



Reducing the effect of COVID-19 on the milk sales of small farmers



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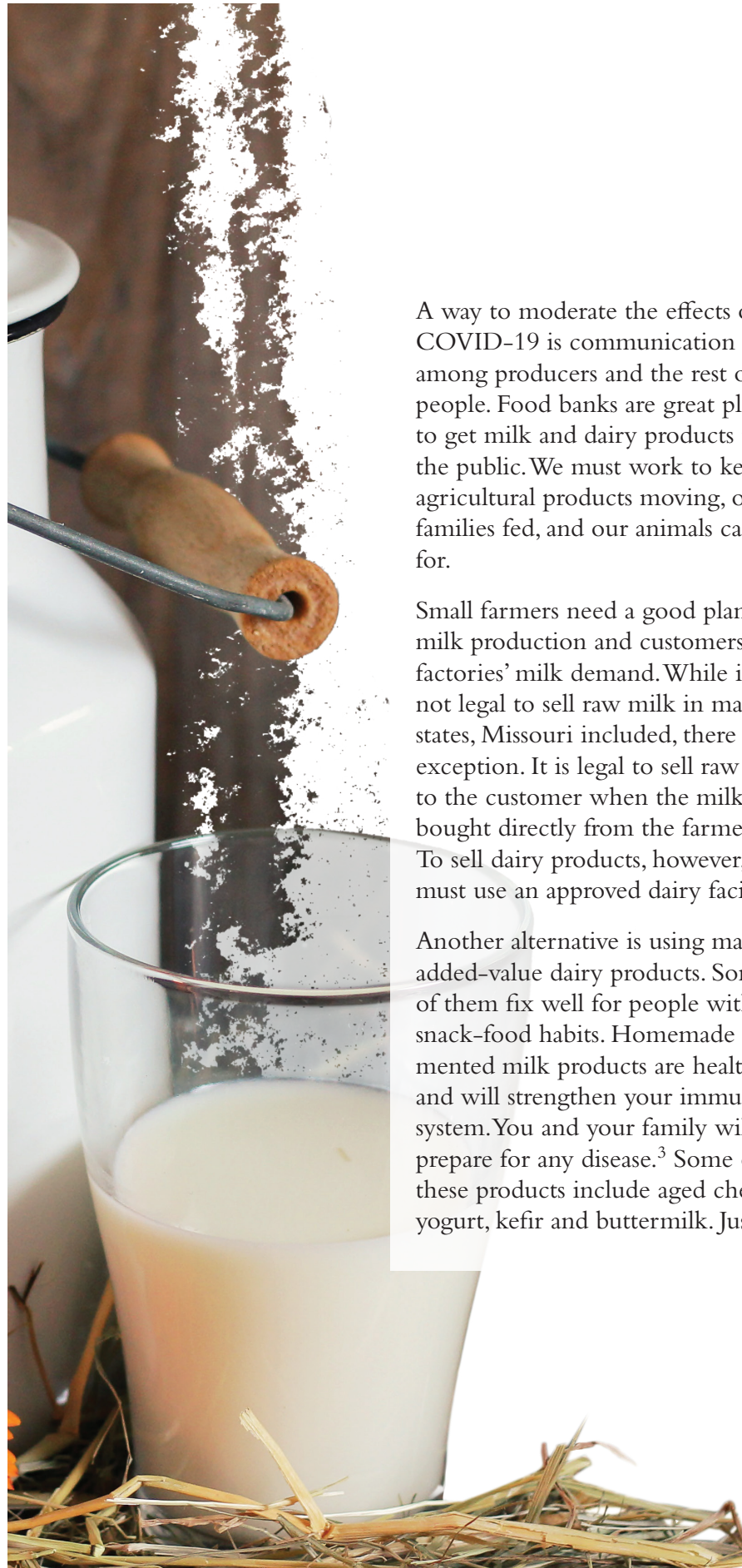
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The Coronavirus is the cause of many economic problems due to the health practice of social distance. With schools and restaurants mostly closed, many products are not moving as usual. Sales from the small farm are challenged during this pandemic time. The spread of COVID-19 in the United States has impacted two markets: fluid milk and dairy products.¹

