



DAIRY POWDERS



> INGREDIENT SOLUTIONS



**MORE THAN
14,000
FARMER-
OWNERS**



GRASSROOTS

DFA is owned & governed by our members



Dairy Farmers of America



DAIRY FARMERS OF AMERICA



DFA is the largest supplier of raw milk in the **world**



Headquartered in **Kansas City, Kan.**



A global dairy foods company owned by **dairy farmers**



AT A GLANCE



**42 manufacturing
facilities**



**\$14.6 billion 2017
U.S. annual sales**



**4th largest
global
dairy company***

Largest U.S. dairy
company*

*Source: Rabobank dairy sales turnover data, 2016



BENEFITS OF WORKING WITH DFA



Full Range of Dairy Offerings

Broad dairy product portfolio (fresh milk, yogurt, cheese, butter, milk powder)



Vertical integration

- Reliable and consistent milk supply
- Sustainable and traceable supply chain
- Long-term view of partnerships



Innovation & Ingenuity

- Customized solutions and product innovation



Quality

- Commitment to quality and food safety

DFA RISK MANAGEMENT

Why use DFA's Price Risk Management Program?

- Largest natural sell-side offset
- Risk management innovation
- Dairy risk management experience
- Potential accounting advantages
- Going beyond the curve
- Market outlooks



DFA members and their customers have access to the industry's leading milk price forward contracting program - globally





**3,400
TRUCKLOADS
OF MILK MOVE
THROUGH OUR
SUPPLY CHAIN
DAILY**

➤ DFA is the world's 4th largest global dairy company



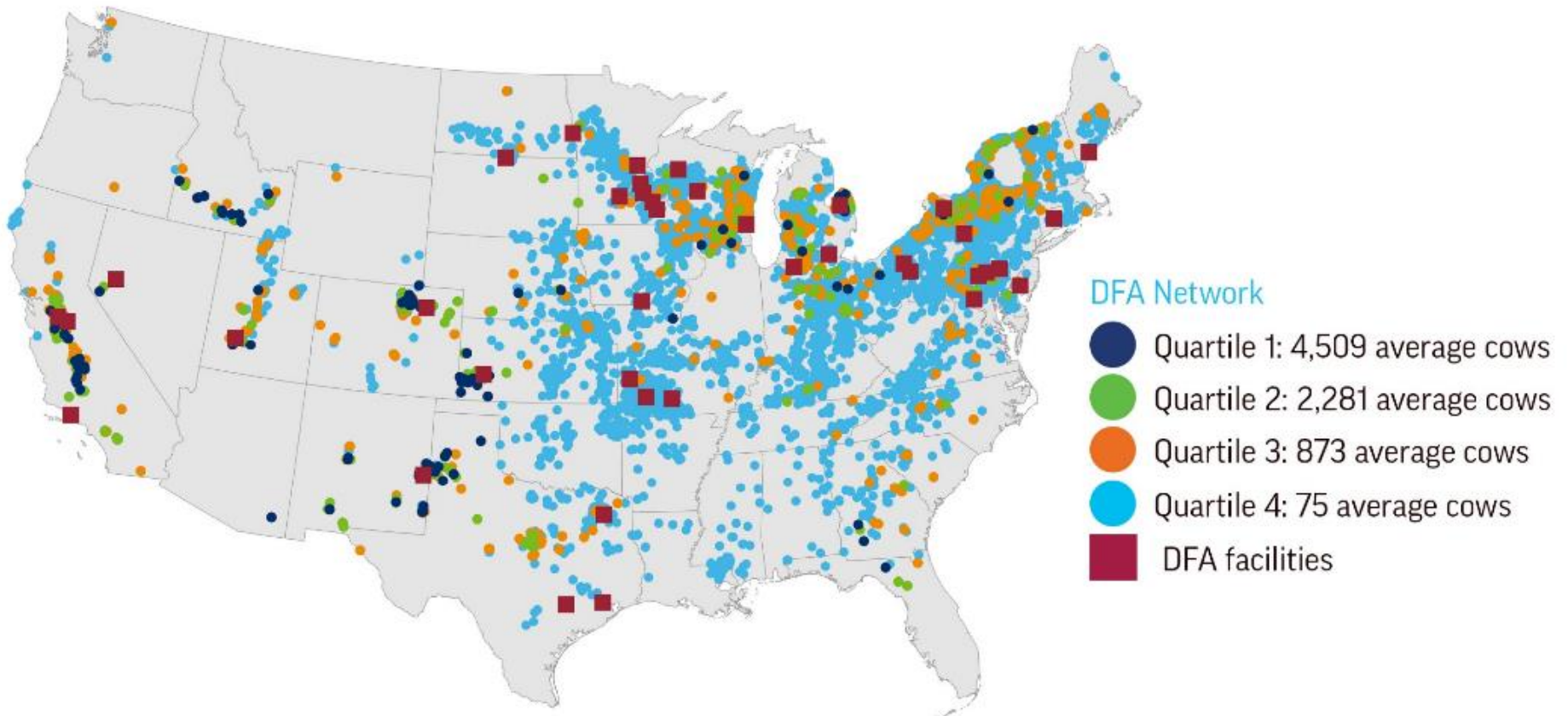
Data provided by:



Rabobank



DFA's facilities are strategically located across our farmer-owner network



GLOBAL SALES PRESENCE

DAIRY POWDER
EXPORT COUNTRIES
IN 2017:

—
27

DAIRY POWDER
EXPORT COUNTRIES
IN 2018:

—
35

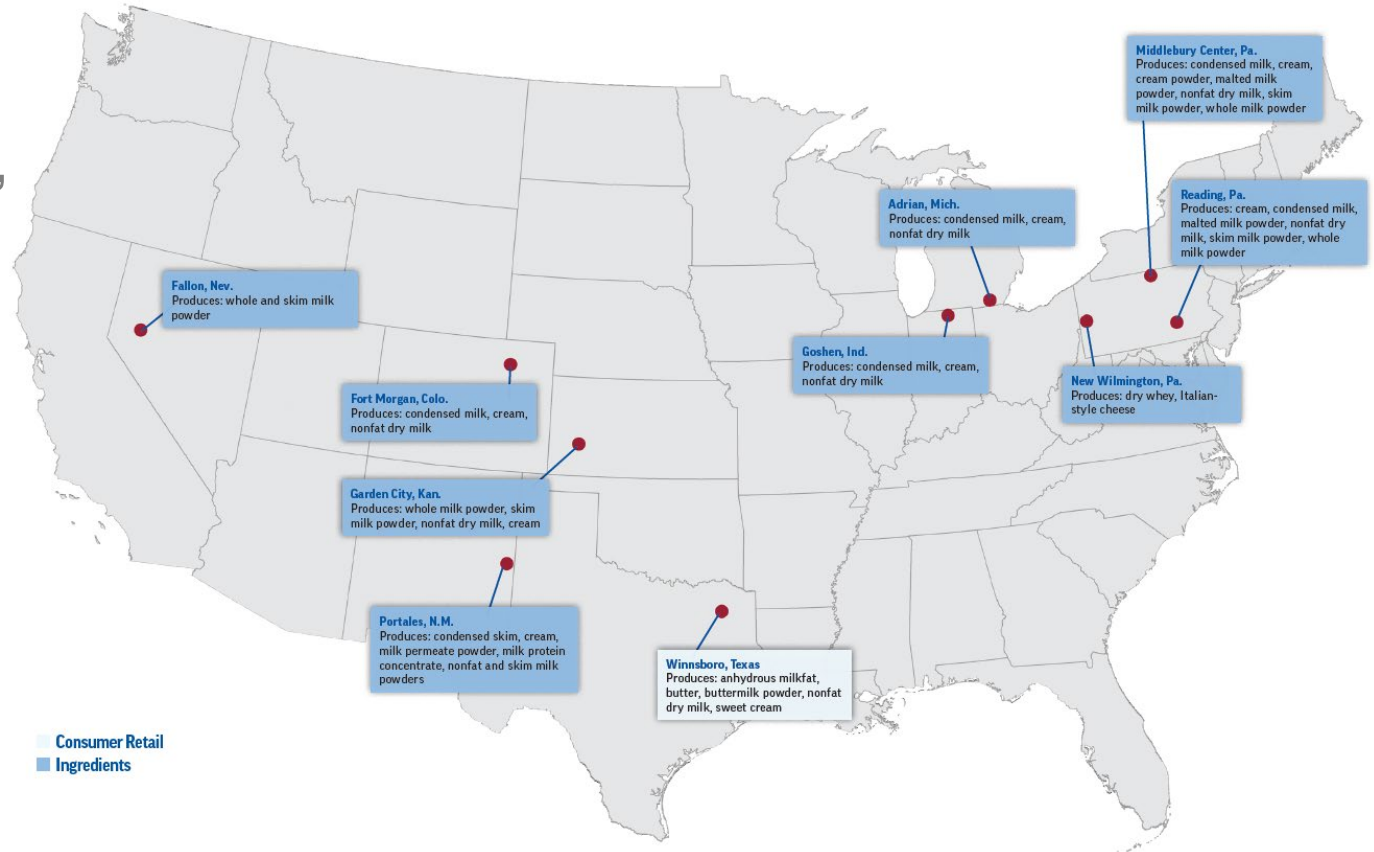
+ 30%

➤ DFA has a growing global sales presence, and is committed to providing innovative dairy and taste solutions to partners around the world.

COAST TO COAST MANUFACTURING

DFA manufacturers
quality products
from coast to coast,
with powder
production in...

- Fallon, Nev.
- Fort Morgan, Colo.
- Garden City, Kan.
- Portales, N.M.
- Winnsboro, Texas
- Goshen, Ind.
- Adrian, Mich.
- New Wilmington, Pa.
- Reading, Pa.
- Middlebury Center, Pa.



COMMITTED TO QUALITY

DFA's facilities have a long and successful history of providing products to reputable companies that demand the highest quality and reliable service.

