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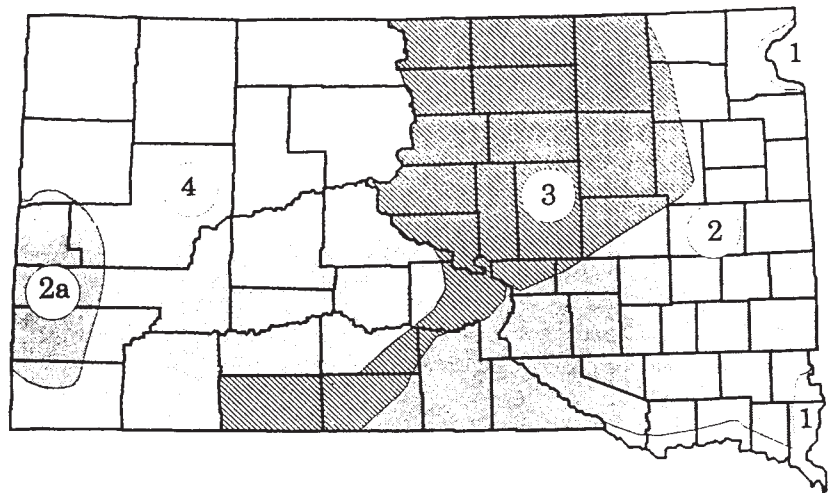
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Fruit Cultivars for South Dakota

by Dr. Anne Fennell, assistant professor, fruit research, and
Dr. David F. Graper, Extension horticulture specialist,
Horticulture, Forestry, Landscape and Parks Department,

This guide has been prepared to help growers choose fruit for home as well as commercial growing.

South Dakota has been divided into five districts (see map). Cultivars have been suggested (X or T) by districts. However, local climatic and soil conditions may vary. (T) designates use in favorable sites or soils only, plant on a trial basis.



Cultivar	Fruit Districts				Info.	Cultivar	Fruit Districts				Info.
	1	2	3	4			1	2	3	4	
APPLES						Mid-Season (mid-Sept. to late Sept.)					
(Plant two different cultivars for pollination)						McIntosh X T T					
Early-Season (early Aug. to mid-Sept.)						MacSpur X T T					
Hazen	X	X	X	X		Cortland	X	T	T		
Melba	X	X	T		FD	Spartan	X	T			
Mantet	X	X	X	T	FD	Northwestern	X	T	T		
Oriole	X	X	T	T		Late-Season (Oct.)					
Duchess	X	X	X	X	FB	Redwell	X	X	T	FB	
State Fair	X	X	T	T		Haralson	X	X	X	X TH	
Paula Red	X	T	T		FB	Haralred	X	X	X	X TH	
Wealthy	X	X	X	T	FB	Prairie Spy	X	X	X	FB	
Red Baron	X	X	T	T	TH	Connell Red	X	X	T	FB	
Sweet Sixteen	X	X	T			Honeygold	X	T			
						Regent	X	T			
						Keepsake	X	T	T		



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Cultivar	Fruit Districts				Info.	Cultivar	Fruit Districts				Info.
	1	2	3	4			1	2	3	4	
CRAB APPLES						BLACK RASPBERRIES					
Dolgo	X	X	X	X		John Robertson	X	X	T	T	
Red River			X	X		Black Hawk	X	X	T		
Chestnut	X	X	T			APRICOTS					
Centennial	X	X	X	X		(Plant two different cultivars for pollination)					
PEARS						Moongold	X	X			SF
(Plant two different cultivars for pollination)						Sungold	X	X			SF
Summer Crisp	X	X	X	T		Manchu	X	X	X	X	SF
Gourmet	X	X	T	T		STRAWBERRIES					
Luscious	X	X	T	T		Junebearing					
Parker	X	T	T			Annapolis	X	X			
Golden Spice	X	X	X	T	P	Settler	X	X			
Lincoln	X	T	T			Honeoye	X	X	T		
Patten	X	T	T			Senator Dunlap	X	X	X	X	
EUROPEAN (BLUE) PLUMS						Glooscap	X	X	T		
Mount Royal	X	T			TH	Sparkle	X	T	T		
Deitz	X	X	X	T		Blomidon	T	T			
Stanley	X	T			TH	Redcoat	X	X	T		
HYBRID PLUMS						Everbearing					
(Pollinizer cultivar required)						Ogallala	X	X	X	X	
Alderman	X	X	T			Fort Laramie	X	X	X		PM
Hanska	X	X	X	T		Ozark Beauty	X	X			
Kaga	X	X	X	T	P	Superfection	X	X	T	T	
South Dakota	X	X	X	X	P	SANDCHERRY					
Superior	X	X			FD	Brooks	X	X	X	X	
Tecumseh	X	X	X	X		Black Beauty	X	X	X	X	
Toka	X	X	X	T	P	Sioux	X	X	X	X	
Underwood	X	X	X	X		SOUR CHERRIES					
Waneta	X	X	T			North Star	X	X	X	T	SF
RED RASPBERRIES						Meteor	X	X	T	T	SF
Summer-Fruiting						BUSH OR NANKING CHERRY					
Killarney	X	T	T			(<i>Prunus tomentosa</i>)					
Nordic	X	X	X	T		Drilea	X	X	X	X	SF
Boyne	X	X	X	T		Orient	X	X	X	X	SF
Latham	X	X	X	T		CHERRY-PLUMS					
Fall-Fruiting (Everbearing)						(Plant two different cultivars for pollination)					
Autumn Bliss	X	X	T			Opata	X	X	X	X	
Redwing	X	X	T			Sapa	X	X	X	X	
Summit	X	X	T			Sapalta	X	X	X	X	
Fallred	X	X	X	T		Compass	X	X	X	X	
Amity	X	X	T			CURRANTS					
Heritage	X	T	T			Red Lake	X	X	X	X	PM
September	X					Cascade	X	X	X	X	PM
PURPLE RASPBERRIES						Perfection	X	X	X	X	PM
Royalty	X	T	T			Wilder	X	X	X	X	PM
Brandywine	X	T	T								
Clyde	X	X									

