

CULTIVATION SNAPSHOT: U.S. Wholesale Marijuana Prices and Supply



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CULTIVATION SNAPSHOT:

U.S. WHOLESALE MARIJUANA PRICES AND SUPPLY



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MJBizDaily
Cultivation Reporter

Welcome to the first edition of the Cultivation Snapshot: U.S. Wholesale Marijuana Prices and Supply produced by the research team at Marijuana Business Daily.

Wholesale cannabis prices and supply can vary widely state to state, which shouldn't come as a surprise to any savvy cannabis industry watcher. Each state regulatory body reinvented its own wheel when coming up with rules, and every cultivation and retail climate is unique, as well.

But there are similarities to be explored when comparing markets. For instance, the more mature programs, such as Washington and Colorado, have experienced steady declines in prices for wholesale cannabis flower.

Those like Oregon with long-entrenched black markets and plentiful outdoor farms suffer from oversupply, driving prices down. Contrast that with relatively new programs, such as Nevada and Alaska, which are reporting strong wholesale markets – for the time being.

Then there's California, which is its own ever-changing, massively complicated behemoth.

This report provides information on and analysis of the wholesale cannabis supply and price situation in:

- Alaska
- California
- Colorado
- Nevada
- Oregon
- Washington state
- Medical marijuana markets (in summary)

Weekly Wholesale Cannabis U.S. Spot Index: May 2017 Through April 2018



Source: Cannabis Benchmarks®, a division of New Leaf Data Services
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On the national level, wholesale cannabis prices have steadily slid downward since last year, from more than \$1,600 a pound to just over \$1,300 a pound, according to Cannabis Benchmarks, which gathers wholesale spot pricing data for the marijuana industry. Prices tend to dip most in the fall, when outdoor cannabis harvests flood the market, pushing supply up. As more businesses are licensed and cultivators build out their facilities and become more efficient, this trend line is likely to continue on the same downward trajectory.

