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# Cultivar Trial of Recently Released Selections of Fire Blight Resistant Pears and Cold Hardy Peaches

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## **Abstract**

Pears and peaches have been limited by the climate for commercial production in Iowa, but recent breeding programs have alleviated some of those constraints. Cold-tender peach trees show flower damage when winter temperatures are -20°F or colder. Similarly, Iowa's wet and humid spring and summer climate encourages fire blight disease in pear crops. New cultivars have been selected from several institutions that can be grown in Iowa with less fear of orchard devastation from cold injury and disease influence. The objective of this study was to trial fire blight resistant European pear and cold hardy Asian pear and peach cultivars available for Iowa production.

## **Keywords**

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## **Disciplines**

Agriculture | Horticulture

# Cultivar Trial of Recently Released Selections of Fire Blight Resistant Pears and Cold Hardy Peaches

## RFR-A1142

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### Introduction

Pears and peaches have been limited by the climate for commercial production in Iowa, but recent breeding programs have alleviated some of those constraints. Cold-tender peach trees show flower damage when winter temperatures are -20°F or colder. Similarly, Iowa's wet and humid spring and summer climate encourages fire blight disease in pear crops. New cultivars have been selected from several institutions that can be grown in Iowa with less fear of orchard devastation from cold injury and disease influence. The objective of this study was to trial fire blight resistant European pear and cold hardy Asian pear and peach cultivars available for Iowa production.

### Materials and Methods

Feathered trees were established at the ISU Horticulture Research Station, Ames, Iowa in the spring of 2011. They were planted 10 ft within and between rows. Growth, winter survival, and eventually yield and fruit quality will be accessed on the cultivars starting in spring 2012.

#### European pear:

*Bartlett*: Fire blight susceptible, medium size fruit, and mid-season harvest (mid- to late-August).

*Blake's Pride*: Fire blight resistant, medium fruit size, and mid-season harvest.

*Harrow Delight*: Fire blight resistant, medium size fruit, and early- to mid-season harvest.

*Harrow Sweet*: Fire blight resistant, medium fruit size, and mid- to late-harvest season.

*Moonglow*: Fire blight resistant, medium fruit size, and early- to mid-season harvest.

*Shenandoah*: Fire blight resistant, large fruit size, and late-season harvest.

*Sunrise*: Fire blight resistant, medium fruit size, and early-season harvest.

#### Asian Pear:

*Hosui*: Fire blight susceptible, large fruit size, and early harvest.

*Olympic*: Moderate tolerance to fire blight, very large fruit, and late harvest.

*Shinko*: Moderate tolerance to fire blight, medium fruit size, and late harvest.

*Yoinashi*: Moderate tolerance to fire blight, large fruit size, and early to mid-season harvest.

*Shinshi*: Moderately susceptible to fire blight, medium fruit size, and early harvest.

#### Peaches:

*Redhaven*: Moderately cold hardy, free stone, medium fruit size, and mid-summer harvest season (late July/early August).

*Contender*: Moderately cold hardy, free stone, large fruit size, and mid-summer harvest season.

*Flamin Fury PF 25*: Suspected to be cold hardy, free stone, medium fruit size, and late-harvest season.

*Flamin Fury PF 23*: Suspected to be cold hardy, free stone, medium fruit size, and mid-season harvest.

*Flamin Fury PF 24-c*: Suspected very cold hardy to -30°F, free stone, large fruit size, and mid- to late-season harvest.

**Results and Discussion**

Initial growth data will be taken on the trees in March of 2012, along with pruning. Winter survival and die back will also be assessed at that time. Additional cultivars are planned to be added to the trial in April 2012.

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