Cultivar	Fruit Districts				Info.
	1	2	3	4	
GOOSEBERRIES					
Pixwell	X	X	X	X	
Welcome	X	X	X	X	
GRAPES					
Valiant	X	X	X	X	
Beta	X	X	X	X	
Reliance	X	T			WP
Edelweiss	X	T			WP
Swenson Red	X	T	T		WP
Blue Bell	X	T	T		
Worden	X	T			

NATIVE OR WILD FRUITS

Buffalo berry	X	X	X	X
Chokecherry	X	X	X	X
Elderberry	X	X	X	X
Highbush				
Cranberry	X	X	X	T
Juneberry	X	X	X	X

Information Key:

FB	Prone to Fireblight
FD	Tend to have excessive fruit drop
P	Suitable as a pollinizer variety
PM	Prone to powdery mildew
SF	Flowers often damaged by spring frosts
T	For trial on favorable sites and soils
TH	Fruit should be thinned for quality
WP	Winter protection recommended

Description of Fruit Districts

When trying new cultivars in any of the fruit districts, always plant a small trial planting to determine whether the cultivar is suitable for the area.

District 1. This area consists of the Missouri River valley and adjacent hills along the valley edge in southern South Dakota. District 1 also extends north along the Big Sioux River to include Newton Hills in Lincoln County.

District 2. It includes much of eastern South Dakota not included in District 1 and protected sites adjacent to Big Stone Lake and Lake Traverse in northern South Dakota. The southeastern part of District 2 and the Whetstone Valley in the northeast are the most favored areas of District 2.

District 2a. This district includes the Black Hills, which at select sites has good growing conditions similar to District 2. However, conditions can vary greatly from one site to another. Select cultivars on the basis of the specific site. Tree-fruit growing is not recommended above 4,000 feet.

District 3. Sites adjacent to the "breaks" along the Missouri River reservoirs provide the most favored conditions for fruit growing in District 3. Deep, well-drained soils and an ample moisture supply are important factors governing success in all parts of District 3.

District 4. Areas having the longest growing season, best soils and supplemental water supplies are the most favored for fruit production in this district.

Comments on Fruit Culture

Soils

A soil test will provide information on soil type, pH, soluble salt content and nutrient status. Most fruit crops prefer a soil with a pH near neutral (7.0) or even somewhat acidic; however, some crops will tolerate pH's that exceed 7.5. Most fruit crops also require a well-drained soil and may not grow well in a heavy, fine-textured soil. Salt content of the soil should not exceed 2.5 mmol/cm.

Cross-Pollination

Plant at least two cultivars of apple, pear, or apricots since these fruits require cross-pollination for fruit set. European (blue) plums, cherries, sand cherries, and Nanking cherries are self-fertile—only one variety needs to be planted for good fruit production. Plant hybrid plums and cherry plums with pollinizer cultivars. The native or wild fruits and the small fruits such as grapes, raspberries, currants, and gooseberries usually are self fruitful and do not require pollinizers.

Dwarf Trees

Dwarf apple trees are developed by grafting the desired cultivar on a dwarfing rootstock. Ordinarily, apple cultivars are grown on vigorous, hardy types of crabapple seedlings (standard rootstocks). These rootstocks produce vigorous, full-size trees with little dwarfing. Apples on dwarfing rootstocks often will come into fruit production earlier than a tree on a standard rootstock.

There are many different types of dwarfing rootstocks available; however, some of them are not hardy here in South Dakota. The rootstocks recommended for use in southern South Dakota are M.7 and M.26. These rootstocks dwarf 50-60% and 40-50% respectively of a standard size tree. M.7 is recommended for most varieties on well drained sites in zones 1 and 2.

Because trees on the dwarfing rootstocks are less hardy, do not plant them in the northern areas of the state. Mulch trees on these rootstocks during the winter with 4 to 8" of clean hay or another material to provide extra winter protection. Use a tree guard to protect the trunk from rodent damage. The guard should be 6-8" in diameter and extend from 1" below the soil to a height of 15". Plant trees in a sheltered location, stake in the first year of planting and use supplemental irrigation.

