

Plastic Buckets for Longer-Term Food Storage

THE CHURCH OF
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Plastic buckets may be used to store food commodities that are dry (about 10 percent moisture or less) and low in oil content. Only buckets made of food-grade plastic with gaskets in the lid seals should be used. Buckets that have held nonfood items should not be used.

To prevent insect infestation, dry ice (frozen carbon dioxide) should be used to treat grains and dry beans stored in plastic buckets. Treatment methods that depend on the absence of oxygen to kill insects, such as oxygen absorbers or nitrogen gas flushing, are not effective in plastic buckets. Avoid exposing food to humid, damp conditions when packaging them.

Dry Ice Treatment Instructions

1. Use approximately one ounce of dry ice per gallon (7 grams per liter) capacity of the container. Do not use dry ice in metal containers of any kind or size because of the potential for inadequate seals or excessive buildup of pressure.
2. Wear gloves when handling dry ice.
3. Wipe frost crystals from the dry ice, using a clean dry towel.
4. Place the dry ice in the center of the container bottom.
5. Pour the grain or dry beans on top of the dry ice. Fill the bucket to within one inch (25 mm) of the top.
6. Place the lid on top of the container and snap it down only about halfway around the container. The partially sealed lid will allow the carbon dioxide gas to escape from the bucket as the dry ice sublimates (changes from a solid to a gas).
7. Allow the dry ice to sublimate completely before sealing the bucket. Feel the bottom of the container to see if the dry ice is all gone. If the bottom of the container is very cold, dry ice is still present.
8. Monitor the bucket for a few minutes after sealing the lid. If the bucket or lid bulges, slightly lift the edge of the lid to relieve pressure.
9. It is normal for the lid of the bucket to pull down slightly as a result of the partial vacuum caused when carbon dioxide is absorbed into the product.

Storage of Plastic Buckets

- Store plastic buckets off the floor by at least ½ inch (1.3 cm) to allow air to circulate under the bucket.
- Do not stack plastic buckets over three high. If buckets are stacked, check them periodically to ensure that the lids have not broken from the weight.

Visit providentliving.org for additional information.