

FEASIBILITY AND VALUE OF A STATEWIDE
EQUALIZATION MILK PLANT

by James E. Click, Manager, Maryland-Virginia Milk Producers' Association

From the program agenda of your 5th Annual Florida Dairy Production Conference I see that you are attacking a host of dairy production and marketing problems. These problems seem to be prevalent in many sections of the country and I might add that the fact that you are tucked away down here in the corner doesn't make them common to you alone.

We have them in the Middle Atlantic--the region with which I am more familiar. Like you, we are trying harder to study and evaluate data and trends that will lead us to sound decisions that accrue to the benefit of our producers. Needed information and data may require drawing on both formal and informal sources and we have been delighted when side trips from conventions have permitted us to observe "how the other fellow does it." In past years many of our directors and producers have visited some of your production and marketing facilities, and I'm sure they have gained much by their visits.

My presentation here today has a twofold purpose; one is simply to relate to you our experience in the operations of a large manufacturing or more recently an equalization plant that has been of considerable value to producers supplying two large metropolitan areas--Washington and Baltimore. The other purpose of my remarks is to give you the benefit of our analysis of the possibilities of a similar facility for the Florida area.

Our plant was purchased in 1955, is situated on 262 acres of land midway between Baltimore and Washington. The original land purchase was 20 acres, but since the original purchase we have added more land. We have our own water system, a power substation, and sewage treatment system. Raw milk storage capacity is 225,000 gallons, about one day's production of our 1130 members. Storage capacity was increased two years ago by the addition of three 40,000 gallon silo tanks. Powder drying capacity is about 7000 pounds per hour. Products sold from the plant are ice cream mix or blends, powder, butter, anhydrous fat and cream. In prior years, we were processing sterile milk; but recently we have discontinued this process.

During 1967, we handled 220 million pounds of milk through the plant which was week end and seasonal surplus milk from the Baltimore, Philadelphia and Washington markets. Within the past two years, it has also become a factor in handling the surplus of the Philadelphia market. At times in the past five years, it has been involved in handling New York surplus milk. You will note I referred to equalization and manufacturing earlier. This is simply my designation to differentiate between periods of short supply and periods of surplus.

During the past short season--October through March--when our Class I utilization in the Washington Market was in excess of 80 percent, we have been rolling milk over in the plant and shipping it into fluid milk plants on the high demand days of Thursday and Friday. Four major fluid milk plants handle about 80 percent of the milk in the Washington Market. They have varying degrees of raw milk storage. For instance, the largest plant which handles about 75 thousand gallons per day has only 40 thousand gallons of raw storage. The smallest of these four large plants has storage equal to one day's needs. This becomes an important factor in the procedure of equalization, particularly when the supply of milk is real tight. You have a tendency to favor those plants that have provided more storage yet the one with less storage in relation to sales may be your largest customer.

In assessing and evaluating the milk situation here in Florida looking toward the feasibility of a jointly owned manufacturing and balancing plant, I must admit that my limited knowledge of supply and demand conditions and other factors in Florida will to some degree fall short of some of the answers you are seeking. I do have the benefit of a study made by Jud Mason on the subject assigned to me by Professor Reaves. I have read and reread this study rather carefully and I understand its contents have been placed in the hands of dairy representatives in the area. I have also done some limited research in other publications and have talked with a few of the people familiar with trends in the area. A couple of weeks ago I was in Chicago and heard some reference made to the possibility that Florida milk may be shipped back to Wisconsin and Minnesota. This would be quite a switch, indeed.

A joint cooperative endeavor to construct and operate a manufacturing and balancing plant in Florida seems highly feasible and economically sound. The cooperatives involved, representing about 80 percent of the milk in Florida, could manage such a project at a time when it would be as a result of economic attraction rather than at some time in the future when circumstances may force the issue. This is the situation that we found ourselves in in 1955. We were dependent on one large manufacturing plant for handling all our surplus milk. The flush season was always a hectic period in negotiating prices for surplus milk under such an arrangement. At times, it cost us as much as \$150,000 per month over a six month period. To change this situation after we had purchased our manufacturing plant we had to have some heated sessions on diverting our own surplus milk to our own plant because it was away from our largest Class I customer. This set of circumstances, I understand, does not exist in the Florida area. The cooperatives for the three Federal Order Markets have the burden of disposing of the surplus. It then becomes a matter of how best to accomplish this.

In addition to the aforementioned reason, a plant of this kind would serve the following purposes in the interest of dairy farmers and of the Florida milk market.

