

Apple Production in the Western United States

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The Pacific Coast and Rocky Mountain states produce over 75 million bushels of apples annually, or about 46% of the U.S. crop. As reported by the USDA Statistical Reporting Service, seven states in the west are commercial apple-producing states, and seven varieties account for 97% of western apple production.

Table 1 indicates the production of each state and its relative percentage of the U.S. crop. Table 2 shows the production by variety with the importance of each variety in relation to total western production and to the U.S. production of that given variety. Table 3 illustrates the production of the seven major varieties within the seven producing states. Table 4 indicates the utilization (fresh and processed) of western-grown apples by state.

Washington produces 71% of the western U.S. apple crop and nearly one-third of the total U.S. crop. During recent years Washington has produced annual crops averaging 53,570,000 bushels.² The major producing areas are (1) Chelan, Okanogan and Douglas counties in north central Washington, with Wenatchee as the market center; (2) Yakima and Benton counties of south central Washington, with Yakima as the market center; and (3) a small but growing area of the Columbia Basin, primarily in the Quincy and Othello areas.

Delicious and Golden Delicious account for 91% of Washington apple production. Other major varieties in order of production include Winesap, Rome Beauty and Jonathan.

California produces 11,340,000 bushels annually, about 15% of the western U.S. production. California's major apple-producing areas are near Watsonville in Santa Cruz County, which is the major Yellow Newtown producing region of the U.S., and Sebastopol in Sonoma County which produces nearly all commercial Gravensteins grown in the U.S. Other areas include several counties in the Sierra foothills and certain coastal valleys.

The major California varieties, in order of production, are Delicious, Yellow Newtown, Gravenstein, Golden Delicious, Rome Beauty and Jonathan.

Oregon's annual production is 3,800,000 bushels. The Hood River Valley is the major producing area, with lesser production near Milton-Freewater in northeastern Oregon, and in the Willamette Valley. Delicious, Yellow Newtown and Golden Delicious are the main varieties produced in Oregon.

Idaho produces 2,620,000 bushels as an annual average. Most of the

Table 1. Western U.S. apple production* 1975-77.

	bushels × 1000	% of U.S.
Washington	53,570	32.6
California	11,340	6.9
Oregon	3,800	2.3
Idaho	2,620	1.6
Colorado	2,090	1.2
Utah	1,070	0.6
New Mexico	640	0.3
Total west	75,150	46.2

*Commercial apple states in western U.S. as reported by the U.S. Statistical Reporting Service.

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²Based on 42 pound equivalents as reported by the USDA Crop Reporting Board.

Table 2. Apple varieties of the western United States, 1975-77.

	BU × 1000	% of total western U.S. apple production	% of U.S. production for the variety
Delicious		56.3	71.1
Golden Delicious		22.6	61.2
Yellow Newton		4.7	100.0
Rome Beauty		4.5	27.4
Winesap		4.2	77.4
Gravenstein		2.8	100.0
Jonathan		2.4	20.7
Misc. varieties		2.5	
Total*			

*Commercial production as reported by the U.S. Statistical Reporting Service.

production is in western Idaho near Caldwell, Payette and Emmett. Delicious, Rome Beauty, Jonathan and Golden Delicious account for nearly all of Idaho's production.

Colorado produces 2,090,000 bushels annually, primarily in the western part of the state near Delta and Grand Junction. The major varieties in Colorado are Delicious, Jonathan, Rome Beauty and Golden Delicious.

Utah has had an erratic history of apple production, principally due to spring freezes. Its recent annual average production has been 1,070,000 bushels. Nearly all of Utah's apples are grown along the western slopes of the Wasatch mountains, primarily in Utah County. Its major varieties are Delicious, Rome Beauty, Jonathan and Golden Delicious.

New Mexico produces average apple crops of 640,000 bushels. Farmington, in the northwestern corner of the state, is the main producing area. Most of the state's production is Delicious, Rome Beauty, Golden Delicious and Jonathan.

Most of the western U.S. apples are produced in arid or semi-arid areas having high light intensity, low humidity and requiring regular irrigation throughout the growing season.

Elevations vary from near sea level in Oregon and California to 6,000 feet in Colorado.