When an economic downturn occurs, it is typical that the demand for these products goes down too. Stores sell less, and at the same time, the food factories require less milk from farmers. The factories process and offer fewer products for sale to the market. When an excess of milk in the market occurs, it is the reason the farmers have to dump unused milk. Now in April 2020, it is estimated that milk production exceeds demand by at least 10 percent.¹

People are changing what they buy due to emergency shopping and choice for healthier food. Therefore, factories must improve quality and production of some products that are in higher demand or stop producing those they do not need. Farmers are looking for new ways to make their products available to buyers. Right now, different products on the farm are so important.



A way to moderate the effects of COVID-19 is communication among producers and the rest of the people. Food banks are great places to get milk and dairy products to the public. We must work to keep agricultural products moving, our families fed, and our animals cared for.

Small farmers need a good plan for milk production and customers' or factories' milk demand. While it is not legal to sell raw milk in many states, Missouri included, there is an exception. It is legal to sell raw milk to the customer when the milk is bought directly from the farmer.² To sell dairy products, however, one must use an approved dairy facility.

Another alternative is using many added-value dairy products. Some of them fix well for people with snack-food habits. Homemade fermented milk products are healthier and will strengthen your immune system. You and your family will prepare for any disease.³ Some of these products include aged cheese, yogurt, kefir and buttermilk. Just as

some prefer the previous list, others like ice cream, milk caramel candies or sauce, milk whey powder, dry milk and even frozen milk. Pasteurized fresh milk is excellent for drinking. Also, milk is used in shakes, smoothies, hot chocolate and in cereal-granola.

It is essential to use salubrious (clean/healthy) raw milk. Also, you may pasteurize the milk for your added value products. Milk must be pasteurized to avoid any contamination with bacteria and viruses. You may pasteurize milk at home. The milk is heated over low heat in a saucepan to a temperature of 165° F while stirring.

The milk is held at 165° F for 15 seconds and then placed the pot in an ice bath. This can be the sink with cold water and ice. When the milk drops below 55° F, you may then transfer it to glass jars and allow them to cool in the refrigerator.

Some suggested recipes that may be used with the pasteurized milk are listed at right.

Suggested Milk Ice Cream Recipes with Ice Cream Maker⁴

Strawberry Milk Ice Cream

- 12 cups of milk
- 12 oz. natural thinly sliced strawberries
- 3 tablespoons strawberry extract
- 2 tablespoons vanilla extract
- 3 tablespoons cornstarch
- 3 cups sugar
- ¼ teaspoon salt

Coconut Milk Ice Cream

- 12 cups of milk
- 7 oz. small coconut flakes
- 1/3 teaspoon coconut extract
- 1 ½ tablespoon vanilla extract
- 3 tablespoons cornstarch
- 2 ½ cups sugar
- ¼ teaspoon salt

