



*Northwest  
Cherries*

The logo features the words "Northwest Cherries" in a white, elegant script font. Below the text is a stylized white graphic of three cherries hanging from a stem, with a small leaf.



**2022** *Season Review*

The text "2022" is in a large, bold, white sans-serif font. To its right, the words "Season Review" are in a smaller, white script font.







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*Deep freezes, delaying snows, and waves of rain and wind all took a swipe at the Northwest cherry crop this season, but the Northwest growers managed to shelter and ship 13,277,332 boxes, while also tying the size record of 84 percent 10 <sup>1</sup>/<sub>2</sub> row and larger.*

MacroBin®





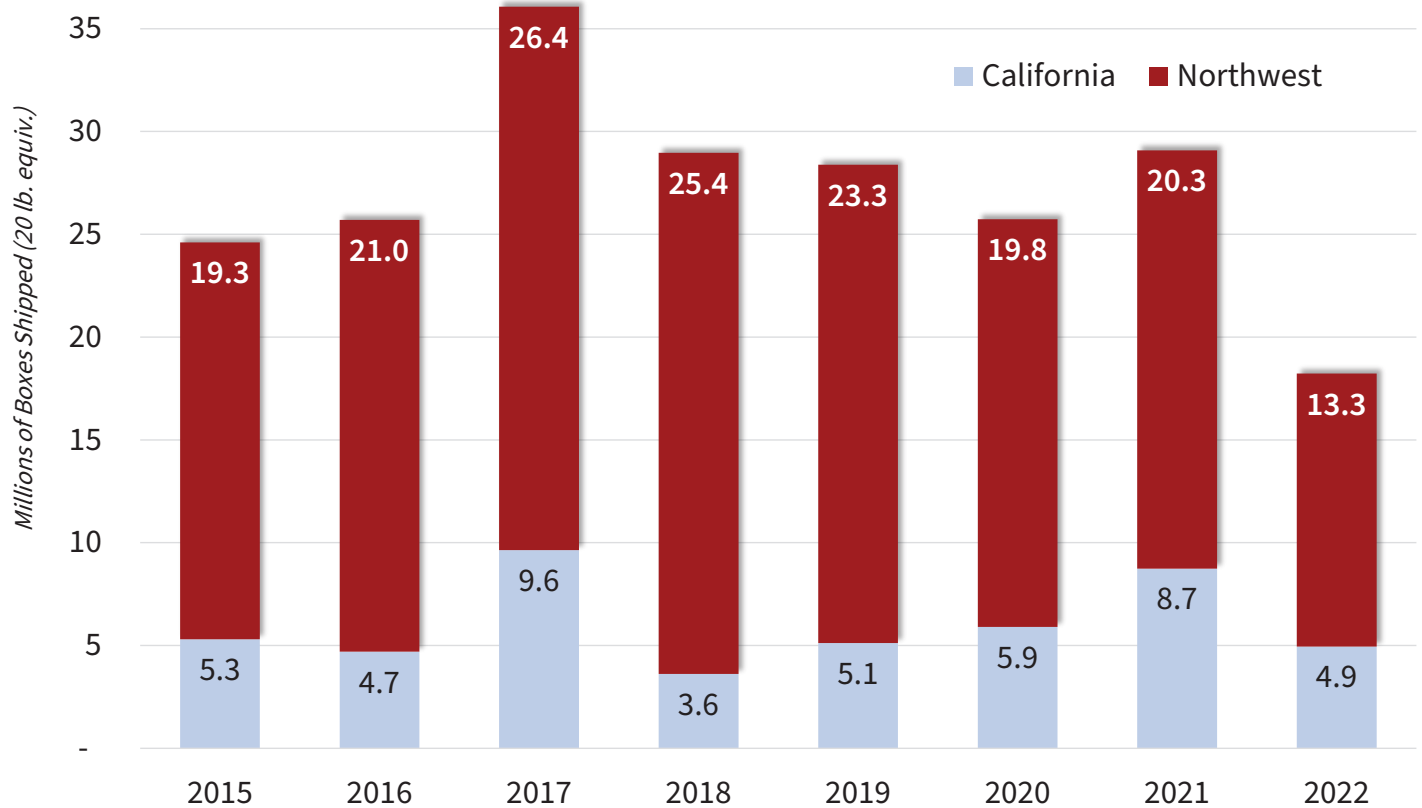
## 2022 POST-SEASON

- *Recorded shipments stretched from June 8th until September 11th, making a harvest of 96 days with peaks on July 2nd and July 22nd*
- *Many growing districts saw the 3rd coldest April on record, and the wettest May-through-June window since 1948*
- *It was the shortest crop since 2008's weather-reduced 9.7 million boxes*
- *Second-slowest start (first 15 days of volume) in 20 years after 2003*