DFA manufacturing facilities have extensive Quality and Food Safety programs and technical expertise.

From grass to glass, DFA products meet the highest safety & quality standards.





DAIRY POWDERS



Dairy Farmers of America

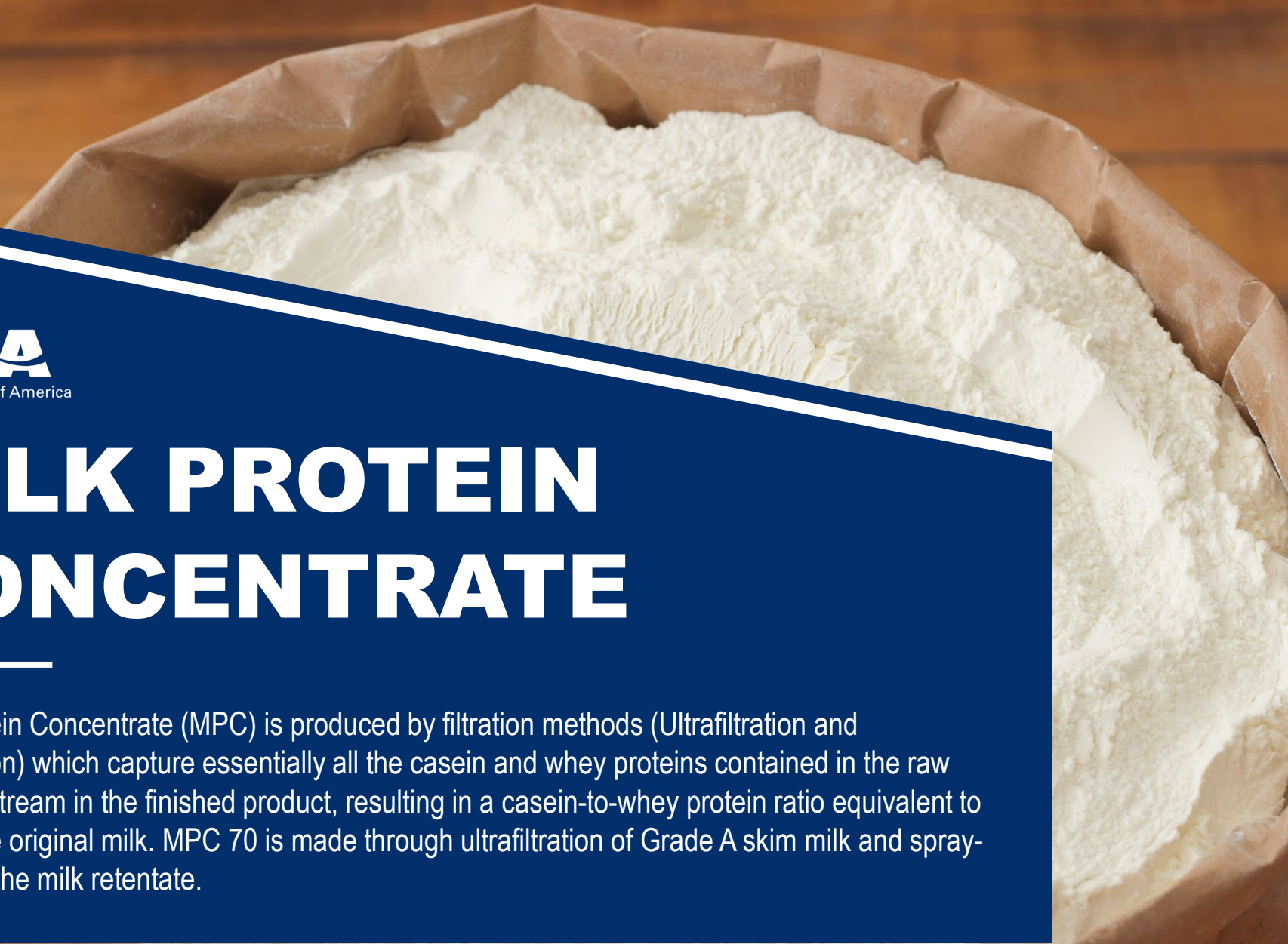
OFFERING A FULL LINE OF
QUALITY PRODUCTS TO
MEET YOUR NEEDS



Dairy Farmers of America

MILK PROTEIN CONCENTRATE

Milk Protein Concentrate (MPC) is produced by filtration methods (Ultrafiltration and Diafiltration) which capture essentially all the casein and whey proteins contained in the raw material stream in the finished product, resulting in a casein-to-whey protein ratio equivalent to that of the original milk. MPC 70 is made through ultrafiltration of Grade A skim milk and spray-drying of the milk retentate.





