageable. and some surplus cash flow should be available from the present operation before expansion has a chance of success.

Dairies with a beginning debt load in excess of \$1,500 per cow are likely to have greater problems. Some older owners should consider continuing to operate with a terminal operation, unless there is an enthusiastic heir to shoulder the new burdens.

The obligations of an expansion decision could outlive present management. Expansion will increase risk, and could force the owners to scrimp and scrape even harder for the rest of their lives. Budgets can help us to avoid mistakes.

### The Long-Range Picture

Each management team needs to examine their resources and then set some objectives for the operation. Budgeting alternative strategies can help decide which combinations of cows, heifers, crop acres, and crop enterprises have the best potential for profit.

It is relatively simple to demonstrate that, for example, doubling the herd will pay for new facilities and increase net farm income. Bankers may even be quite willing to finance the expansion on the strength of the long-range picture. So farmers are tempted to rush out and hire the contractor.

The most important step in the process is to determine exactly how we can get to the long-range situation from here. Different expansion processes could be the difference between success and failure.

# **One Giant Leap**

There is a strong desire to get where we want to be and get there right away. This may be technically feasible, but it could be economically disasterous. Let's look at a model of a doubling dairy herd which we constructed. If we bring in a new herd and move into new facilities, we have a good chance that we will experience a drop in production of maybe 10 percent for at least the first year or two. The bank wants the new cows' debt to be retired within four years. Herd culling rate could run at 30 percent. But there will be no raised heifers from the new herd freshening for two years, so replacements have to be purchased. Meanwhile, the cost of rearing the additional new heifer calves also has to be borne. Labor requirements may double, so family living/labor costs will increase. All these factors taken together result in the newly expanded herd, in the first two years, being unable to pay any more on debt for new facilities than could the original stable herd. If, in year three, production returns to prior levels, the operation will have a cash-flow deficit equivalent to any pre-expansion debt payments. In year four, the new operation could break even. If the business began the expansion with zero prior debt load, and if labor costs and family draws were to remain at original levels for the first three years, then the "giant leap" expansion program might maintain cash-flow obligations.

#### Closea-Hera Expansion

When heifer rearing is well managed, it should be possible to increase the herd by 10 percent per year and still maintain an effective culling rate. This would result in doubling of the herd in a little over seven years, without bringing in outside problems, and with a good chance of maintaining prior production levels. We could have a stabilized doubled herd in year eight instead of year five with the "giant leap" alternative.

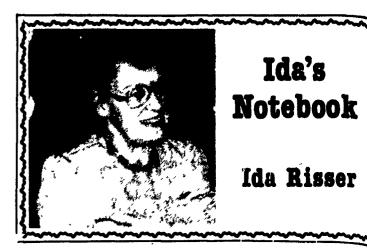
The slower expansion process enables the herd to grow into new facilities which are added as they are required. No new debt is incurred for cows or replacements. This reduces risks, but it is not without inconveniences. The new barns can be built and financed as required. There is a major problem if the parlor has to be built early in the process unless there are no pre-existing debt payments. If existing milking facilities (or a makeshift, low-cost modification of them) can be made to handle milking for six more years, then the expansion can cash-flow even with moderate pre-existing debt payments.

### Conclusion

Our model suggests that the closed herd expansion is far less risky than the giant leap alternative. If you want to see the assumptions and computations upon which this is based, please write Penn State Extension York County, 112 Pleasant Acres Road, York PA 17402-9041, or call (717) 757-9657 and request a copy of "Expand the Dairy Herd?"

Every farm situation is distinct, and all its unique circumstances must be considered before an expansion decision is made. Plan on making your own long-range budgets, and then preparing a careful and detailed cash flow for every year of the expansion process. This should enable you to see potential mistakes on paper before you make them with concrete.

Next time we will look at economic considerations of dairy facilities.



caster Laboratories with a group of "Church Women United" of Lancaster County. We toured their facilities in small groups. Our guide explained their work in improving the environment. We also observed their testing of pharmaceutical and food products.

Many farmers are familiar with their work due to the fact that they have their water tested for purity at Lancaster Laboratories. Here they also test ingredients in food products and check for shelf life. Sludge is checked for heavy metals like copper and lead.

However, one part of our tour was entirely different. You see, Lancaster Laboratories instituted

Recently, I took a tour of Lan- a Chid Care Center in 1986. It w a pioneer effort to keep employed who had young children. The started with 20 children and non care for 150 each day. The facility is just two minutes away from the workplace and parents can so their youngsters at lunchtime Most of the women return to work when the baby is three months old They even have a separate area provide care for mildly # children.

> An Adult Day Care Center linked by a corridor and her dependent family members a cared for. This way they do m need to be put in a nursing home Another place that we toured w their Fitness Center that encour