# COMBINED NW & CALIFORNIA

## *Total Season Volumes*



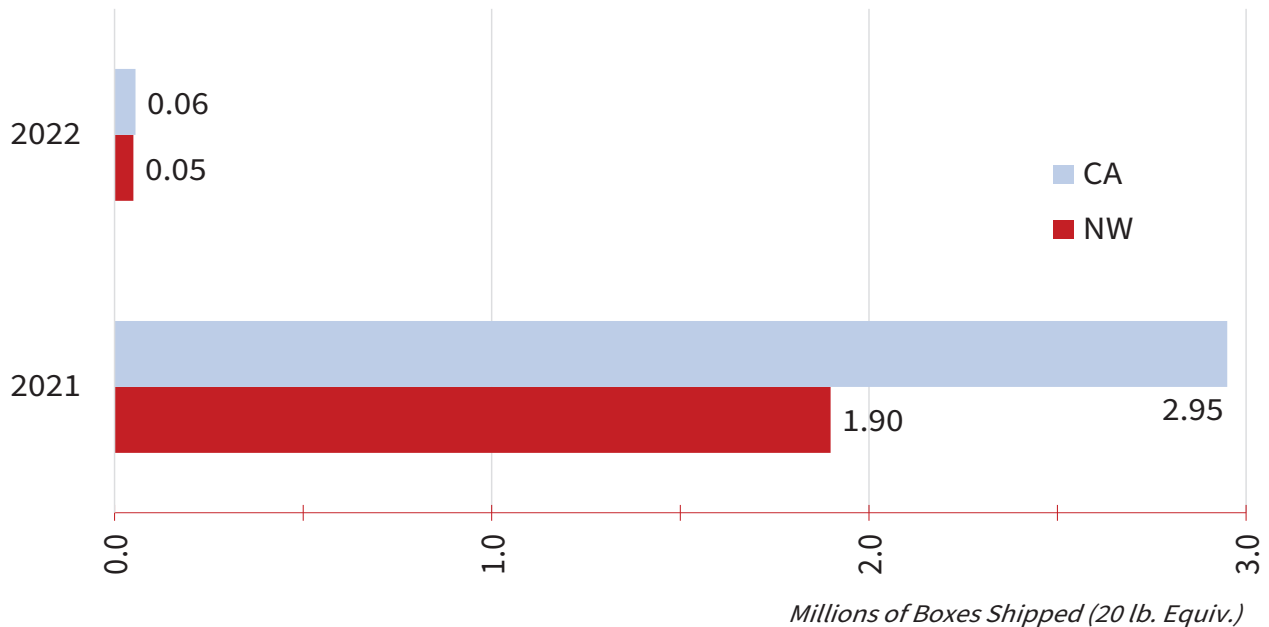