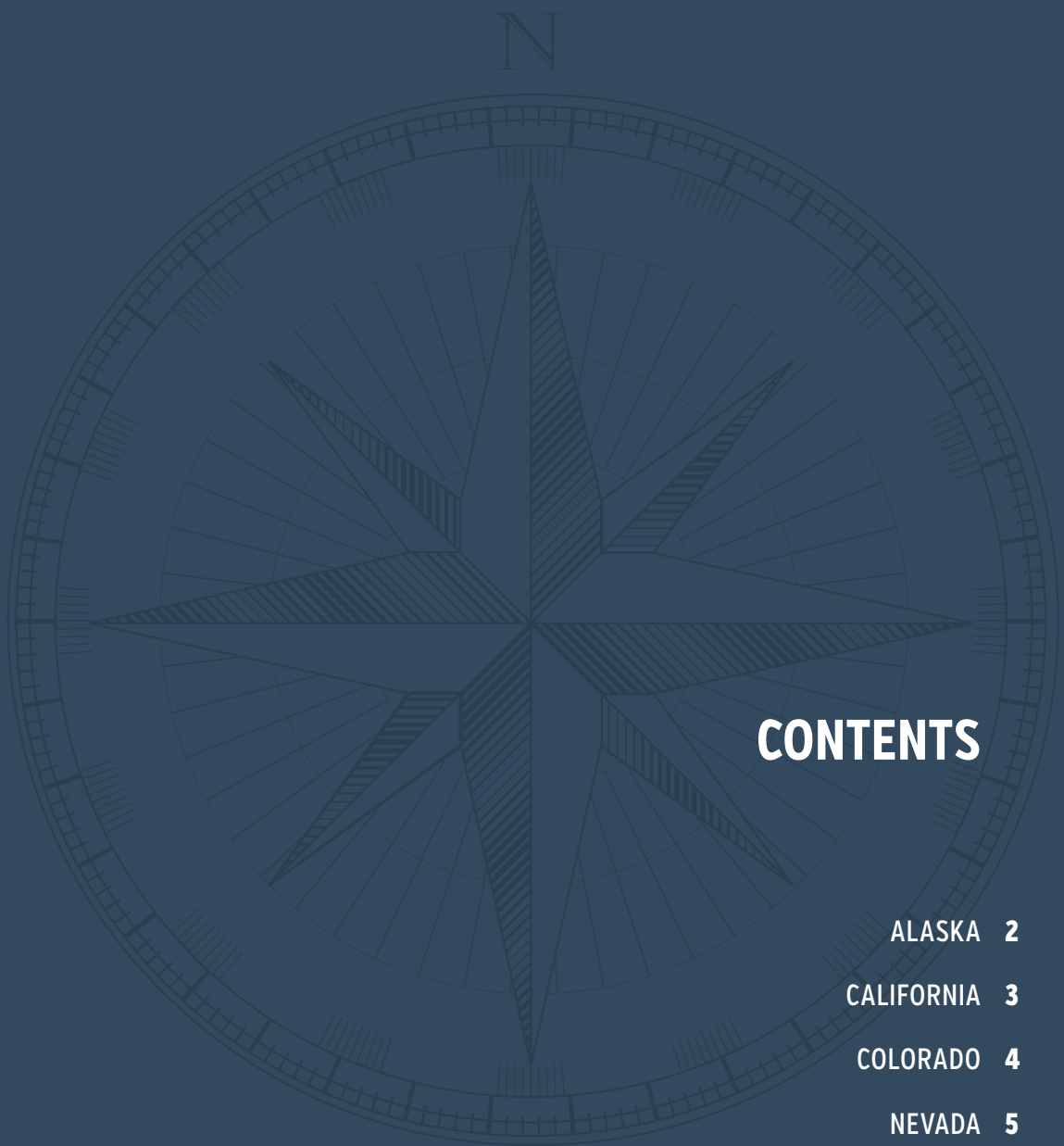
The information in this report is derived from dozens of interviews with growers and retailers in the abovementioned markets. Hard data is difficult to obtain in today's federally illegal cannabis industry, making the most reliable source the men and women in the field. The data presented are ranges, not averages, of what the markets are experiencing.

Where available, we provide a year-over-year comparison of prices. This data was not available in for states where the recreational market began in the last year.

If you have any questions or want to provide feedback, please contact me at barts@mjbizdaily.com.

Best regards,

Bart Schaneman
MJBizDaily Cultivation Reporter



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ALASKA



Like prices for other consumer goods, prices for cannabis in Alaska run higher than other states with recreational cannabis markets. The wholesale supply has taken time to develop, and the state has a restrictive outdoor growing climate.

Voters approved a ballot initiative in 2014 for adult-use marijuana, leapfrogging the traditional route of setting up a medical cannabis market first. Medical use was allowed, but commercial cultivation and sales weren't. Recreational sales began at the end of 2016, and demand quickly outstripped supply.

During the first year of sales, cannabis business owners saw a spike in demand during summer tourist season – when cruise ships unloaded visitors by the thousands and scores more drove up from Canada and the lower 48 states in RVs to take in Alaska's natural beauty, wildlife and recreational cannabis – which drove up prices. But supply has been on a steady uptick since then, slowly decreasing prices.

SUPPLY

When sales began in Alaska, retailers didn't have enough cannabis to keep shelves stocked. Some were forced to close in the first few months while they awaited the next shipment.

But more cultivators have come online and new licenses are consistently being granted by the Marijuana Control Board. In addition, growers who got an early start are likely becoming more efficient with their production process and building out their facilities to full capacity.

Retailers are breathing easier now that the supply has become more reliable and prices are starting to come down on the wholesale side.

