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IDAHO POTATO STORAGE RECOMMENDATIONS

J. E. BRYAN
W. C. SPARKS

IDAHO Agricultural
Extension Service
Bulletin No. 436
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IDAHO POTATO STORAGE MANAGEMENT

TEMPERATURE

The relative humidity in the potato storage should always be above 90%. A high relative humidity is most important during the first month of storage to promote healing of cuts and wounds. It also prevents dehydration and weight loss.

BEFORE HARVEST

- 1. Clean cellar and disinfect*
- 2. Wet down floor*
- 3. Check insulation — repair where needed*
- 4. Check fan motors and controls*

DURING HARVEST

- 1. Prevent bruising*
- 2. Remove all rotten and frosted tubers*
- 3. Keep humidity above 90%*
- 4. Maintain 45-50 degrees F. tuber temperature*

AFTER HARVEST

- 1. Maintain proper temperature and humidity*
- 2. Provide airflow up through potatoes at rate of 10 cubic feet per minute per ton*
- 3. Do not handle cold tubers*

Suberization (wound healing) will take place best at temperatures of 45-55 degrees F. if the relative humidity is above 90%. These temperatures can be used the first month of storage. When water rot, field frost or leak are present, storage temperatures should be lowered and held to 40 degrees F. immediately after harvest.

Potatoes that will be removed from storage before December can be held at 40-45 degrees F. to prevent sugar build-up. Potatoes to be removed after December 1 should be cooled to 40 degrees F. and held. A rapid build-up of sugars occurs at temperatures below 40 degrees F. Potatoes will freeze at 29 degrees F.

Tuber temperatures of 55-60 degrees F. for varying lengths of time are necessary to reduce sugars. Sprouting and rots become serious problems at these high temperatures. Seed potatoes should be warmed for two weeks at 55-60 degrees F. to promote sprouting. Before removal from storage, tubers should always be warmed to 45-50 degrees F. A cold potato bruises very easily.

A constant and uniform tuber temperature is desirable in the potato storage. A constant temperature will prevent sprouting longer than will fluctuating temperatures. Forced air ventilation throughout the potato pile is necessary to maintain uniform temperature.

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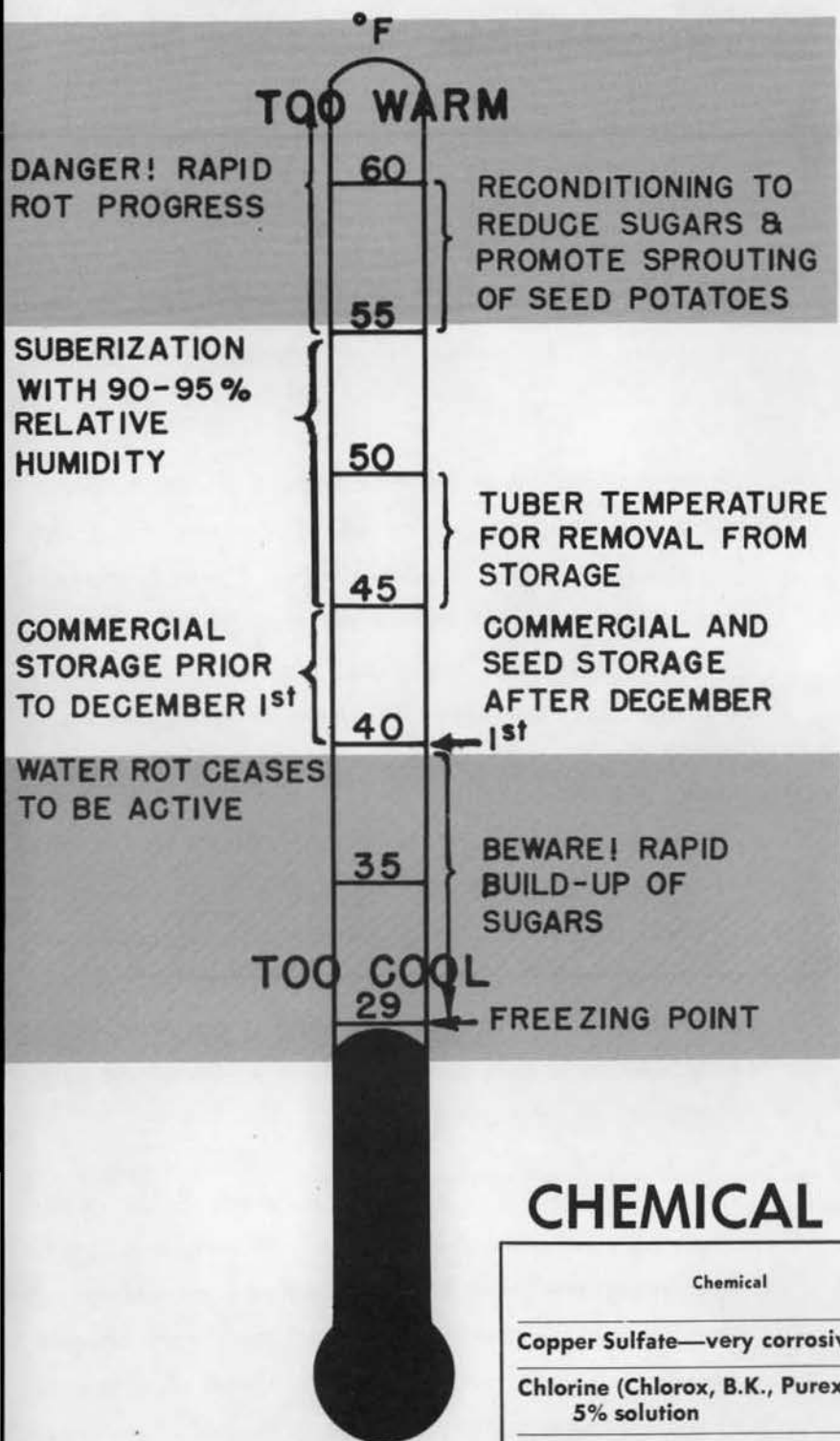
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FOR FURTHER INFORMATION

This guide to improved potato storage management has been prepared by J. E. Bryan and W. C. Sparks. Bryan is county agent located in Bingham County. Sparks is horticulturist at Idaho's Aberdeen Branch Experiment Station. Either of these staff members of Idaho's Agricultural College can be consulted for special problems in potato storage management. The basis for many of their recommendations is the experimental work in potato storage now being conducted at Aberdeen.