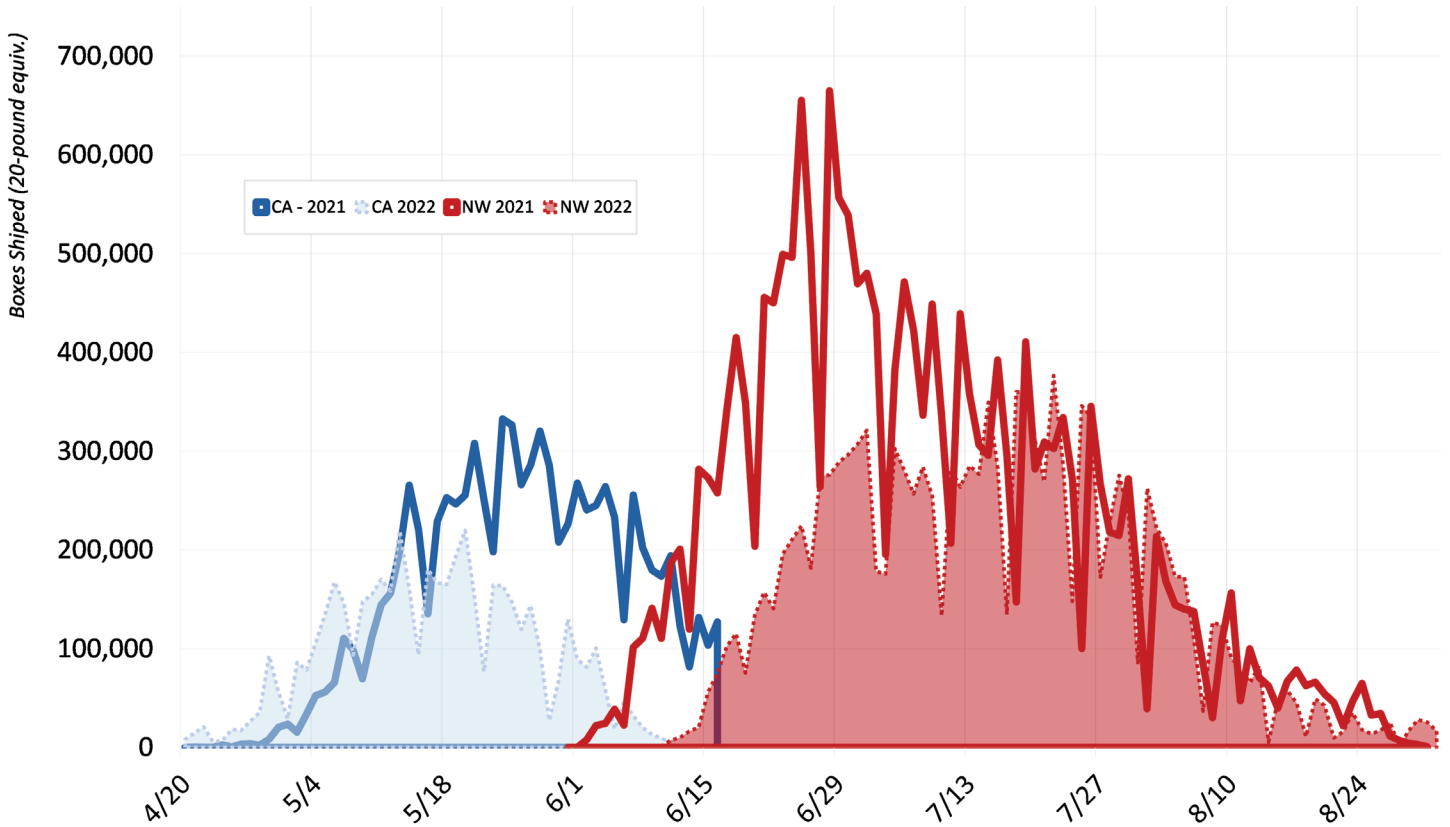
# COMBINED NW & CALIFORNIA