PRODUCT FEATURES

DEFA

MILK PROTEIN CONCENTRATE

TASTE

Clean and milky

COLOR

White to light cream

VARIETIES

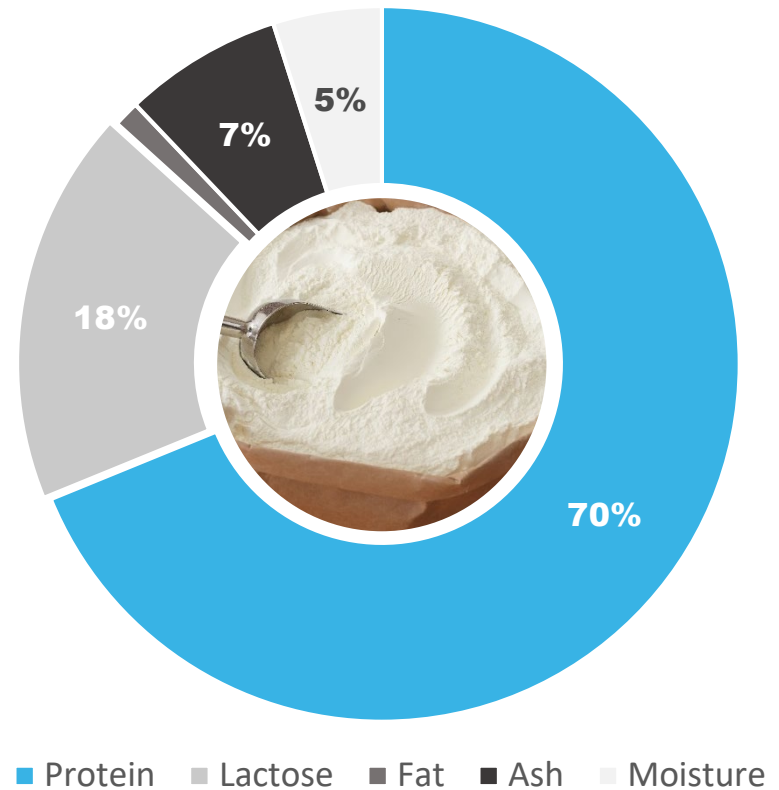
Low Heat



Medium Heat



High Heat





**PRODUCT
APPLICATIONS**

DFEA

MILK PROTEIN CONCENTRATE



NFDM REPLACEMENT

Replacement of Nonfat and Skim Milk Powder



HIGH PROTEIN

Used to create specialty food with high protein and low carbohydrates (lactose)



END-USE VARIETY

- Infant formulas
- Dietary Beverages
- Baked goods
- Cheese
- Yogurt
- Ice cream



**[PRODUCT
MFG.]**

DEFA

MILK PROTEIN CONCENTRATE



 **PORTALES, N.M.**

- Servicing domestic and international markets
- Focused on continuous improvement
- Committed to food safety and quality

DFEA MILK PROTEIN CONCENTRATE

STORAGE

Product should be shipped and stored in a cool, dry environment with relative humidity below 70%. Protect from moisture and foreign odors.

SHELF LIFE

Approximately 730 days at specified storage conditions.

PACKAGING

20kg multiwall Kraft bag with poly liner.

PACKAGING



18 kg bag



20 kg bag



700 kg tote





PRODUCT BENEFITS

DEFA

MILK PROTEIN CONCENTRATE



WHIPPING

Protein stable for meringues, mousses, ice creams, and desserts



BROWNING & COLOR

Lactose and proteins undergo caramelization for bakery products



CHEESE YIELDS

Substitute for NFDM – high level of protein optimizes cheese yields



DFA

MILK PROTEIN CONCENTRATE

DFA IS COMMITTED TO QUALITY.

DFA's Milk Protein Concentrate, produced in Portales, New Mexico, recently won awards at the 2019 United States Championship Cheese Contest.

- **BEST OF CLASS**, 99.95 Score (213219-005-2-700-1-100)
- **THIRD AWARD**, 99.85 Score (213219-003-2-700-1-200)

UNITED STATES CHAMPIONSHIP
CHEESE 2019
CONTEST





Dairy Farmers of America

NONFAT DRY MILK

Nonfat Dry Milk Powder is the powder that is obtained by removing water from Grade A, pasteurized skim milk or condensed skim milk. It meets requirements of CODEX STAN 207- 1999.