For additional written information on Idaho potato storage see University of Idaho Experiment Station Bulletin No. 410. Your own County Agent can supply you with a copy or it can be obtained from the University of Idaho agricultural mailing room in either Boise or Moscow.

SANITATION

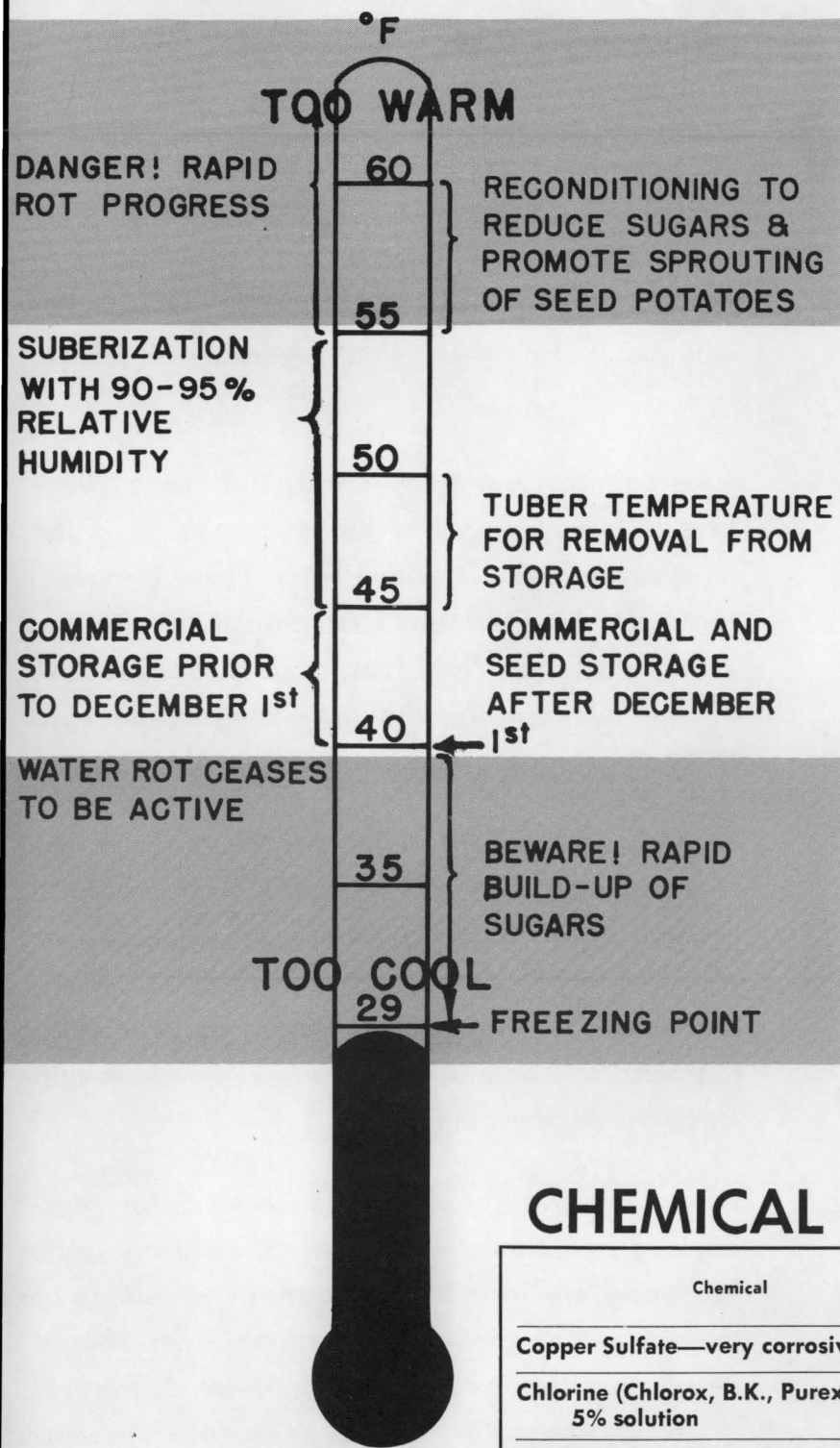
1. Remove trash, old tubers and field soil from cellar.
2. Disinfect storage by thoroughly wetting walls, floor, partitions and ceiling with chemical disinfectant.
3. Steam clean or wash and disinfect all potato handling equipment.

CHEMICAL DISINFECTANTS

Chemical	Amount to add to	
	10 gal. water	100 gal. water
Copper Sulfate—very corrosive	2 lb.	20 lb.
Chlorine (Chlorox, B.K., Purex, etc.) 5% solution	1 gal.	10 gal.
Lysol 50% solution in soap	1 gal.	10 gal.
Formaldehyde—avoid breathing 40% solution	3.2 cups	4 gal.
Quaternary Ammoniums* (Roccal, Hyamine, Purina, etc.) 10% solutions	1.6 cups	1 gal.

*Used mainly for ring rot control

TUBER TEMPERATURE IN STORAGE



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