



The Contribution of the Mint Industry to Washington's Economy

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Mint Industry

- \$69.7 million production
- 1,121 jobs
- \$46.7 million in wages
- \$57.7 million value added
- \$150.9 million total economic impact

Washington State produces a number of high-value specialty crops that include apples, cherries, pears, hops and mint, among others. The state is the top producer of apples and pears, and sweet cherries in the country. Hops are an important ingredient in beer making and Washington accounts for 79% of the country's total hops production (USDA NASS, 2013a). The state is also the leader in all mint production, accounting for 40% of total U.S. production, followed by Oregon and Idaho. Washington produces 79% of the total U.S. spearmint oil and 26% of the total U.S. peppermint oil as of 2011 (USDA NASS, 2013b). Figure 1 shows the production of the aforementioned crops in the state relative to national production. The objective of this publication is to provide an overview of the economic contribution of the mint industry on the economy of Washington State.

Mint production and consumption

Mint is a perennial crop grown primarily for the essential oils produced from the plant's

leaves. There are two species of mint commercially grown in the U.S.: peppermint and two cultivars of spearmint — Native spearmint and Scotch spearmint. Mint oils have different uses. Forty five percent is used as flavoring to chewing gum, another 45% in dental hygiene products, and 10% is used in medicinal products, confections, and aroma therapy products (Mint Industry Research Council, 2013).

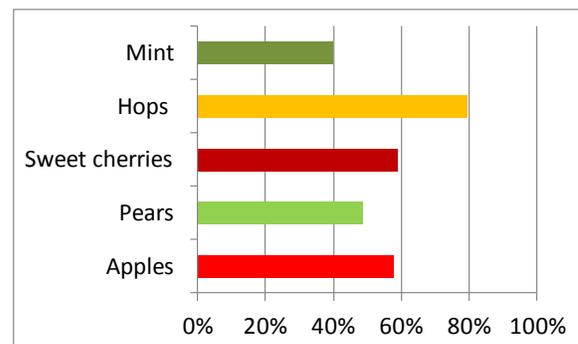


Figure 1. Washington production of selected specialty crops as a percentage of U.S. total.

Source: USDA NASS (2013b).

The Pacific Northwest region (Idaho, Oregon and Washington) accounts for 76% of the U.S. total production area of mint and 84% of the U.S. mint oil production as of 2011. In this period, the region had 56,000 acres of peppermint and 13,300 acres of spearmint in production that yielded 5.46 million pounds and 2.01 million pounds of oil, respectively (USDA NASS 2013b). Figure 2 shows the

production of peppermint and spearmint oils by state.

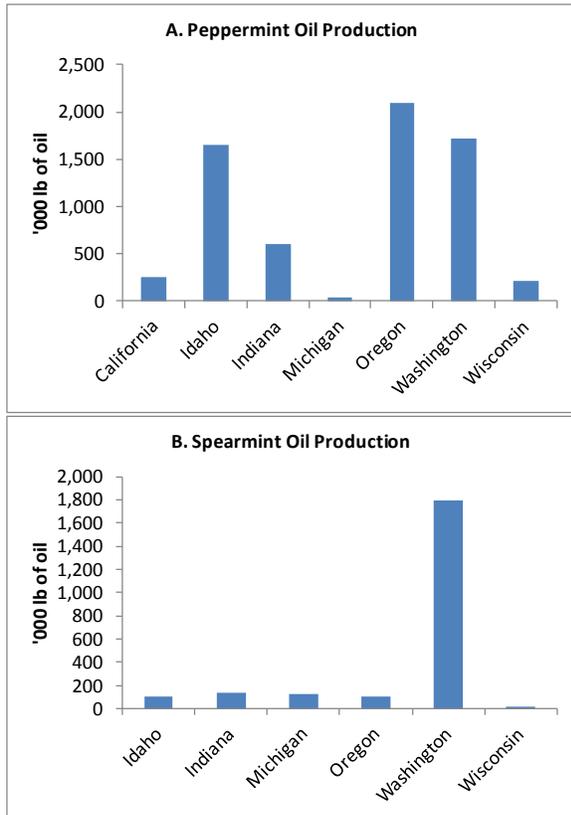


Figure 2. Production of peppermint oil (A) and spearmint oil (B) by state, 2011.
Source: USDA NASS (2013b).

Spearmint grown in the Pacific Northwest follows a marketing order that stipulates the producer's allotment base and regulates the amount of oil a producer may sell (Far West Spearmint Oil, 2013). The allotment base is determined by each producer's sales history during a set period before the order was enacted in 1980 and is transferable between producers. Each year, the Committee of the marketing order estimates the demand for spearmint oil for the coming marketing year (June 1-May 31), and allocates the expected quantity demanded to each producer's allotment base. If a producer has more spearmint oil than his allotment for that year, the oil goes into the Reserve Pool. More information about the marketing order is provided in the Far West Spearmint Oil website. (www.farwestspearmint.org)

Spearmint producers in the Midwest, on the other hand, are not subject to a marketing order. Peppermint also has no marketing order (USDA AMS, 2013).