## *Year-over-Year Overlapping Volume*

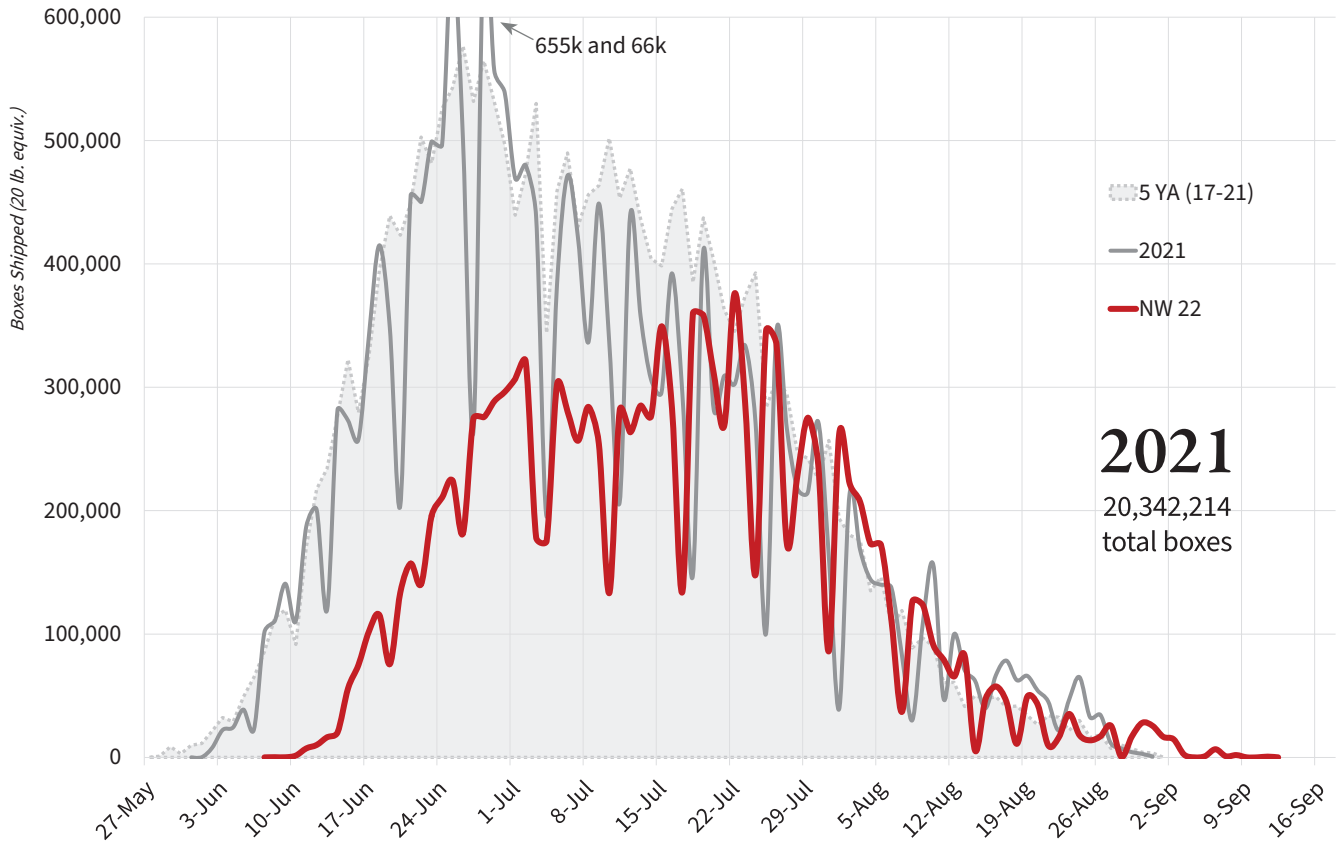


# OVERLAID NW & CALIFORNIA