**PRODUCT
FEATURES**

DEFAT

NONFAT DRY MILK

TASTE

Sweet, clean and pleasing

COLOR

Uniform white to light cream color, practically free from visible dark particles

VARIETIES

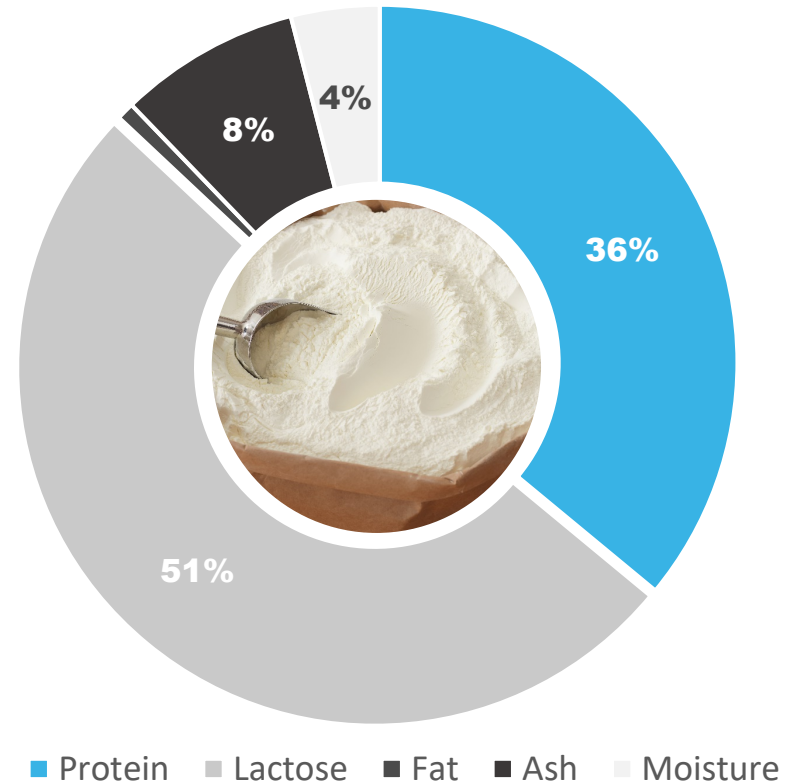
Low Heat



Medium Heat



High Heat





**PRODUCT
APPLICATIONS**

DFEA

NONFAT DRY MILK



LOW-HEAT: CHEESE

Heat treatment options for various applications: low-heat optimizing yield in cheese



HIGH HEAT: BREAD

Heat treatment options for various applications: high-heat important for volume in bread



END-USE VARIETY

- Bakery
- Confectionary
- Meat products
- Mixes



**[PRODUCT
MFG.]**

DEFA

NONFAT DRY MILK



 **READING, PENN.**

 **MIDDLEBURY CENTER, PENN.**

 **GARDEN CITY, KAN.**

 **FALLON, NEV.**

 **ADRIAN, MICH.**

 **FORT MORGAN, COL.**

 **PORTALES, N.M.**

 **HUGHSON, CALIF.**

 **WINNSBORO, TEX.**

DFEA

NONFAT DRY MILK

STORAGE

Product should be shipped and stored in a cool, dry environment with relative humidity below 70%. Protect from moisture and foreign odors.

SHELF LIFE

Approximately 730 days at specified storage conditions.


PACKAGING

Multiwall Kraft bag with polyethylene liners

PACKAGING NFDM

- 50 lb bag
- 25 kg bag
- 2000 lb tote
- 2200 lb tote





**PRODUCT
BENEFITS**

DFEA

NONFAT DRY MILK



SOLUBILITY

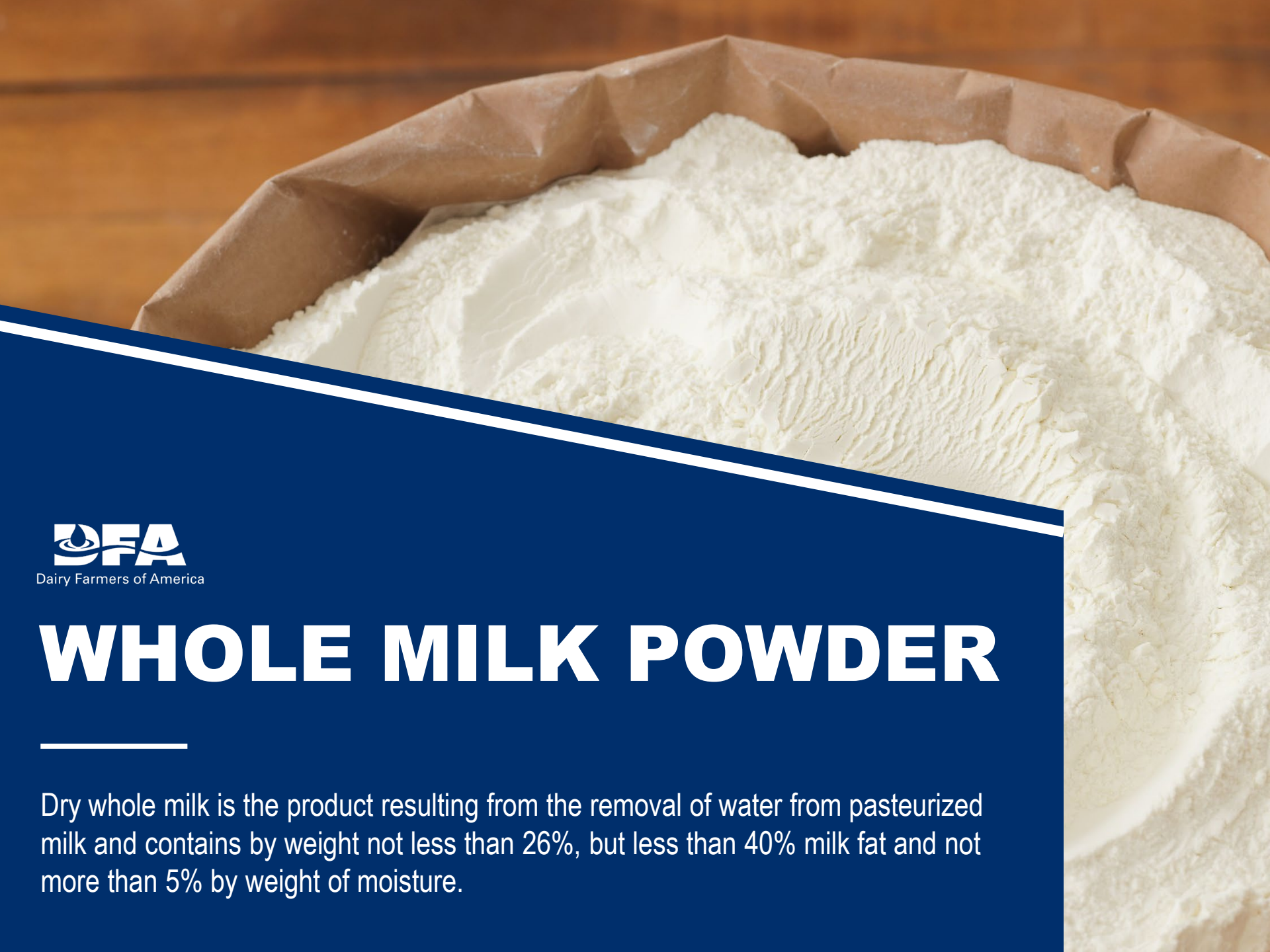
- Low Heat, high solubility (for cheese)
- Medium heat, medium solubility (for ice cream, frozen desserts)
- High heat, low solubility (for volume in bakery products)



