

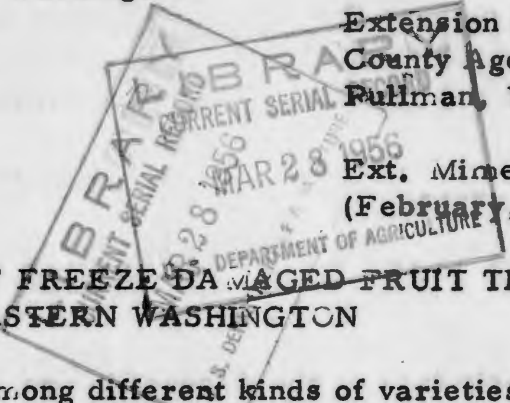
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COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
State of Washington

State College of Washington
U.S. Department of Agriculture
Cooperating

Extension Service
County Agent Work
Pullman, Washington

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1956 EMERGENCY TREATMENT OF FREEZE DAMAGED FRUIT TREES
IN CENTRAL AND EASTERN WASHINGTON

Damage varies from area to area and among different kinds of varieties of fruits. The several treatments here are intended to fit all conditions in Central and Eastern Washington but no one treatment is suitable for all conditions. To use the suggested treatments correctly, you must diagnose the type and extent of your injury as accurately as possible. If in doubt as to the treatment to follow after examining your trees thoroughly, consult your County Extension Agent.

APPLES AND PEARS

I. Bearing trees

1. Severely injured: 80 to 90 per cent of spurs completely brown at base of bud; tip of bud on spur may be green; some blossom buds dead; some one year tips brown; some browning in trunk and crotches.
 - A. Pruning: do very little pruning except for removing part of water sprouts.
 - B. Fertilization: reduce your regular application materially; extra fertilizer is not the answer.
 - C. Dormant insecticide sprays: none

2. Moderately injured: spurs brown at base of bud but cambium region light in color with browning rarely extending completely across the spur. Blossom buds all alive.
 - A. Pruning: lighten pruning considerably.
 - B. Fertilization: make your regular application not later than April 1

3. Slightly Injured: some spurs showing darkened area on inside but cambium region green or light in color.
 - A. Pruning: prune normally
 - B. Fertilization: fertilize normally

II. Non-bearing trees

1. Severely injured: trunk and framework wood dark brown in bark and cambial area; dead appearing bark surrounds trunk; bark on small wood may be brownish in cambial area; buds may be green.
 - A. Pruning:
 - a. Trees up to 3 1/2 inches in diameter: cut off in live wood and graft.
 - b. Trees over 3 1/2 inches in diameter: 1. Let stand without any pruning to see if they may possibly recover, or cut off and graft. With trees over 3 1/2 inches in diameter the chances of grafting successfully decrease as the trees get bigger.
 2. Bridge graft trees with only a band of trunk bark killed.
 - B. Fertilization: Reduce your regular fertilizer application.
 - C. Dormant insecticide sprays: none.
2. Moderately and slightly injured: trunk and framework discolored in bark and cambial area; small wood may be slightly discolored; buds green; tips brown.
 - A. Pruning: prune lightly or not at all; avoid large structural cuts on trees 4 to 10 years old.
 - B. Fertilization: lighten fertilizer application

CHERRIES

I. Bearing trees

1. Severely injured: spurs, fruiting wood, framework and trunk brown. Most fruit buds killed.
 - A. Pruning: do not prune. Plan replacement program.
 - B. Fertilization: do not fertilize. Foliage sprays of urea not recommended.
 - C. Dormant insecticide sprays: none.
2. Moderately injured: spurs discolored; all wood including trunk discolored in cambial area; many fruit buds killed by February low temperatures.

- A. Pruning: do not prune; remove and burn dead wood in summer; watch for shothole borers in this wood.
 - B. Fertilization: reduce application to about half normal application. Foliage sprays of urea are not recommended.
3. Slightly injured: spurs discolored; all other parts green; many fruit buds dead.
- A. Pruning: prune lightly if at all.
 - B. Fertilization: fertilize normally.

III. Non-bearing trees.

- 1. Severely injured: Cambial area of trunk and framework brown.
 - A. Pruning: Plan replacement program. Unlikely that these trees will permanently recover through sprouts either from trunk or framework.

PEACHES AND APRICOTS

I. Bearing trees.

- 1. Severely injured: Trunk and framework wood brown in cambial area; slight browning in cambial area of smaller wood; some tips brown. Many leaf and fruit buds killed.
 - A. Pruning: Plan replacement program but hold judgement until mid-summer. Peach trees sometimes make miraculous recoveries.
 - B. Fertilization: Reduce your regular application to 1/2 the usual amount.
 - C. Dormant insecticide spray: None
- 2. Moderately and Slightly injured: 2 to 4 year-old wood discolored in cambial area; slight discoloration on trunk and in crotches; slight bud killing; many fruit buds dead.
 - A. Pruning: Prune normally leaving higher percentage of vigorous wood than usual; some small weak wood seams to be seriously injured.
 - B. Fertilization: Fertilize normally.

II. Non-bearing trees.

1. Seriously injured; all wood brown in cambial area.

A. Pruning

- a. 1 to 3 year-old trees: Cut off before growth starts with sloping cut in live wood to encourage sprouting; paint stub with pruning wound dressing.

B. Fertilization: Do not fertilize

C. Dormant insecticide sprays: none

2. Moderately and Slightly injured; some discoloration of cambial area of woods 2 years old or older.

A. Pruning: Prune lightly

B. Fertilization: Fertilize normally.

PRUNES

I. Bearing trees.

1. Severely injured: Nearly all spurs brown; area at base of leaders and fruit buds brown; all wood brown in cambial area including that on trunk, crotches and framework particularly being very brown; most fruit buds green.

A. Pruning: Do not prune; plan replacement program but withhold final judgment until growing season starts.

B. Fertilization: Crop prospects don't justify fertilization, and additional fertilizer is not advisable for trees in this condition.

C. Dormant insecticide spray: None

2. Moderately and Lightly Injured: Tips slightly discolored; trunk, crotches and some framework wood discolored; most buds green.

A. Pruning: Lighter pruning somewhat

B. Fertilization: Fertilize normally

II. Non-bearing trees

Severely injured: All wood including tips, trunk and framework brown; some buds green.

- A. Pruning: Plan replacement program but withhold judgment until growing season starts; do not prune.
 - B. Fertilization: Save fertilizer
 - C. Dormant insecticide sprays: None
2. Moderately to Lightly injured: Trunk and framework wood discolored in cambial area; buds green.
- A. Pruning: Lighten pruning somewhat.
 - B. Fertilization: Apply about 1/2 normal ground application in early spring.

Dormant Zinc sprays should be applied by bulk application (300 gallons of spray per acre or more) for greatest safety. Use 7 1/2 lbs. actual Zinc per acre on damaged trees.

Mildew - Karathane should be substituted for Lime-Sulfur in pre-bloom sprays on damaged trees.

Chemical thinning - Evaluation of damage and its effect on thinning sprays will be made in April.

This material prepared by representatives of the Washington State Department of Agriculture, the Washington Agricultural Experiment Station and the Washington Extension Service.