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## Vegetables and Pulses Outlook: Special Article

# Longrun Outlook: Projections for Vegetable and Pulse Markets<sup>1</sup>

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The farm value of vegetables and pulses (including melons) is projected at \$25.8 billion in 2024, up from \$21.7 billion in 2014—an average growth rate of 1.8 percent per year. Contributing to this \$4-billion increase over the next decade are \$1.9 billion from fresh-market vegetables, \$400 million from processing vegetables, \$1 billion from potatoes, more than \$500 million from pulses, and the rest from sweet potatoes and mushrooms. Vegetable farm receipts as a share of total U.S. horticultural farm receipts will remain around 36 percent by the end of the coming decade, compared to 46 percent for fruits and nuts, and 18 percent for nursery and other specialty crops.

The average farm value of domestic vegetable production amounted to \$4,303 per acre in 2014. This value is projected to expand at a 1.6-percent annual pace over the next 10 years, reaching \$5,035 per acre in 2024. Prices received by vegetable crop producers are expected to rise 1.2 percent annually on average through 2024, which is less than the general consumer inflation rate. This reflects the role of vegetable imports in keeping the domestic supply of vegetables growing at a 1.2-percent annual rate. Imports also help hold vegetable consumption at around 415 pounds per capita in the projection period.

### *Production Projected to Exceed 139 Billion Pounds in a Decade*

U.S. production of all vegetables and pulses (including melons), which totaled 131.3 billion pounds in 2014, is projected to reach 139 billion pounds in 2024—an average 0.6 percent annual increase. This growth is based on a 0.4 percent rise in yield (pounds per acre) and a 0.2 percent expansion of production acres per year, which is projected to be 5.13 million acres by 2024, up from 5.04 million acres in 2014. While production of fresh-market vegetables is anticipated to grow by only 0.1 percent per year, processing vegetables grow at a 0.8-percent pace, potatoes at 0.3 percent, and pulses at 3.6 percent annually.

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Table 1--Long-term projections of horticulture production and crop value, 2014-24

Crop group	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
-- 1000 acres --											
Production area:											
Fruits, nuts, vegetables	9,240	9,249	9,268	9,289	9,311	9,334	9,359	9,386	9,414	9,444	9,475
Fruits and nuts	4,202	4,213	4,225	4,238	4,252	4,266	4,281	4,296	4,313	4,330	4,347
Vegetables	5,038	5,036	5,043	5,051	5,059	5,069	5,079	5,090	5,101	5,114	5,128
Farm production: -- Billion pounds --											
Fruits and tree nuts	61.7	62.5	62.8	63.0	63.2	63.5	63.8	64.0	64.3	64.6	64.9
All vegetables	131.3	132.1	132.8	133.6	134.4	135.1	135.9	136.8	137.6	138.4	139.3
Fresh market	42.6	42.7	42.7	42.8	42.8	42.9	42.9	42.9	43.0	43.0	43.1
Processing	35.7	36.0	36.3	36.6	36.9	37.2	37.5	37.8	38.1	38.4	38.7
Potatoes	44.3	44.4	44.5	44.7	44.8	44.9	45.1	45.2	45.4	45.5	45.6
Pulses <sup>1</sup>	5.0	5.1	5.3	5.5	5.7	5.9	6.1	6.3	6.6	6.8	7.1
Farm value: -- Billion \$ --											
Fruits and tree nuts	25.5	26.2	26.8	27.5	28.3	29.0	29.8	30.6	31.4	32.2	33.1
All vegetables <sup>2</sup>	21.7	22.1	22.5	22.8	23.2	23.7	24.1	24.5	24.9	25.4	25.8
Fresh market	12.4	12.6	12.8	13.0	13.1	13.3	13.5	13.7	13.9	14.1	14.3
Processing	1.9	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.2	2.3	2.3
Potatoes	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1
Pulses	1.3	1.4	1.4	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.8
Prices received by farmers 2011=100											
Fruits, nuts, vegetables	114.9	116.5	118.5	120.5	122.6	124.7	126.8	128.9	131.1	133.3	135.5
Fruits and tree nuts	125.0	126.6	129.4	132.3	135.2	138.3	141.3	144.4	147.6	150.8	154.1
Vegetables	103.0	104.2	105.5	106.7	108.0	109.2	110.5	111.8	113.0	114.3	115.6

<sup>1</sup> Includes dry beans, dry edible peas, and lentils.

<sup>2</sup> Estimated from production value or farm cash receipts.

Sources: USDA, Economic Research Service.

The faster projected production pace of processing vegetables (including pulses) than the fresh-market crop is partly due to the greater export demand for processed vegetables, including pulses, over the past decade. Also, exports of processed vegetables in the past decade rose by nearly 10 percent per year and exports of pulses grew faster at 13 percent since 2004. By contrast, exports of fresh-market vegetables expanded 6 percent per year in the same period.

The 0.1-percent annual production growth outlook for fresh-market vegetables is partly due to an uneven growth pattern in the past decade and the current severe drought in the San Joaquin Valley of California. While other states such as Arizona and Florida may boost fresh-market production to supplant crop declines in California, increased vegetable production in greenhouses as well as more imports from Mexico and Canada will likely limit effects of the production disruption and price volatility in California. Indeed, the share of imports in domestic vegetable consumption is expected to exceed 26 percent in 10 years, up from 19 percent in 2014.