THICKENING

Increases viscosity and gel strength for puddings, yogurts, sauces





Dairy Farmers of America

WHOLE MILK POWDER

Dry whole milk is the product resulting from the removal of water from pasteurized milk and contains by weight not less than 26%, but less than 40% milk fat and not more than 5% by weight of moisture.



**PRODUCT
FEATURES**

DEFA

WHOLE MILK POWDER

TASTE

Sweet, clean and pleasing

COLOR

Uniform white to light cream color, practically free from visible dark particles

VARIETIES

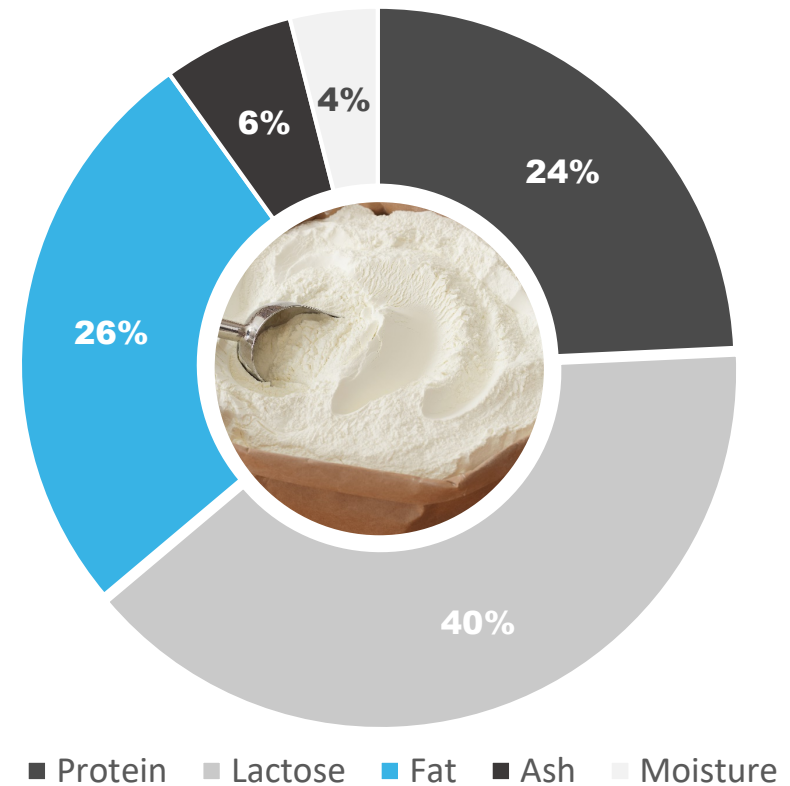
Low Heat



Medium Heat



High Heat





**PRODUCT
APPLICATIONS**

DEFA

WHOLE MILK POWDER



NUTRITIOUS MILK

Nutritious milk that doesn't require refrigeration



INFANT FORMULA



RECONSTITUTION

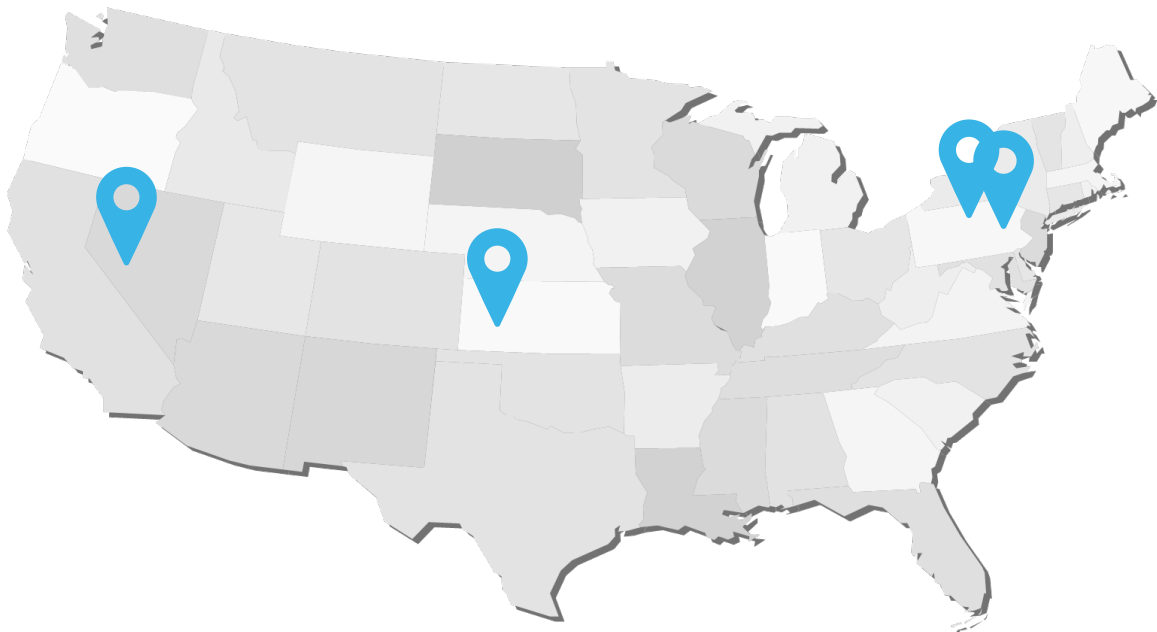
- Bakery
- Confectionary
- Prepared Mixes
- Soups



**[PRODUCT
MFG.]**

DEFA

WHOLE MILK POWDER



 **READING, PENN.**

 **MIDDLEBURY CENTER, PENN.**

 **FALLON, NEV.**

 **GARDEN CITY, KAN.**

DFA

WHOLE MILK POWDER

STORAGE

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SHELF LIFE

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PACKAGING

Multiwall Kraft bag with polyethylene liners

PACKAGING

- 25 kg bag
- 2000 lb tote
- 2200 lb tote





PRODUCT BENEFITS

DEFA

WHOLE MILK POWDER



FUNCTIONALITY

Stability to relatively low pH and high temperature applications