ALASKA CULTIVATION SNAPSHOT

Licensed recreational cultivators:	Standard: 73 Limited: 44
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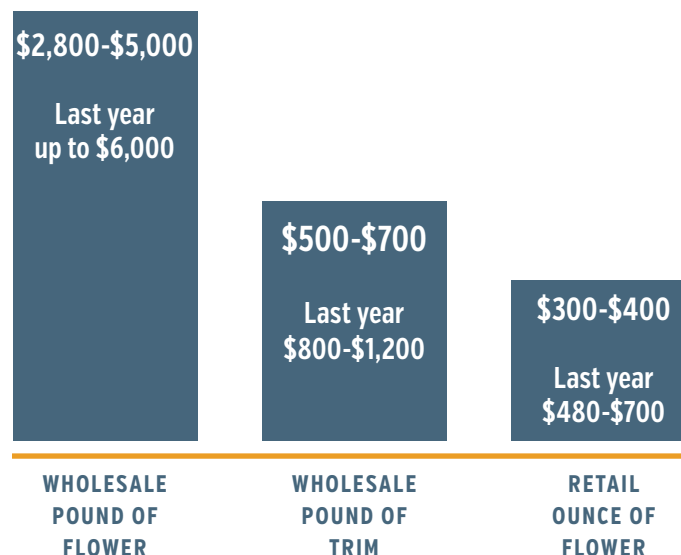
Licensed recreational retailers:	55
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Estimated recreational retail sales:	\$100 million for latest 12 months
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OUTLOOK

Prices in Alaska should continue to fall as more growers are licensed, but the state's current tax structure on wholesale cannabis will create a floor on how low they can go. Cultivators pay a flat tax of \$50 an ounce – or \$800 a pound – on cannabis to be sold to retailers. Growers are calling for a change to a typical sales tax to be levied on the retail side.

PRICES BY PRODUCT



CALIFORNIA



California has a long-running medical marijuana program but only began its regulated adult-use cannabis sales on Jan. 1, 2018. It's too early to know exactly how pricing and supply will play out, but the state's market is going to be a behemoth – the largest market in the world – once everything gets up and running.

For the nascent legal recreational market, the transition period of temporary licensure ends in July. Once that's over we expect to see a more normal economic structure. Much of the current business activity is happening in a climate that might be best described as in flux. Many retailers still buy from the gray or black markets for the time being. Seed-to-sale tracking and lab testing begins this summer, so characterizing the wholesale price and supply scene is done with the understanding that the market will undergo major changes in July.

SUPPLY

A tiny percentage of legacy businesses have secured licenses so far, therefore purchasers who are unwilling to buy from the gray or black markets likely will find a constrained supply. Under current law, firms with temporary licenses can only do business with other firms with temporary licenses, which makes for a small economy.

There's a huge amount of supply in California, particularly from farms in the northern region of the state, but many farmers aren't selling to the regulated adult-use market. Companies skirting the rules and looking to buy wholesale cannabis find supply to be plentiful – and cheap. This will become more difficult once traceability and testing rules kick in this summer.

CALIFORNIA CULTIVATION SNAPSHOT

Temporary licensed recreational cultivators: **3,191**

Temporary licensed recreational retailers:
[including microbusinesses] **381**

Recreational retail sales estimates: **\$339 million**
in sales in first two months

WHOLESALE PRICE CHANGE, APRIL 2017-2018 (\$/LB)

-19%

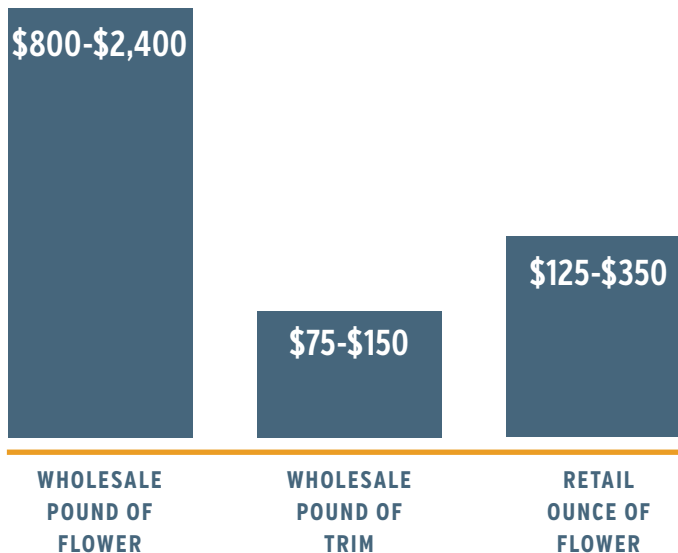
Source: Cannabis Benchmarks
Data includes both recreational and medical markets

OUTLOOK

When the transition period ends in July, licensed businesses will only be able to buy and sell lab-tested cannabis that's been entered into the seed-to-sale traceability system. Retailers and processors are expected to stock up on cannabis before that to help alleviate pain during the transition.

