

## APPLE CULTIVARS FOR WESTERN MONTANA

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Many excellent apple cultivars will perform well in western Montana and can greatly expand the selection of apples over those available in groceries. A careful choice of cultivars can provide fresh apples from early to mid-August until frost, and stored apples until December or January.

Most of western Montana has a short, cool growing season with winter temperatures occasionally reaching -20°F and sometimes dropping below -30°F. Apples are among the hardiest of all orchard crops, but many cultivars need a long growing season to ripen properly. Late-maturing cultivars such as 'Granny Smith,' 'Fuji,' or 'Braeburn' do not ripen reliably in most locations of western Montana.

When selecting cultivars, special attention should be given to disease-resistant apples. Apple scab, a fungal disease, and fire blight, a bacterial disease, are usually serious problems in western Montana. Cultivars which are resistant to scab and fire blight, as well as cedar apple rust and powdery mildew, have recently been released by apple breeding programs. At this time there are no insect-resistant apples, so protection from codling moth and other insect pests continues to be necessary.

Over one hundred apple cultivars have been tested at the Western Agricultural Research Center at Corvallis. The apples presented here are just a sampling of those which have demonstrated potential at the Research Center or in other locations in western Montana. The cultivars are listed in approximate order of ripening. Cultivars that were developed for disease resistance are marked with a \*.

**'VISTA BELLA'** is a somewhat tart early summer apple. The fruit is red, of small to medium size, and is firmer and of better fresh quality than most early apples. The tree is vigorous, hardy, and crops biennially, so thinning is necessary for regular cropping. The tree is susceptible to fire blight. Pruning in early years is needed to stimulate branching. Ripens late July-early August.

**'LODI'** is a tart yellow apple that bears biennially, so requires early fruit thinning. It is excellent for cooking but softens rapidly after harvest. The tree is vigorous and hardy but is susceptible to fire blight. 'Lodi' was developed as a replacement for 'Yellow Transparent,' an old variety that is smaller and softer.

**'DISCOVERY'** is a high-quality, European-type dessert apple. The fruit is small to medium, oblate, with a red blush. The flesh of 'Discovery' is very dense, crisp, tart, and aromatic, with good quality for fresh use as well as for cooking, and keeps almost a month in cold storage. The tree is not vigorous, so should not be grown on the fully dwarfing rootstocks. 'Discovery' bears its fruit at the tips of the branches and requires little pruning. The tree is not resistant to fire blight. Ripens mid- to late August.

**'WILLIAMS' PRIDE'** \* is an early, attractive apple with a dark purple-red overcolor. The flesh is crisp and mild-flavored. The tree is an open-spreading spur type, with very good resistance to fire blight, good resistance to powdery mildew, and is field immune to cedar-apple rust.

**'JERSEYMAC'** is an attractive, medium to large apple, similar in appearance and flavor to 'McIntosh,' mostly red over a green ground color. The fruit is slightly less

aromatic than 'McIntosh' but has excellent flavor and juicy, crisp flesh. 'Jersey mac' will keep for about a month in cold storage. The hardy tree is strong, upright and spreading but is very susceptible to fire blight. Fruit are borne at the tips of the shoots, ripen unevenly, and drop before fully ripe. Ripens mid- to late August.

**'STATE FAIR'** is a hardy Minnesota cultivar. The apples are a glossy, attractive bright orange-red over yellow. The flesh is good-flavored, cream-colored, fine-grained, juicy, and tender-crisp. 'State Fair' makes a very smooth applesauce and is excellent for pies. The tree is vigorous and upright, but cropping will spread the branches. This variety tends to be over productive, so early fruit thinning is important. 'State Fair' is not resistant to fire blight. Ripens mid- to late August.

**'SUMMERRED'** is a very attractive, oblong apple, solid red with white dots, and medium in size. The flesh is tender and flavorful, and the fruit is used both fresh and for cooking. 'Summerred' is hardy and is not resistant to fire blight. Young trees should not be allowed to crop heavily, as growth of the tree will slow or cease. Ripens late August.