THICKENING

WM proteins and lactose show high-water retention capacity to impact viscosity through gelling and thickening for desserts, confectionary, & set-type yogurts





**STANDARD
PRODUCTS**

DFA MILK PROTEIN CONCENTRATE

Milk Protein Concentrate - MPC

Material	Product Description	Pack	Bags/SKID	Shelf Life	Product Family	Plant	Detail Flavor
136282	DFA MPC70 GR A <u>20</u> KG BAG EXTRA AFFID	20 kg	56	2 years	Ingredient Milk Powder	Portales	Low Heat
137530	DFA MPC70 GR A <u>20</u> KG BAG AFFID	20 kg	56	2 years	Ingredient Milk Powder	Portales	Low Heat



DEFA

MILK PROTEIN CONCENTRATE

Tote

Nonfat Dry Milk

Material	Product Description	Pack	CS/SKID	Shelf Life	Product Family	Plant(s)	Detail Flavor
100043	DFA NFDM LH GR A 2200 LB TOTE AFFID	2200 lb	-	2 years	Ingredient Milk Powder	Adrian/Goshen/Garden City	Low Heat
138392	DFA NFDM HH GR A 2200 LB TOTE	2200 lb	-	2 years	Ingredient Milk Powder	Goshen/Reading	High Heat
102706	DFA NFDM LH GR A 2000 LB TOTE	2000 lb	-	2 years	Ingredient Milk Powder	Reading	Low Heat
100006	DFA NFDM LH GR A 2000 LB TOTE	2000 lb	-	2 years	Ingredient Milk Powder	Portales	Low Heat
100009	DFA NFDM MH GR A 2000 LB TOTE	2000 lb	-	2 years	Ingredient Milk Powder	Portales	Med Heat
102706	DFA NFDM LH GR A 2000 LB TOTE	2000 lb	-	2 years	Ingredient Milk Powder	Middlebury Center	Low Heat