The end of the temporary period will force compliance and likely cause a dip in supply, leading to higher wholesale and retail prices. The regulations, particularly the lab-testing requirements, are predicted to create bottlenecks in product availability, leading to price inflation. Once the kinks are ironed out and supply stabilizes, prices should begin to trend back downward.

PRICES BY PRODUCT



COLORADO



Colorado is a perfect example of a state market that proves cannabis is headed toward commoditization. Voters passed Amendment 64 in 2012 and began the first legal recreational cannabis sales in the United States in January 2014. Colorado's supply since then has built up over time, driving prices down.

Colorado doesn't have nearly as many sizable outdoor grows as the Pacific Northwest, so the state isn't quite as oversupplied. But more greenhouse and outdoor operations are developing in southern Colorado, and prices are responding to the additional supply.

SUPPLY

Colorado has a robust industry with seasoned growers who have built out their facilities to capacity and perfected their growing practices. The state's indoor growers are some of the most advanced in the game.

Outdoor farmers in the southern region around Pueblo inundate the market each fall with outdoor-grown cannabis, causing a dip in prices, particularly for cannabis intended for processing. While demand from consumers – residents and visitors – remains strong, there's still too much cannabis to go around and more hitting the market all the time.

COLORADO CULTIVATION SNAPSHOT

Licensed recreational cultivators: **724**

Licensed recreational retailers: **527**

Estimated recreational retail sales: **\$1.1 billion**
for latest twelve months

WHOLESALE PRICE CHANGE, APRIL 2017-2018 (\$/LB)

-23%

Source: Cannabis Benchmarks
Data includes both recreational and medical markets.

OUTLOOK

Some industry players have called for a moratorium on the state issuing more licenses. But absent any regulatory market correction, it's likely wholesale prices will continue to fall as cannabis becomes a commodity in the industry's longest-running market.

Vertically integrated companies will stand the best bet of making it in the long run, as they won't live or die based on fluctuations in the wholesale market. Expect prices to continue to fall for the near future.

PRICES BY PRODUCT

\$500-\$1,200

Last Year
\$1,800-\$2,200

WHOLESALE
POUND OF
FLOWER

\$250-\$400

Last Year
\$500-\$600

WHOLESALE
POUND OF
TRIM

\$99-\$250

Last Year
\$150-\$350

RETAIL
OUNCE OF
FLOWER

NEVADA



Nevada voters approved the sale of recreational cannabis in November 2016, and regulators allowed early sales to begin in July 2017. Since then, Nevada's recreational market has shot out of the gate. The state's month-on-month retail totals are some of the best in the industry, driven largely by the more than 40 million tourists that visit Las Vegas annually.

Nevada's early start program allowed dispensaries licensed under the existing medical cannabis program to begin selling recreational marijuana in 2017, which provided a boost to the industry.

The federal gaming commission doesn't want anything to do with cannabis, however, and until Nevada approves public consumption lounges, visitors are limited in how they can legally consume at hotels and casinos. That doesn't seem to have stifled demand.

SUPPLY

With strong sales come a tight supply, and while retailers struggled in the first months with finding enough product, store prices remained high and cultivators charged plenty for pounds of flower and trim.

That's slowly starting to improve. Like other nascent markets, such as Alaska, cultivators are beginning to figure out their processes and expand cultivation facilities. In addition, more cannabis farmers are consistently being added.

