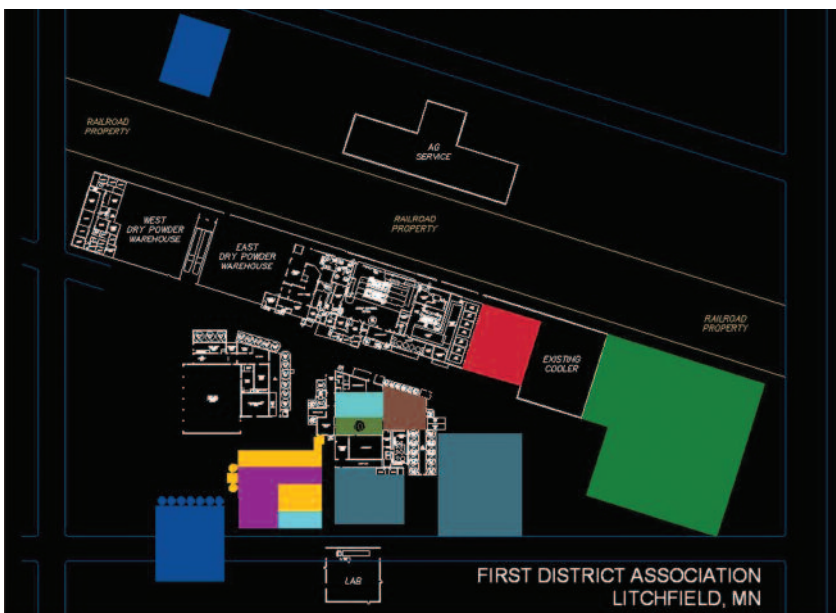


FDA FUTURE

First District Association will be expanding its operations by 25% - 30% along with modernizing a number of production processes with the intent of securing the future for First District Association and the Minnesota Dairy Industry. This expansion is another step toward further growth in FDA's capability to market our members' milk along with satisfying the important needs of our customers.

FDA's vision for the future includes ongoing growth. FDA is focused on securing strong markets for its members thus allowing FDA to remain competitively strong in a dynamic growing global industry. Below is a possible future look of the FDA plant involving incremental expansion, indicated by the colored blocks.



FIRST DISTRICT ASSOCIATION

90th Anniversary 2011

Celebrating the Past, Present and Future



Plant 1 • 1926

Plant 3 • 2010



Cheese Cooler • 2011



First District Association is an independent dairy cooperative that maximizes returns for its producers and employees through innovation and by providing superior quality products to a global market.

FDA PAST

First District Association played a prominent role and has a very distinct and proud history in the birth and formation of the modern dairy cooperatives in this nation.

From its very beginning, the Litchfield Creamery was known for the consistently high quality of its butter, the efficiency with which it was run, and the excellent service and return to its patron owners. The Litchfield Creamery was regarded as one of the top three creameries in Minnesota.

In answer to marketing, quality and pricing problems, the Meeker County creamery men voted on November 23, 1920 to form the Meeker County Creamery Association. They elected John Brandt as their president. Mr. Brandt was also President of the Litchfield Cooperative Creamery. The Meeker County Creamery Association pioneered the effort to get the best prices for its products through cooperative purchasing, marketing, shipping and stressing quality above all. On March 31, 1921, the Meeker County Creamery Association leading the way as part of a larger state-wide organizational effort, incorporated under the new Minnesota cooperative law and changed their name to the Minnesota Cooperative Creameries Association. The Meeker County Creamery Association became the first unit organized as Unit #1 in this newly formed Minnesota cooperative. On March 7, 1923, the Board of Directors of the Minnesota Cooperative Creameries Association unanimously elected John Brandt to take over as President.

The Minnesota Association began by setting specifications to ensure quality and uniformity for sweet cream butter. The real pioneering began with marketing this high-quality sweet cream butter directly and educating the consumers to recognize this quality. Once again, it was the 24 creameries of Unit #1, now known as First District Association, which quickly recognized the importance of this marketing plan and unanimously approved the plan at once! All along the way, there were many challenges and intensive campaigns to break up this Minnesota Association. The butter buyers, suppliers, shippers, and very large private creameries had considerable success in breaking up dairy cooperatives in other states. The Minnesota Association, its member districts and their patrons held together and succeeded.