Varieties

Delicious now accounts for 56% of the total apple production in the western United States, and western-grown Delicious make up 71% of the total U.S. Delicious crop (Table 2). A high percentage of Delicious grown today are super-red strains. During the past 10 years or so spur-types have dominated new plantings. Older non-spur strains are gradually being phased out, although substantial acreages of newer, super-red, non-spur strains are still being planted.

Golden Delicious production makes up nearly 23% of the western U.S. apple crop, and western-grown Golden account for 61% of the U.S. Golden crop, thus 79% of the apples grown in the western states of the U.S. are Delicious or Golden Delicious.

As shown in Table 2, the other major varieties grown in the western U.S. are Yellow Newtown, Rome Beauty, Winesap, Gravenstein and Jonathan. The combined production of these five varieties is slightly under 14 million bushels.

Nearly all commercial production of Yellow Newtown is in California

and Oregon. Commercial Gravenstein production is almost exclusively in California. Washington produces most of the western-grown Winesaps, whereas Rome Beauty and Jonathan are popular varieties throughout the western states (Table 3).

A large number of miscellaneous and minor varieties are produced in limited quantities throughout the west. Their combined production amounts to less than 2 million bushels, but they have some impact on certain local or seasonal markets. The more important of these include Granny Smith, Tydeman Red, Spartan and Lodi.

Marketing

Over two-thirds of western-grown apples are marketed fresh. The percentages of the 1975-77 crops sold fresh by state were as follows: Washington 77, California 22, Oregon 72, Idaho 70, Colorado 67, Utah 75 and New Mexico 96. Washington accounted for 81% of the western states' fresh marketed apples, and Delicious and Golden Delicious dominated fresh market sales.

As shown in Table 4, juice, including cider, jam, vinegar, wine and frozen, accounted for 58% of the total processed tonnage. Canned and con-

Table 3. Western U.S. apple production, major varieties by state, 1975-77 average.

State	BUSHEL \times 1000						
	Delicious	Golden Delicious	Yellow Newtown	Rome Beauty	Winesap	Gravenstein	Jonathan
Washington	34,180	14,843		854	2,925		286
California	2,936	1,015	2,579	1,023	119	2,151	571
Oregon	2,087	488	953	48			
Idaho	1,446	213		748			258
Colorado	714	274		349	74		467
Utah	601	74		201	15		178
New Mexico	310	79		166			41
Total west	42,274	16,986	3,532	3,389	3,133	2,151	1,801

Table 4. Utilization of western U.S. apple crop, average of 1975-77 in million pounds.

	Total marketed	Fresh	Total processed	Canned	Juice ¹	Dried
Washington						
California						
Oregon						
Idaho						
Colorado				10		
Utah						
New Mexico						
Total				207		195
% of total				7		6

¹Includes cider, jam, vinegar, wine and frozen.

centrate juices made up the major tonnage of the above items. Canned and dried apples were about equal in processed tonnage of western-grown apples.

Washington and California accounted for nearly 89% of total processed apples in the west. Even though nearly all Washington apples are grown for fresh market, the warehouse sort-outs from the fresh packing lines make Washington the leading processing state in the west and second only to New York as a national processing state. California is the only state in the west where processing is more important than fresh market. As indicated in Table 4, nearly 78% of California's crop is processed. This is due in part to California's high production of Gravenstein and Yellow Newtown. The relative tonnage of these varieties for processing is much greater than for fresh market.

Western-grown apples are physically handled and marketed by a large number of diverse organizations and sales agencies. These range from small grower-owned warehouses to multi-million bushel capacity cooperatives or private packers. The majority of northwest apples for fresh market are handled, stored, packed and marketed by off-farm organizations. Most of these packing organizations handle from 200,000 to 1,500,000 packed boxes. In Washington, cooperatives handle about half of the total apple crop. Approximately half of Washington's apple crop is stored in controlled atmosphere (CA) which permits year-around marketing of Delicious and Golden Delicious. Some federated sales cooperatives may handle sales of several handling-packing-storage cooperatives. As an example, the Wenoka Federation of Wenatchee is the cooperative sales agency for nine cooperatives in north central Washington. Its sales volume for the 1977 crop exceeded 42 million dollars.