Washington mint industry's total value of production as of 2011 is about \$69.7 million (in 2012 dollars). Washington is the nation's leading producer of spearmint oil, and second largest producer of peppermint oil in the nation. Additionally, Washington mint growers have the highest yields per acre nationally, with 104 lbs/acre of peppermint oil and 155 lbs/acre of spearmint oil as of 2011 (USDA NASS 2013a, 2013b). Between 1997 and 2012, the general trend in the per-acre yields has been relatively steady for spearmint oil, but increasing for peppermint oil. The revenue per acre has been increasing for both peppermint and spearmint growers over the same period (Figure 3).

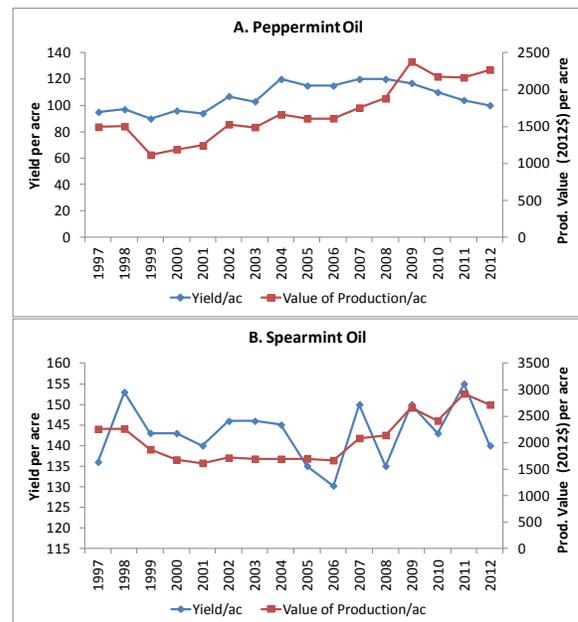


Figure 3. Yield and value of production per acre of peppermint oil (A) and spearmint oil (B) in Washington State, 1997-2012.
Source: USDA NASS (2013b).

Mint production is concentrated in the central part of the state, east of the Cascades – Adams, Benton, Franklin, Grant, Kittitas and Yakima counties (USDA NASS 2007). Because these areas are semi-arid, irrigation is

required for optimum production of mint. Peppermint and spearmint require similar production practices and some growers produce both types. Farm acreage is also relatively large so field operations have been mechanized. As of the 2007 Agricultural Census, there are 48 farms and 16,424 acres of peppermint or about 342 acres/farm; and 81 farms and 12,817 acres of spearmint or about 158 acres/farm.

Economic contribution

The IMPLAN software and 2011 IMPLAN model for Washington are used (the latest available database for the state) to estimate the mint industry's economic contributions in Washington. Data on employment, crop price and crop yield are obtained from USDA NASS. Although some data are available for 2012, we collected data for 2011 to be consistent with IMPLAN. The production costs for peppermint and spearmint under center pivot irrigation are obtained from the latest enterprise budgets (Gallardo, 2011; Galinato and Gallardo, 2012).

The total contribution of mint production in Washington in terms of output or revenue is about \$150.9 million (Table 1). Other impacts of the industry include: 1,121 full-time jobs;

\$46.7 million labor income; and \$57.7 million value added. Total impact is the sum of the direct, indirect and induced effects. Direct effects are the immediate effects associated with the production of mint. Indirect effects represent inter-industry transactions, i.e., demand for services such as harvest contractors, gas distributors, fertilizer sales, wholesale and retail sales and banking services. Induced effects represent household consumption expenditures of employees in the directly and indirectly affected industry sectors; for example, expenditures on real estate, healthcare services, wholesale and retail merchandise, food services, banking services and utilities.

Indirect effects account for the largest portion of the economic impact in three categories — 74% of employment, 62% of labor income, and 53% of value-added. Indirect employment effect is greater than the direct employment effect because many of the field operations are done by contractors or custom work. In terms of the output category, it is accounted by 46% of direct effects, 34% of indirect effects, and 20% of induced effects.

Table 1. Economic contributions of the mint industry by type of impacts.

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	73	\$7,803,942	\$8,752,917	\$69,527,186
Indirect Effect	833	\$28,895,589	\$30,728,041	\$51,156,188
Induced Effect	216	\$10,020,184	\$18,261,550	\$30,253,273
Total Effect	1,121	\$46,719,715	\$57,742,508	\$150,936,646

Definition (Source: MIG, 2013):

¹Employment = number of jobs.

²Labor income = employee compensation+ proprietor income.

³Value added = employee compensation + proprietor income + other property income + indirect business taxes.

⁴Output = intermediate expenditures + value added.

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