DEFA MILK PROTEIN CONCENTRATE

Material	Product Description	Pack	Bags/SKID	Shelf Life	Product Family	Plant	Detail Flavor
100004	DFA NFDM LH GR A 25 KG BAG	25 kg	40	2 years	Ingredient Milk Powder	Ft. Morgan	Low Heat
100046	DFA NFDM HH GR A 50 LB BAG	50 lb	40	2 years	Ingredient Milk Powder	Goshen	High Heat
100050	50 LB NFDM GR A LH FROM AFFID MLK	50 lb	40	2 years	Ingredient Milk Powder	Goshen	Low Heat
101084	DFA NFDM LH GR A 50 LB BAG	50 lb	40	2 years	Ingredient Milk Powder	Goshen	Low Heat
101085	DFA NFDM MH GR A 25 KG BAG	25 kg	40	2 years	Ingredient Milk Powder	Portales	Med Heat
136289	DFA NFDM LH GR A 25 KG BAG AFFID	25 kg	40	2 years	Ingredient Milk Powder	Goshen	Low Heat
136289	DFA NFDM LH GR A 25 KG BAG AFFID	25 kg	40	2 years	Ingredient Milk Powder	Middlebury Center	Low Heat
140400	DFA NFDM LH GR A 25KG BAG FORT W/VIT A&D	25 kg	40	2 years	Ingredient Milk Powder	Middlebury Center	Low Heat
100004	DFA NFDM LH GR A 25 KG BAG	25 kg	40	2 years	Ingredient Milk Powder	Reading	Low Heat
100046	DFA NFDM HH GR A 50 LB BAG	50 lb	40	2 years	Ingredient Milk Powder	Reading	High Heat
100063	DFA NFDM MH GR A 50 LB BAG	50 lb	40	2 years	Ingredient Milk Powder	Reading	Med Heat
101084	DFA NFDM LH GR A 50 LB BAG	50 lb	40	2 years	Ingredient Milk Powder	Reading	Low Heat
100004	DFA NFDM LH GR A 25 KG BAG	25 kg	40	2 years	Ingredient Milk Powder	Winnsboro	Low Heat
139801	DFA NFDM LH GR A 25 KG BAG PR AFFID	25 kg	40	2 years	Ingredient Milk Powder	Fallon	Low Heat
136289	DFA NFDM LH GR A 25 KG BAG AFFID	25 kg	40	2 years	Ingredient Milk Powder	Portales	Low Heat
136289	DFA NFDM LH GR A 25 KG BAG AFFID	25 kg	40	2 years	Ingredient Milk Powder	Garden City	Low Heat
139801	DFA NFDM LH GR A 25 KG BAG PR AFFID	25 kg	40	2 years	Ingredient Milk Powder	Garden City	Low Heat

DEFA

MILK PROTEIN CONCENTRATE

Whole Dry Milk

Material	Product Description	Pack	CS/SKID	Shelf Life	Product Family	Plant	Detail Flavor
100071	DFA WHOLE MILK POWDER 2000 LB TOTE GR A	2000 lb	-	6 months	Ingredient Milk Powder	Middlebury Center	Med Heat
100068	DFA WH MLK PWDR 28.5% MFAT 2000LB GR A	2000 lb	-	6 months	Ingredient Milk Powder	Reading	Med Heat
100071	DFA WHOLE MILK POWDER 2000 LB TOTE GR A	2000 lb	-	6 months	Ingredient Milk Powder	Reading	Med Heat
100068	DFA WH MLK PWDR 28.5% MFAT 2000LB GR A	2000 lb	-	6 months	Ingredient Milk Powder	Middlebury Center	Med Heat



DEFA MILK PROTEIN CONCENTRATE

Whole Dry Milk

Material	Product Description	Pack	Bags/SKID	Shelf Life	Product Family	Plant(s)	Detail Flavor
100072	DFA WH MLK POWDER 28.5% 25KG BAG GR A	25 kg	56	6 months	Ingredient Milk Powder	Middlebury Center	Med Heat
136430	DFA WH MLK PWDR 28.5% 25KG AFFID GR A	25 kg	56	6 months	Ingredient Milk Powder	Middlebury Center	Med Heat
140540	DFA WH MLK PWDR 25KG VIT A&D GR A AFFID	25 kg	56	6 months	Ingredient Milk Powder	Middlebury Center	Med Heat
100072	DFA WH MLK POWDER 28.5% 25KG BAG GR A	25 kg	56	6 months	Ingredient Milk Powder	Reading	Med Heat
136430	DFA WH MLK PWDR 28.5% 25KG AFFID GR A	25 kg	56	6 months	Ingredient Milk Powder	Reading	Med Heat
136467	DFA REG WHOLE MILK POWDER 25 KG BAG	25 kg	56	2 years	Ingredient Milk Powder	Fallon	Med Heat
136468	DFA INS WHOLE MILK POWDER 25 KG BAG EXP	25 kg	56	2 years	Ingredient Milk Powder	Fallon	Med Heat



DFA

MILK PROTEIN CONCENTRATE

Whole Dry Milk - Standardized

Material	Product Description	Pack	Bags/SKID	Shelf Life	Product Family	Plant(s)	Detail Flavor
140061	DFA WHOLE MILK POWDER 25KG BAG EXP PR	25 kg	56	2 years	Ingredient Milk Powder	Fallon/Garden City	Med Heat





THANK YOU



INGREDIENT SOLUTIONS