Processing is done by corporate and cooperative organizations. Tree Top, the largest apple juice organization in the U.S., is a grower-owned cooperative in Washington state.

Production Trends

Apple production in the western states has nearly doubled in the past 15 years, from 39 million bushels in 1960-64 to 75 million during the most recent years, 1975-77. By comparison, the remainder of the U.S. increased only 4% during the same 15 years, from 86 million bushels in 1960-64 to 89 million in 1975-77.

As shown in Figure 1, most of this increase has been in Washington which had a 124% increase from an average annual production of 23,900,000 bushels during 1960-64 to 53,570,000 during 1975-77. California has remained fairly stable, having an average annual production of 10,170,000 bushels during 1960-64 and 11,340,000 in 1975-77. The combined production of the other western states increased from 5,500,000 bushels in 1960-64 to 10,200,000 in 1975-77. The percentage increases of these states

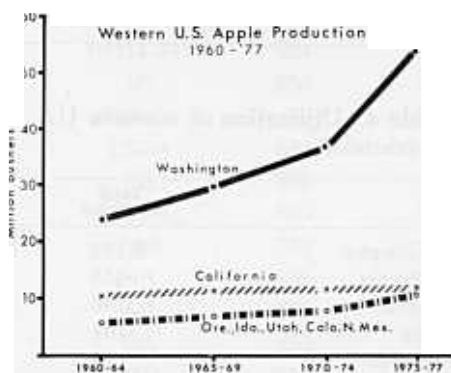


Fig. 1. Apple production in the western U.S. by producing states. Shown as 5-year averages for 1960-74, and 3-year average for 1975-77. Lower line represents combined production for 5 states, Oregon, Idaho, Utah, Colorado and New Mexico.

during the 1960-64 to 1975-77 period of time was Utah 174, Idaho 136, Oregon 84, Colorado 87 and New Mexico 5.

Both Delicious and Golden Delicious had phenomenal production increases during the 1960s and 1970s (Fig. 2). Delicious production in the west increased from 20,466,000 bushels during 1960-65 to 42,310,000 during 1975-77. During the same time Golden Delicious production quadrupled from 3,750,000 bushels in 1960-65 to 16,990,000 in 1975-77. Most of the production increase of Delicious and Golden Delicious has been in Washington state which now produces 81% of western-grown Delicious and 87% of western-grown Golden Delicious.

Present production and new plantings indicate the western U.S. will continue its upward trend in production of apples. At least during the next 10 years, most of the increase will be in Washington state with the Delicious variety. Fig. 2 shows the substantial increases in production of Delicious and Golden Delicious dur-

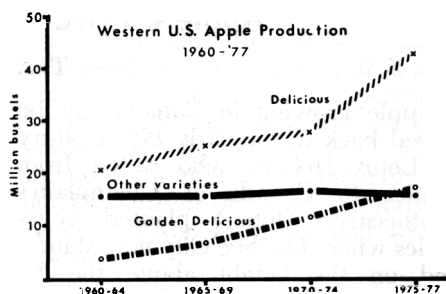


Fig. 2. Apple production in the western U.S. by variety. Shown as 5-year averages for 1960-74, and 3-year averages for 1975-77. Solid line includes combined production of all varieties except Delicious and Golden Delicious.

ing 1960-77, compared to zero growth, as an average, for all other varieties. Present plantings indicate a continued growth for Delicious, a slowing down for Golden Delicious, and a significant interest in Granny Smith. Some industry observers in Washington feel Granny might eventually replace Golden Delicious as Washington's number two variety. Only time will tell.

E. M. Meader Honored

The North American Fruit Explorers, an association of fruit gardening enthusiasts, have honored Professor E. M. Meader for his outstanding achievements in the field of pomology by presenting the Milo D. Gibson award at their 1976 annual meeting at the Fruit Testing Station, Geneva,

New York. The variety releases of Professor Meader include: 'Reliance' peach, 'Mericrest' nectarine, 'Fall red' raspberry, 'Fallgold' raspberry, 'AugustRed' raspberry, 'Meader' blueberry, and 'Meader' persimmon. He has also introduced numerous vegetable varieties.