NEVADA CULTIVATION SNAPSHOT

Licensed recreational cultivators: **99**

Licensed recreational retailers: **61**

Estimated recreational retail sales: **\$400 million**
On pace to exceed in first year

WHOLESALE PRICE CHANGE, APRIL 2017-2018 (\$/LB)

-2%

*Medical only from April-July 2017

Source: Cannabis Benchmarks

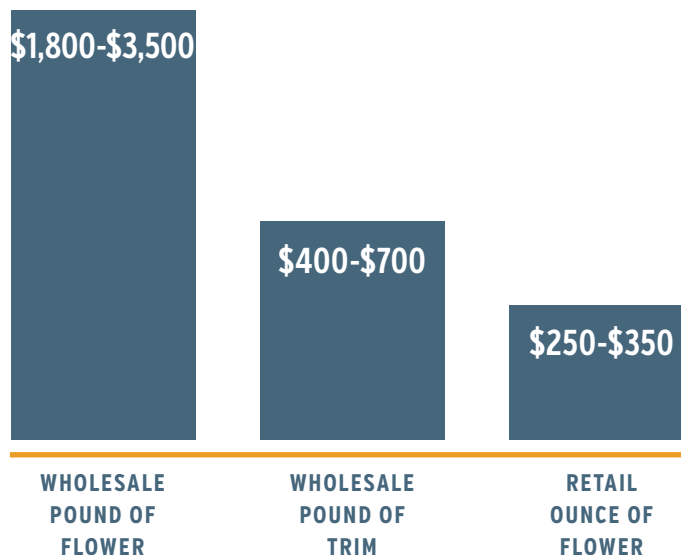
Data includes both recreational and medical markets.

OUTLOOK

Because Nevada's available outdoor farmland is limited, wholesale prices aren't expected to experience the steep drop seen in Oregon or Washington, but prices should still steadily decline as the program matures.

Public consumption lounges are likely in the cards for Las Vegas, which should add to the bottom line for retailers. But cultivators without retail licenses are already pushing to be able to sell directly to consumers, so companies without vertically integrated permits might be on borrowed time.

PRICES BY PRODUCT



OREGON



Of the mature recreational cannabis markets, Oregon's regulated program became oversupplied the fastest. Voters passed a ballot measure in 2014 to legalize adult-use cannabis, and sales began in October the following year. Since that time, the state has licensed nearly 1,000 growers and more than 500 retailers, with many more applications for both pending approval.

Oregon had a robust black market prior to legalization, and the state is simply growing more cannabis than it can consume. Earlier this year, the state's top federal prosecutor hosted a summit of federal law enforcement representatives and state officials to discuss the oversupply problem.

Oregon, like many other states, has a separate medical marijuana program.

SUPPLY

With so much available outdoor-grown cannabis, retailers or processors looking for cheap cannabis can find it in abundance. Same is true for indoor grown and trim. The oversupply continues to drive prices down across all sectors. It's also leading to questions about diversion and worrying law enforcement. This is likely to get worse before it gets better.

OREGON CULTIVATION SNAPSHOT

Licensed recreational cultivators: **958**

Licensed recreational retailers: **538**

Estimated recreational retail sales: **\$432 million**
for the latest twelve months

WHOLESALE PRICE CHANGE, APRIL 2017-2018 (\$/LB)

-44%

Source: Cannabis Benchmarks
Data includes both recreational and medical markets.

OUTLOOK

Oregon regulators still have hundreds of licenses in the application queue. If the state continues to license new growers, the supply glut will only worsen and continue to drive prices down. Vertically integrated companies will be the best positioned to weather the shake out as smaller, standalone growers take the biggest hit.

Only government intervention in the form of market correction, such as a moratorium on new licenses or a reduction in square footage a grower can farm, could have an impact. But those measures haven't gained much traction.