**'PRIMA'** \* is a large, bright red apple with sweet, mild-flavored, yellowish flesh. 'Prima' is an excellent culinary apple but does not store well. The tree is spreading and vigorous, is resistant to apple scab, moderately resistant to fire blight and powdery mildew, and susceptible to cedar apple rust. Ripens early to mid-September.

**'WEALTHY'** is a hardy old cultivar well known in western Montana. The apple is attractive, medium sized, round, and is yellow with a red stripe. The tart fruit is moderately firm and keeps through October in cold storage. It is an excellent processing, juice, and cooking apple, especially when combined with an aromatic cultivar such as 'McIntosh,' but is only of fair quality for fresh eating. The tree is highly susceptible to fire blight. Ripens early to mid-September.

**'REDFREE'** \* is a medium-sized glossy red, firm, mild-flavored dessert apple which stores for about two months. The fruit ripens unevenly and requires more than one picking. The tree will bear heavily, so the fruit should be thinned. 'Redfree' is resistant to apple scab and cedar apple rust and has moderate resistance to fire blight and powdery mildew. Ripens early to mid-September.

**'JONAMAC'** is a very attractive 'McIntosh'-type dessert apple. It combines the best qualities of its parents, 'Jonathan' and 'McIntosh.' The fruit is mostly red, medium sized, with very fine-grained white flesh, sweet and aromatic in flavor, does not drop before harvest, and stores well. The tree is medium in size, hardy, and very productive, but is not resistant to fire blight. Ripens early to mid-September.

**'GALA'** is a high-quality New Zealand cultivar with 'Golden Delicious' as one parent. It is a small to medium, round apple with red stripes over a yellow ground color. Several red strains of 'Gala' are available. The flesh is very crisp and sweet, with a distinctive pear-like flavor. The fruit stores well. 'Gala' is difficult to grow in western Montana as the vigorous tree is very cold-tender and highly susceptible to fire blight. The fruit requires heavy thinning to increase size. Ripens mid- to late September.

**'McINTOSH'** is the standard commercial cultivar grown in western Montana. The tart fruit is of excellent fresh and cooking quality when matured in our cool climate. The fruit has a dark red stripe or blush over a greenish ground color and a waxy bloom. The flesh is white, juicy, aromatic, and stores well, and although it softens in storage, it maintains good flavor. The hardy tree is vigorous. Fruit drops before fully ripe. 'McIntosh' is highly susceptible to apple scab but is moderately resistant to fire blight. Ripens mid- to late September.

**'SWEET SIXTEEN'** is a high-quality dessert apple with a unique flavor and sweetness.

The apples are unattractive, red over a yellow ground, and may be russeted. The flesh is yellow, firm, and crisp, with a distinctive spicy, aromatic flavor, reminiscent of anise. The fruit stores well for cooking but softens and loses some flavor during extended storage. 'Sweet Sixteen' is vigorous, upright-growing, and is very susceptible to fire blight. Ripens late September to early October.

**'LIBERTY'** \* is an attractive medium-sized apple, red over a greenish undercolor, with sweet, pale yellow, crisp, good-flavored juicy flesh. The fruit ripens unevenly and must be picked slightly immature if it is to be stored. 'Liberty' is resistant to scab, fire blight, cedar apple rust, and powdery mildew. Heavy early cropping will stunt trees grown on dwarfing rootstocks. Ripens early to mid-October.

**'HONEYCRISP'** is one of the best-keeping apples for Montana. The fruit is yellow with a 50-90% red overcolor, has cream-colored flesh, and is mild, crisp, sweet, and juicy. The fruit remains firm on the tree after maturity and will stay crisp for up to five months in storage. Young trees tend to have very large fruit that may be affected by cork spot. The moderately vigorous tree is hardy.

**'EMPIRE'** ripens about two weeks after 'McIntosh.' The fruit is excellent quality, small to medium sized, dark red with a waxy bloom, and stores well. The flesh is cream colored, crisp, juicy, and aromatic, but the fruit should be thinned early to increase size. The tree is vigorous and spreading. 'Empire' requires a long growing season to obtain adequate fruit maturity and size. Ripens early to mid-October.