## *Total Daily Shipments*

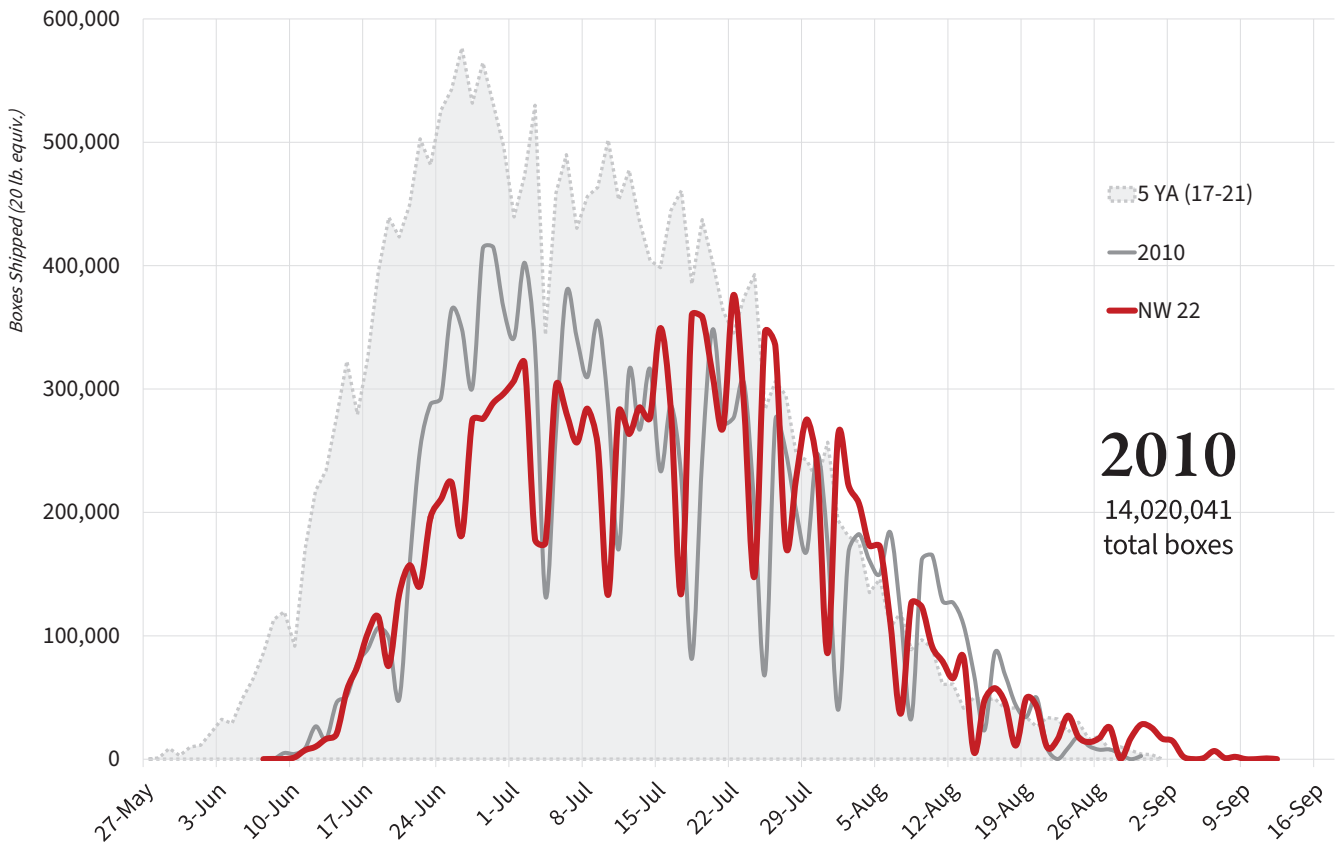


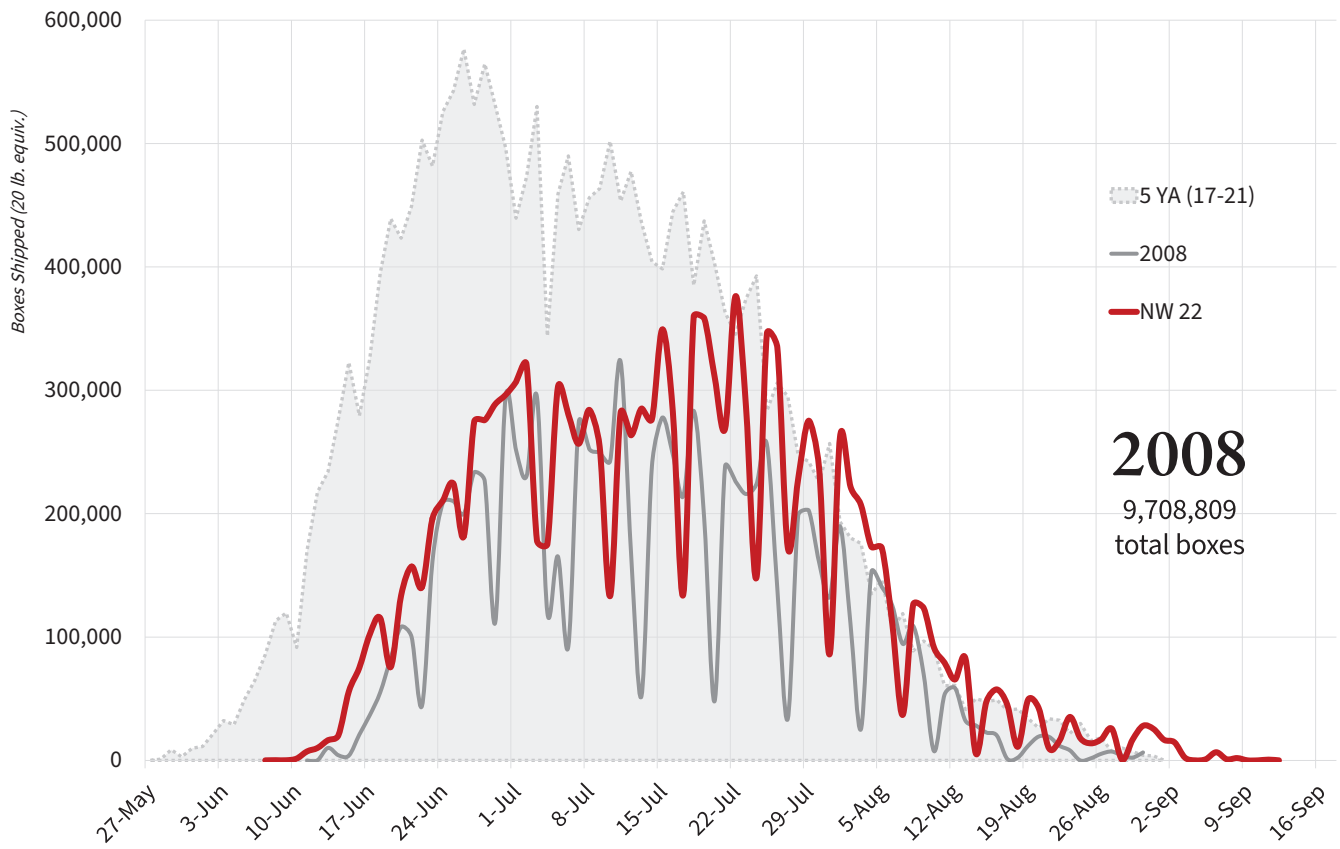