On February 24, 1924, the Minnesota Cooperative Creameries Association began marketing the sweet cream butter under the name "Land O' Lakes." In March of 1926, the Minnesota Cooperative Creameries Association was renamed Land O' Lakes Creameries Inc. In later years, First District Association began marketing its own products and in 1985 adopted the "Fieldgate" logo.



precast panels with the interior walls coated with fiberglass for a smooth sanitary finish. The Clean in Place (CIP) system also was designed to handle the future flow rates nearly doubling what they are currently.

FACTS ABOUT PLANT THREE

- Building dimensions 118' X 120' (three roof heights 28', 48', & 95')
- Approx. 2650 yards of cement to accommodate large footings for the 85' evap.
- Approx. 91,000 lbs. of reinforcing steel utilized in the footings for the calandria bases
- Approx. 140,000 lbs. of stainless steel structural and decking material.
- 168 precast panels or approx. 4,660,000 lbs of cement wall panels.
- Evaporator was built at Seitz Stainless in Avon, MN.
- Operates on 2 - 800 HP turbo fans for compressing the steam.
- Modular design to accommodate future growth.
- Designed with full turbo fan redundancy - if one should fail no loss production capacity.
- Fully automated; one operator runs the entire evaporator along with other equipment.
- 6 CIP chemical tanks for a total capacity of 36,000 gallons of raw chemical storage. CIP chemical tanks located on second level to prevent pumping of raw chemical.
- Approx. 3,000 HP operating in plant currently; designed for @ 6,000 HP in future.
- Entire structure is secured.
- Current evaporation capability is approx. 100,000 lbs/hr water removal / hour. (12,000 gals.)



- Charm Safe Level
 - Measures amount of antibiotic residue in raw milk
 - Takes approx. 3 min.
 - Testing approx. 85 trucks a day
 - Trucks must be tested before unloading
- Microbiology Room
 - Test for bacteria, coliform, yeast & mold, spores and salmonella
 - Test each producer bacteria every month
 - Also check all producer well water
 - Test all incoming and finished product for bacterial quality

PLANT ONE:

We receive and handle over 1,600,000,000 lbs of milk annually. 1,400,000,000 lbs goes into making cheese, and 192,000,000 lbs goes directly to Grade A milk. (3,700,000 lbs of Grade A milk is shipped to the bottling market weekly). Also we receive 3,500,000 lbs of sweet cream and 132,000,000 lbs of whey products annually. We also ship out 5,500,000 lbs of whey cream, 10,000,000 lbs of WPC, and 70,000,000 of DLP annually. Plant One storage silos have a total capacity of 3,500,000 lbs. On an average day over 100 tankers are received or loaded, CIPed and washed.

EQUALIZATION SYSTEM:

FDA has designed a wastewater equalization system to control the large swing in pH in our effluent due to the chemicals utilized for cleaning the equipment. This system also has the ability to catch high Biochemical Oxygen Demand (BOD) loadings and alarm the operators in the plant that a problem is occurring. FDA typically generates approx. 425,000 gallons of wastewater per day. When the pH of our effluent is out of range the system will automatically pump this solution to the above ground tank; where we then have the ability to neutralize with chemicals or load it onto a truck and haul it away.

PLANT THREE:

Built and commissioned in July 2010, all aspects of the design of this facility were built to accommodate future growth capabilities up to 7 million pounds milk / day. Currently the structure houses a state of the art evaporator that condenses the following 3 products: whey protein concentrate, Permeate (milk sugar), and DLP. The evaporator was designed as a modular evaporator so we can expand in the future with minimal downtime. All of the future infrastructure is in place to accommodate the future expansion to include footings/ structural steel for the new calandrias; and also the utilities infrastructure. The building is made of



In 1974 because of declining demand for butter, First District Association started construction of a new cheese plant. This plant was completed in February of 1975 and could process 1.2 million pounds of milk into cheese a day.

FDA continues to increase its efficiencies and capabilities to process milk into cheese, lactose and whey protein concentrate. In 1997 the old cheese vats and curd tables were replaced with new state-of-the-art horizontal cheese vats and an enclosed cheese belt process which has given FDA the ability to increase processing capacity to 3.8 million pounds of milk a day. The FDA plant has become one of the most efficient and modern dairy production facilities in the upper Midwest. In 2010 FDA produced over 144 million pounds of cheese.