PRICES BY PRODUCT

\$500-\$1,400

**Last Year
\$800-\$2,800**

**WHOLESALE
POUND OF
FLOWER**

\$50-\$150

**WHOLESALE
POUND OF
TRIM**

\$50-\$500

**Last Year
\$100-\$500**

**RETAIL
OUNCE OF
FLOWER**

WASHINGTON STATE



Washington state joined Colorado in legalizing recreational marijuana in November 2012 and began retail sales in 2014. Over time, regulators folded the state's medical market into the recreational market. While taxes have gone up, prices have fallen.

As seen in other mature markets, successful businesses have become highly efficient at growing and selling cannabis, and though this benefits the consumer, it creates a difficult business climate for small business owners and anyone looking to enter the market. Several retailers have put their businesses up for sale in the recent months.

SUPPLY

Like its neighbor to the south, Washington has too many outdoor growers and too much licensed canopy to maintain a strong wholesale market. Oversupply is driving prices of pounds of wholesale cannabis – outdoor-grown, trim and flower – as low or lower than any recreational cannabis market.

Some small farms are pushing fire sales at rock-bottom prices to dump product and exit the business, adding even more cheap wholesale cannabis to the surging supply.

OUTLOOK

Among industry insiders and regulators, there has been some talk of market correction in the form of:

- Reducing growers' canopy size.
- Allowing the licenses of failed businesses to die and disappear, rather than letting the big companies absorb those failures.
- A moratorium on new licenses for the already saturated market.

But any action by state lawmakers or regulators isn't likely to stem the downward trend of falling prices in Washington.

WASHINGTON STATE CULTIVATION SNAPSHOT

Licensed producer/processors: **1,043**

Licensed retailers: **527**

Retail sales data: **\$927 million**
in sales for latest twelve months

WHOLESALE PRICE CHANGE, APRIL 2017-2018 (\$/LB)

-46%

Source: Cannabis Benchmarks
Data includes both recreational and medical markets.