1. It would eliminate the need and cost of shipping reserve milk to distant plants for manufacturing.
2. It would eliminate the disposal of skim milk as a waste product which becomes necessary at times.
3. It would offer more flexibility in the production process.
4. The plant would provide a ready market for milk produced which is in excess of the requirements of the fluid milk market and would return a price commensurate with its value for manufacturing.
5. It would provide an opportunity to balance available supplies of milk to the day-by-day requirements of the fluid milk and processing plants served by the cooperative associations.
6. It would provide an opportunity to expand markets to Florida dairy farmers by making butterfat and solids-not-fat available to the local trade in the form of such products as cream, skim milk, condensed milk, frozen dessert mixes, butter and non-fat dry milk.

The annual statistical summary of Milk Production and Dairy Products for 1967 showed that Florida led all other states in the percentage of increase in production over 1966. Milk production per cow showed a healthy gain which pushed total annual milk production up 7 percent compared to a $\frac{1}{2}$ of 1 percent drop for the U.S. as a whole. It is not unreasonable to assume that annual milk per cow in Florida at 8660 in 1967 could be pushed on toward the 10,000 pound level as shown for Connecticut, New Jersey, Arizona, Nevada and 11,000 pounds for California.

The population of Florida which now approximates 5.9 million persons should consume about 1.8 billion pounds of milk in 1968. The trend in the population growth rate shows a 2.5 percent increase in population per year.

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Incidentally, this is the same growth rate in the Metropolitan Washington Area over the past 10 years. If fluid milk processing plants are to be assured of a sufficient supply from local sources at all times, considering seasonal and other variations in milk production and in sales, it is desirable that there be a reserve supply in an amount representing 10.5 to 12 percent of fluid milk requirements during that season of the year when sales are greatest in relation to production. Actually with the relationship of raw storage to sales in our fluid milk processing plants in Washington, we must have about 20 percent. Of course this 20 percent figure is also considering extra milk for separation for cottage cheese making. The reserve for the average month in Florida would thus be more than 10.5 percent of fluid milk sales.

If calculated on the basis of 1.8 billion pounds sales of fluid milk products per year, the reserve would amount to about 180 million or nearly 490,000 pounds of milk per day. A portion of this milk will be absorbed currently in the production of ice cream and cottage cheese, but it seems reasonable that in all probability a manufacturing plant could be expected to receive more than an average of 300,000 pounds of milk per day for a minimum of 7 months.

At the present time, there are no manufacturing plants in Florida, with the exception of plants manufacturing ice cream and cottage cheese. It would seem to me it would be an opportune time for cooperatives to give this very serious consideration--a time when it is economically attractive. There would be no division of volume with competing plants and a single plant could be located for greatest convenience, efficiency in procurement and processing. It could serve to reduce losses associated with transporting and marketing milk out of the state or drying-up cows before the end of the normal lactation period, as has been necessary in recent years. In the first 6 months of 1967 alone, dairy farmers in Florida lost in excess of \$1.5 million in transporting milk to out-of-state markets or in disposing of milk within Florida at less than manufacturing value. This last statement, which was in Mr. Mason's treatise on the subject, stands out to me. It is much the same as I related to you as our situation prior to 1955. I'm sure it would be most convincing in persuading our people to fashion some do-it-yourself facilities in quick order and get the job done. To me it seems highly feasible and the value will be revealed to you, as dairymen, once you have acted cooperatively to build versatility and usefulness into the venture.

Financing, plant site, type and size of equipment requirements can be arrived at after a more thorough study and I have not discussed these factors here. I believe it would require a closer look at other factors such as the demands for products for the ice cream industry, bakery trade, soft drink bottlers and other possible outlets. Further study could be made of the day to day volumes of milk that might be available to a manufacturing plant. It might be possible that the initial outlay could be smaller if it were decided to go to just a condensing operation for cream and condensed. This would be dependent on the amount of surplus that the ice cream industry would absorb. The plant could be designed to go in steps, dependent on the need to go all the way to butter and powder.

All of these matters should be thoroughly pursued and meaningful data should be provided to the final decision makers in order that they may choose the best solution. I confess that what I have said here does not represent expertise or precise guidelines that would make it possible to break ground tomorrow. From what little I have observed as to the functions and operations of the cooperatives in the Florida markets I am convinced that the principle of your own manufacturing and balancing plant is sound. Cooperative participation on such a joint endeavor would provide a high degree of stability in performance of your task of supplying milk to your Class I buyers and its resulting value would be measured in added income to dairymen.