

# Center for Milk and Dairy Product Safety Disinfecting Farm Water Supplies

The disinfection of water present in wells or springs may be adequately accomplished by using either liquid household bleach or calcium hypochlorite, a dry chemical available in either powder or tablet form. The powder or tablets can usually be obtained from a hardware, swimming pool equipment, or chemical supply store. The amount of disinfectant required depends on the volume of water to be disinfected. The attached table shows the amount of calcium hypochlorite powder (A) or household bleach (B) required for different size wells, with varying depths of standing water.

#### **Disinfecting Well Water**

- 1. Remove the cover or the sanitary seal from the well to determine the amount of standing water present in the well (ft.).
- **2.** Determine the quantity of calcium hypo chlorite or household bleach needed from the table provided.
- **3.** When using the powder, mix it with water in a clean plastic or other non-metallic bucket or container.
- **4.** Slowly pour the required amount of chlorine solution into the well.
- 5. Start the pump, and with a garden hose connected to a faucet near the pressure tank, circulate the water back down into the well. Do this for about 15 minutes until the chlorine and water are thoroughly mixed.
- **6.** Water should then be drawn from each outlet in the distribution system until the odor of chlorine is present at each outlet.
- 7. Hold the chlorine treated water in the system for at least 6 hours (preferably overnight), then flush it out of the system. Pump the water to waste, until the odor of chlorine disappears. (This should be done through an outlet where the waste will not enter a septic system).

CAUTION SHOULD BE USED TO PREVENT LIVESTOCK OR HUMANS FROM CONSUMING WATER WITH HIGH CHLORINE CONTENT.



## **Disinfecting Spring Water**

- 1. Remove any excess organic material or silt from the spring box or reservoir.
- 2. Add about one cup of household bleach per 10 gallons of water, and scrub the walls of the spring box or reservoir with a stiff bristle brush.
- 3. Add the same amount of bleach again, and disinfect the distribution system as indicated for wells.
- 4. Because of the difficulty in maintaining the chlorine solution in the reservoir for the desired contact time, the addition of calcium hypochlorite tablets (which take several hours to dissolve) to the spring box is recommended.



# Quantities of Calcium Hypochlorite (A) or Household Bleach (B) Required for Well Water Disinfection

### Well Diameter (in.)

	Drilled Well				Dug Well		
Depth of Water in Well (ft.)		4	6	8	36	42	48
5	A				7 oz.	9 oz.	12 oz.
	В				3 qt.	4qt.	5 qt.
10	A				13 oz.	24 oz.	24 oz.
	В				1 ½ gal.	2 gal.	2 ½ gal.
15	A				24 oz.	24 oz.	32 oz.
	В				2 gal.	3 gal.	4 gal.
20	A	1 tbsp.	3 tbsp.	4 tbsp.			
	В	1 cup	1 cup	2 cups			
40	A	2 tbsp.	6 tbsp.	8 tbsp.			
	В	1 cup	2 cups	4 cups			
60	A	3 tbsp.	8 tbsp.	8tbsp.			
	В	½ qt.	1 qt.	2 qt.			
80	A	4 tbsp.	9 tbsp.	10 tbsp.			
	В	½ qt.	1 qt.	2 qt.			
100	A	2.5 oz.	4 oz.	7 oz.			
	В	³⁄₄ qt.	1 ½ qt.	2 ½ qt.			
150	A	4 oz.	6 oz.	10 oz.			
	В	1 qt.	2 ½ qt.	4 qt.			

#### Key

 $\overline{A} = 70\%$  Calcium Hypochlorite

**B** = 5.25 % Liquid Household Bleach

Tbsp. = tablespoons (1 tbsp. =  $\sim 1/2$  oz.)

Cup = cup (8 oz.)

Qt. = quart

Gal. = gallon