PRICES BY PRODUCT

\$450-\$1,600

**Last Year
\$700-\$2,200**

**WHOLESALE
POUND OF
FLOWER**

\$45-\$180

**Last Year
\$140-\$335**

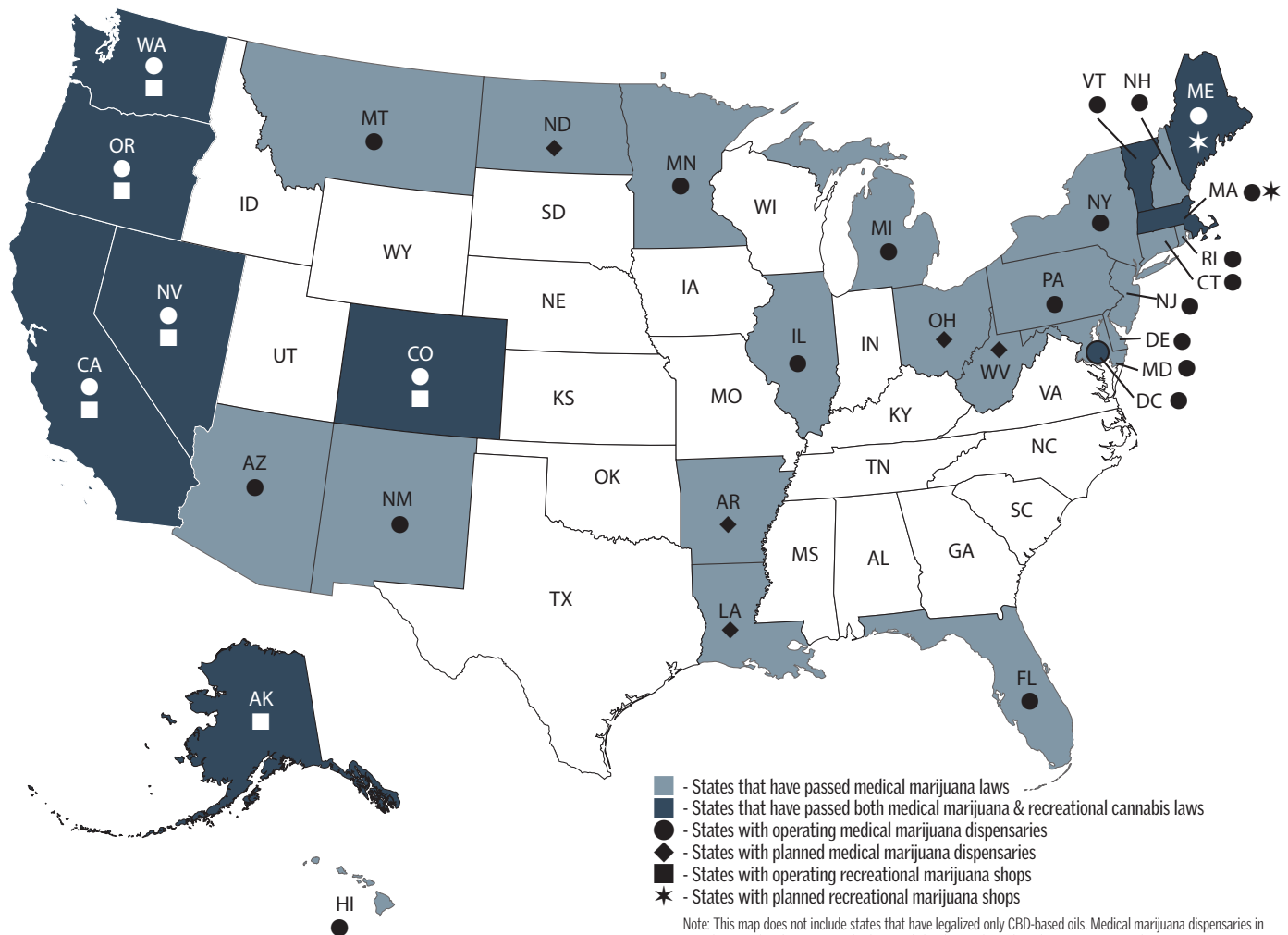
**WHOLESALE
POUND OF
TRIM**

\$60-\$380

**Last Year
\$89-\$450**

**RETAIL
OUNCE OF
FLOWER**

MEDICAL MARIJUANA MARKETS



Cannabis businesses in certain medical marijuana markets experience similar problems as those seen by the recreational cannabis programs, namely oversupply concerns and falling prices. Other markets, however, are undergoing exactly the opposite.

In Arizona, for example, large outdoor greenhouse cultivation operations have added considerable supply to the market. The patient count has grown by almost 40,000 since a year ago, from 119,000 in February 2017 to 158,000 in February 2018. But a pound of wholesale medical cannabis sells for \$900-\$2,000 a pound, down from \$1,500-\$2,600 the year prior.

By contrast, in New Mexico, patient counts continue to swell, with at least 100 additional patients registering for the program each week. The total number broke the 50,000 mark at the end of the March. But regulators have limited the amount of cannabis plants each MMJ company in the state can grow, so demand is quickly outpacing supply. Prices are rising, with wholesale pounds of medical marijuana flower fetching \$2,800-\$3,000, up from \$2,100-\$2,200 for a pound of medical marijuana a year ago.

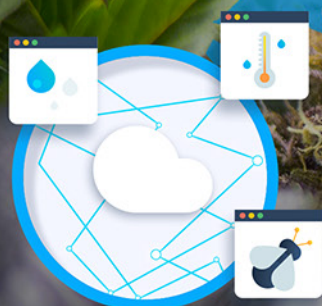
In Colorado, which has separate recreational and medical cannabis markets, MMJ prices have fallen since recreational cannabis sales began in 2014. In the early days cultivators were able to sell a wholesale pound of medical cannabis flower for \$4,200. Now they get closer to \$900-\$1300, depending on quality. Patient counts are down roughly 16% since legal sales began, from 110,000 in 2014 to 93,000 in February 2018.

The wholesale market for medical cannabis is a mixed bag. Each state charted its own course when developing its MMJ rules and regulations, which affects how the patient pool (the demand) and the plant counts (the supply) develop. Therefore, economics can really only be understood on a state-by-state basis.

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