Red Raspberries

The canes of the summer fruiting cultivars bear fruit in the second season. The canes are biennial. The vegetative shoot (primocane) develops one year and fruits the next growing season.

The everbearing cultivars can bear fruit on the primocane in the fall of their first growing season. These canes will bear a small amount of fruit the next summer if they are not removed after the fall fruiting. However, if a summer crop is desired, plant a summer fruiting variety since fruit production will be greater. Consider planting the primocane fruiting cultivars where summer heat, wind, and winter temperatures limit raspberry production.

Growing everbearing raspberries for a fall harvest reduces disease and cold hardiness problems and can extend the life of the planting. Mow or cut the canes 1 to 2" above the ground after the plants become dormant. Remove the canes from the planting if they are not shredded. In northern areas, fall cropping can be used only with cultivars that ripen earlier than Heritage. Autumn Bliss, Redwing, Summit and FallRed ripen about 10-25 days sooner than Heritage. Nordic, an everbearer, is recommended only for summer fruiting since the fall crop ripens later than Heritage.

Black and Purple Raspberries

The culture of the black and purple raspberries is very similar. The purple raspberries are developed from crosses between the red and the black raspberry. The purple and black raspberries are not as hardy as many of the red raspberries. Plant in sheltered location. Support the canes with stakes or a trellis system to decrease wind injury, which causes cane abrasion and breakage. The canes are biennial and fruit in their second summer. Tip the primocanes of the purple and black raspberries in the summer to promote branching. When new canes are 28 to 32" tall, remove 4" of the cane terminal, tipping just above a bud. Remove fruiting canes immediately after harvest to help keep disease problems down. Dormant pruning is similar in both raspberries. Remove weak or spindly 1-year canes, keep canes 1/2" or greater in diameter. Head back strong large diameter laterals to 8 to 12" and weaker laterals to 2 to 4".

Strawberries

Junebearing strawberries fruit from June to mid-July, depending on variety. Junebearers most often are grown in a matted row 12 to 18" wide with 36 to 48" between rows.

Everbearing strawberries fruit heavily in the spring and less in the fall. Everbearers do well in a hill system with double or triple rows 8 to 12" apart and plants 8 to 12" apart within the rows. Leave 24" between sets of rows.

Day-neutral strawberries are a newer type of everbearing strawberry that will fruit from June through the first frost. However, day-neutral strawberries do not form flower buds at temperatures above 85 F and are suggested only where mulching, shading, or sprinkler irrigation can be used to provide a cool environment.

Apply a winter mulch (2-3") of weed-seed free straw, marsh hay or sudan grass when the temperature drops to 20°F. This is usually in early November after several frosts. Remove mulch in the spring when young leaves under mulch first begin to yellow.

Plums

Pollinizer cultivars are not needed for the European plums recommended here because they are self-fertile. These plums are suitable for fresh dessert, canning, jams, and jellies.

The hybrid plums were developed from crosses between the native wild plums and oriental cultivars. They are self-unfruitful and require a special pollinizer variety. These plums are very hardy. The fruit is larger than the cherry-plum and is suitable for fresh dessert, jams and jellies.

The cherry-plums were developed from crosses of the sand-cherry (*Prunus besseyi*) with plums, tree cherries or both. Cherry-plums are self-unfruitful and require a special pollinizer variety. They are dwarf or bush-like and the fruit is the size of a cherry. The fruit is suitable for juice, jams, and jellies. The cherry plum is a good replacement for sour cherries in zones 3-4.

Native Fruits

Cultivars with improved fruit quality are available for many of the native fruits. Check your nursery catalogues. Except for Buffalo berry, the native fruits are self-fertile. Buffalo berry requires both male and female plants for fruit production, one male to five or six female plants. The fruit is tart and ripens in August. Fruit is suitable for drying, sauces, jellies, and preserves.

Chokecherry fruit ripens midsummer and is suitable for jelly. Chokecherry tends to sucker, so remove suckers if training as a small tree.

Juneberry (Serviceberry, Saskatoon Berry) fruit is suitable fresh, canned, or frozen for pies, jellies, jams, preserves, and syrup. The shrub begins to fruit 2 to 4 years after planting. The fruit ripens in June.

American highbush cranberry (*Viburnum trilobum*) is suitable for jelly, pies, and sauces (remove seeds for sauces). This shrub begins to fruit 3 to 4 years after planting. Fruit ripens in late August and into September. Do not confuse this species with the European highbush cranberry (*Viburnum opulus*), which has bitter, inedible fruit, or with the true cranberry (*Vaccinium macrocarpon*), which grows in acidic boggy soils.

Elderberry fruit is suitable for sauces, juice, wine or combined with other fruits for pies. Flowers are used for wine, vinegar or flavoring. Fruit ripens mid-August to September (depending on location). Fruit production is greatest on two-year-old canes. Dormant prune, leaving equal numbers of 1-, 2-, and 3-year-old canes, and remove canes older than 3 years.