FDA PRESENT

THE OFFICES:

- FDA has approx. 620 direct patrons
- 9 member creameries with 430 patrons
- Together they will produce over 1.5 billion lbs. of milk this year.

POWDER WAREHOUSE:

- We can hold 3,600,000 lbs. powder, or 85 truck loads.
- Most powder is shipped by truck or ship container.

POWDER PACKAGING:

FDA's powder packaging area is designed to exceed customer requirements in every aspect, starting with the packaging room which contains a very sophisticated environmental monitoring system that interfaces with the equipment control software to ensure a totally hygienic environment at all times. Hygiene junctions and air locks were established to gain entrance into this packaging area for both personnel and packaging supplies.

The powder is stored in large storage silos where it is conveyed through a sophisticated dense phase vacuum conveyance system to a choice of three different filling stations. FDA has two automated bulk bag filling stations that are dedicated to specific products which can package 1500 to 2500 lb. tote bags. The four-head rotary bag filler equipment will automatically take bags from the magazine, accurately fill and record weights, de-aerate, seal, code, and palletize the final product. All FDA powder products are passed through sifters, rare earth magnets and metal detection during the packaging process to assure product quality.

In 2010 FDA packaged approximately 49.0 million lbs of powder.

CHEESE PLANT:

Utilizes approximately 3.85 million lbs of milk daily (approx. 453,000 gallons).

Packaging sizes and variations include:

500 lb barrels

Products include:

- Stirred Curd Cheddar (slice, loaf, spreads, sauces, seasonings, etc.)
- Monterey Jack (shredding)
- Colored Cheddar (shredding)
- Swiss Curd for Manufacturing (slice and loaf)

We produced approx. 144,000,000 lbs of cheese in 2010.

That is : 11,916,667 lbs per month

391,781 lbs per day

16,324 lbs per hour

272 lbs per minute

4.54 lbs per second

CHEESE COOLER:

We have 1 cooler that can hold a total of approx. 4.4 million lbs of cheese.

We ship out about 65-70 truck loads (over 2.7 million pounds) of cheese per week.

MAINTENANCE / ELECTRICAL / ENGINEERING:

- Maintain over 200 different pieces of equipment throughout the plants.
- Maintain over 300 pumps and motors.
- Maintain over 50 product tanks and their heating/cooling systems.
- We use 2,300,000 KW of electrical power per month, or the equivalent of approximately 3061 households.
- We use 1,000,000 cubic feet of compressed air daily.
- We use 150,000 gallons of well water and 275,000 gallons of cow water daily (water that's removed from milk or whey).
- We use 21,000 MCF (million cubic feet) of natural gas per month, or the equivalent of approximately 1825 households.
- When we're on propane we use 360 gallons per hour.

PARTS WAREHOUSE:

The cost of parts and supplies to maintain our operations amounts to \$1,600,000 annually or \$4,300 every day. We inventory over 10,500 different items with a total value of over \$950,000.

BOILERS:

We have three 750 HP high pressure boilers.

PLANT 2 (WHEY PLANT):

Whey is the by-product of cheese manufacturing and up until the last 30 years was considered primarily a waste product. It has since become an added value product and an integral part of the dairy industry. FDA was involved in the early stages of developing, processing and marketing whey products. FDA is a recognized leader in the whey processing field.

The products extracted from whey are whey cream, lactose (milk sugar), and whey protein concentrate (WPC) in either liquid or powder form. The remaining product after processing lactose is delactose permeate (DLP) which is condensed and sold as an animal feed additive. On an average day we will produce 18,000 lbs of whey cream, 110,000 lbs of lactose powder, and 65,000 34% WPC powder. We also condense all of the milk used for cheese processing. On an average day we produce nearly 2,500,000 lbs of potable cow water due to evaporation.

LABORATORY:

FDA's lab tests all incoming and finished product for all analytical and microbiological qualities, which can be as many as 4,000 tests run each day. We also provide a service to our producers in testing individual cow samples to help them in managing their herd.

All producer test information is available on the internet for the producers' convenience.

- Barcoded Producer samples
 - Scanner identifies number
 - All test results are transferred automatically to office
- Bently 400 combi system
 - Measures Fat, Protein, Lactose, Other solids, Somatic Cell, added Water and MUN
 - 400 samples/hour
 - Testing approx. 800-1000 samples every day