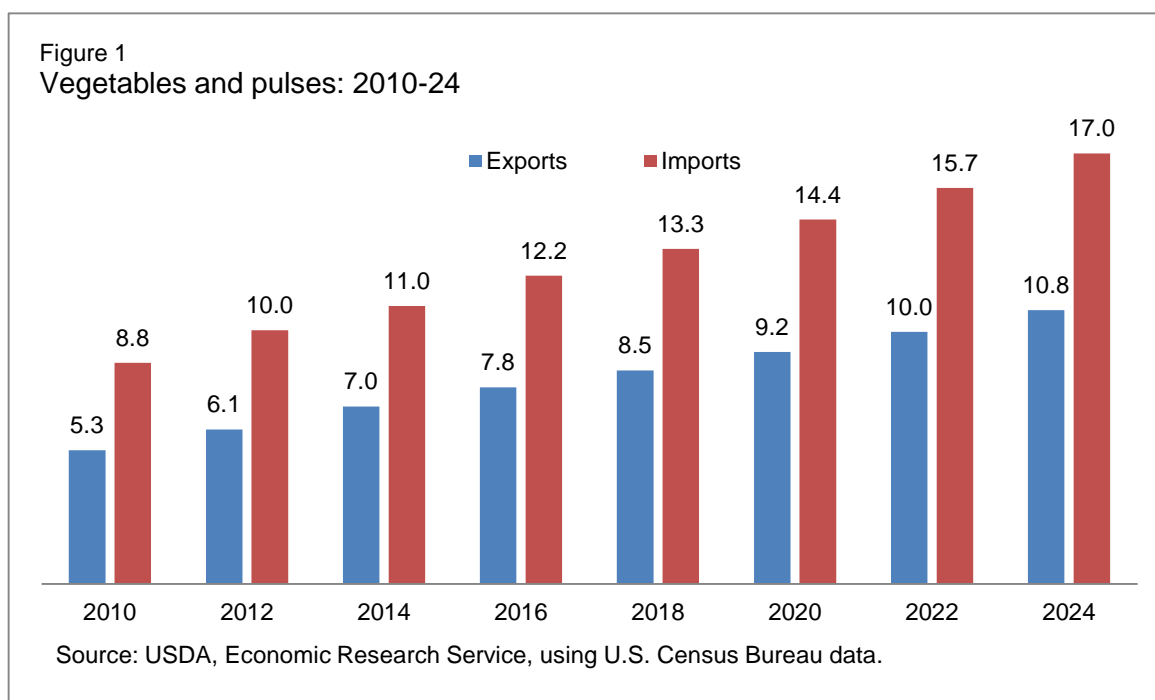
### ***Per Capita Consumption Averages 415 Pounds Through 2024***

The domestic supply of vegetables, melons, and pulses is projected to reach 177 billion pounds in 2024, up from 157 billion pounds in 2014, representing a 1.2-percent annual gain. After accounting for net imports and population growth, per capita consumption of vegetables will range between 414 and 416 pounds from 2015 to 2024. Domestic consumption of vegetables is expected to increase from 134 billion pounds in 2014 to 143 billion pounds in 2024—a 0.7 percent annual pace. Since the U.S. population is also anticipated to increase at this same rate, domestic vegetable consumption is projected to average 415 pounds per capita over the next 10 years.

## Projected Vegetable Imports Slightly Outpace Exports

Although U.S. vegetable exports grew at a faster rate than imports over the past decade in volume and value terms. The value of imports is projected to increase at a 4.5-percent rate through 2024 as compared to 4.4 percent for exports. This small difference is attributed in part to a larger domestic consumption pace of 0.7 percent versus a production rate of 0.6 percent per year through 2024. The import share of vegetable consumption is also larger than the export share of vegetable production—26 versus 24 percent, respectively, in 2024. The strength of the U.S. dollar in 2015 likely to continue into 2016 will help boost imports and discourage exports initially in the decade ahead.

U.S. imports of vegetables are projected to exceed \$17 billion in 2024, up from \$11 billion in 2014, led by fresh vegetables. Exports, which are expected in the initial years to be affected by California's current drought and the dollar's higher value, are forecast at \$10.8 billion in 2024, up from \$7 billion in 2014. The estimated export value of processed vegetables was about twice that of fresh vegetables in 2014. While estimated exports of processed vegetables will outpace fresh vegetable exports in the next ten years as they have in the past decade (in value and volume terms), imports of fresh vegetables will increase faster than imported processed vegetables. U.S. import demand for fresh vegetables is driven to a large extent by off-season consumption during the cold-weather months, when production in the United States is seasonally low.



### For More Information

Vegetable supply and use projections and additional information about the long-term outlook for agricultural commodities and trade are reported in:

*USDA Agricultural Projections to 2024*, OCE-2015-1, February 2015 <http://www.ers.usda.gov/publications/oce-usda-agricultural-projections/oce151.aspx>