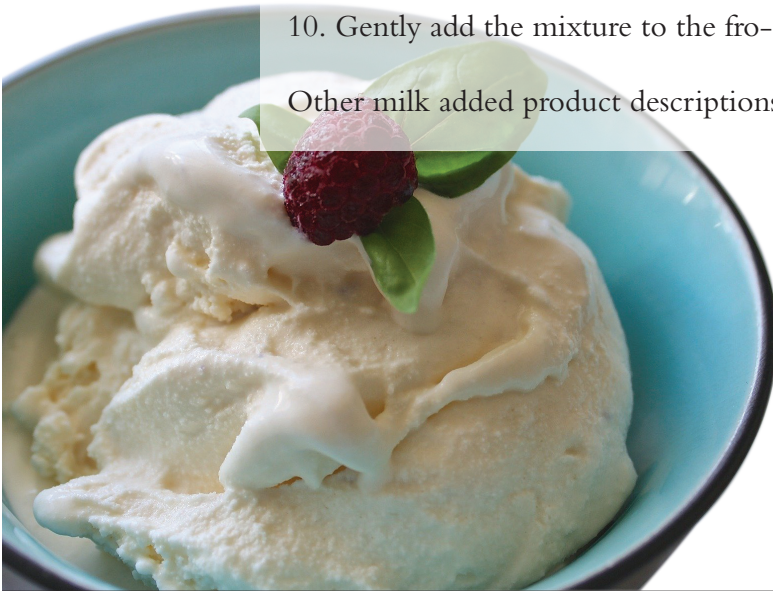
Prepare the milk ice cream after pasteurizing the milk. The milk (40° F) is mixed with corn starch and sugar, vanilla extract, and the rest of the ground or liquid ingredients, and all parts are blended thoroughly. Finally, add chopped ingredients such as fruits, cookies, chopped chocolate, or your preferred ingredients to the mix and stir well. Pour the mixture into the stainless-steel cylinder of a homemade ice cream maker. Add ice and grain salt to the outer barrel. Turn on for 45-60 minutes, or until the proper texture.

Ice cream without an ice cream maker

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| 2 cups of cold goat's milk (35-40 degrees) | 1 cup heavy whipping cream |
| 1 cup sugar + 2 tablespoons | 2 tsp vanilla extract |
| 2 tsp cornstarch | |
1. Freeze an empty freezer-safe shallow bowl or pan (a 13 x 9 cake pan works well) and a freezer-safe mixing bowl.
 2. Using a double boiler or a very heavy sauce pan, pour in the milk, sugar, and cornstarch.
 3. Stir it well.
 4. Place it on medium-low heat.
 5. Stir constantly with a spoon or a whisk until the mixture thickens (it should feel almost like thin gravy). You may need to turn the heat down if the mixture starts to boil.

6. Remove from the heat and let it cool in a shallow bowl or container for about 10-15 minutes, then place it in the refrigerator until it cools to 45 degrees or less.
7. Using the frozen mixing bowl, add the heavy whipping cream and 2 Tablespoons of sugar and whip it using a hand mixer or a blender on high speed until soft peaks form.
8. Add in the vanilla to the cream and sugar mixture, stirring gently.
9. Add the cold milk mixture 1/3 at a time about 3/4 c at a time). Stir it gently just long enough to blend it after each 3/4c of milk)
10. Gently add the mixture to the frozen shallow bowl or pan. Put plastic on top of the milk mixture and freeze for 30 minutes.
11. Remove the pan from the freezer and blend well again. (This makes it creamier). You can add fruit or flavorings (like chocolate syrup or more vanilla) at this time. Place the plastic on top of the milk mixture.
12. Freeze for another 30 minutes. Remove the pan and blend again. You may have to let it thaw for 5 minutes if it is starting to freeze hard.
13. Cover and place the pan back in the freezer for 6 hours.
14. Scoop out and enjoy!

Other milk added product descriptions coming in future fact sheets.



1. IDFA. Proposed NMPF-IDFA Milk Crisis Plan for USDA. April, 2020, 4p https://www.idfa.org/wordpress/wp-content/uploads/2020/04/NMPF-IDFA-COVID-19-Mitigation-Proposal-040620_FINAL.pdf
- 2 - Missouri Dept. of Agriculture, Raw milk. <https://agriculture.mo.gov/animals/milk/rawmilk.php>
3. Balcells F., Mariani, Weill, Perdigón, Maldonado-Galeano. Effect of Yogurt With or Without Probiotic Addition on Body Composition Changes and Immune System in an Obese Model. *J Food Sci Nutr* 2017, 3: 022
- 4.- Luis Isidro, et al, 2018. Análisis Microbiológico de la nieve sabor fresa y coco elaborada con leche de cabra pasteurizada. XXX Semana Internacional. FAZ, UJED, México.