## DAILY CHERRY SHIPMENTS

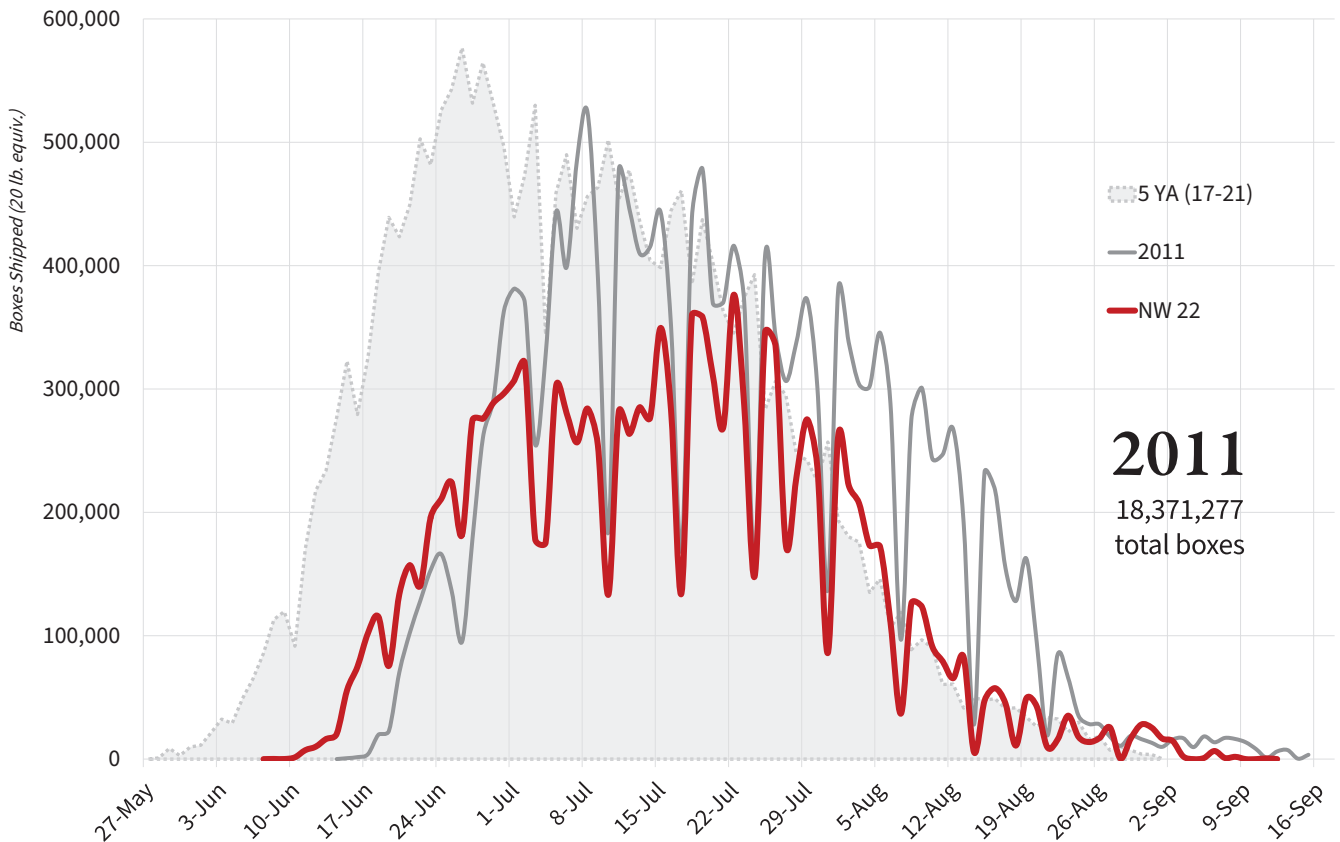
### *2022 & 5-Year Average with:*



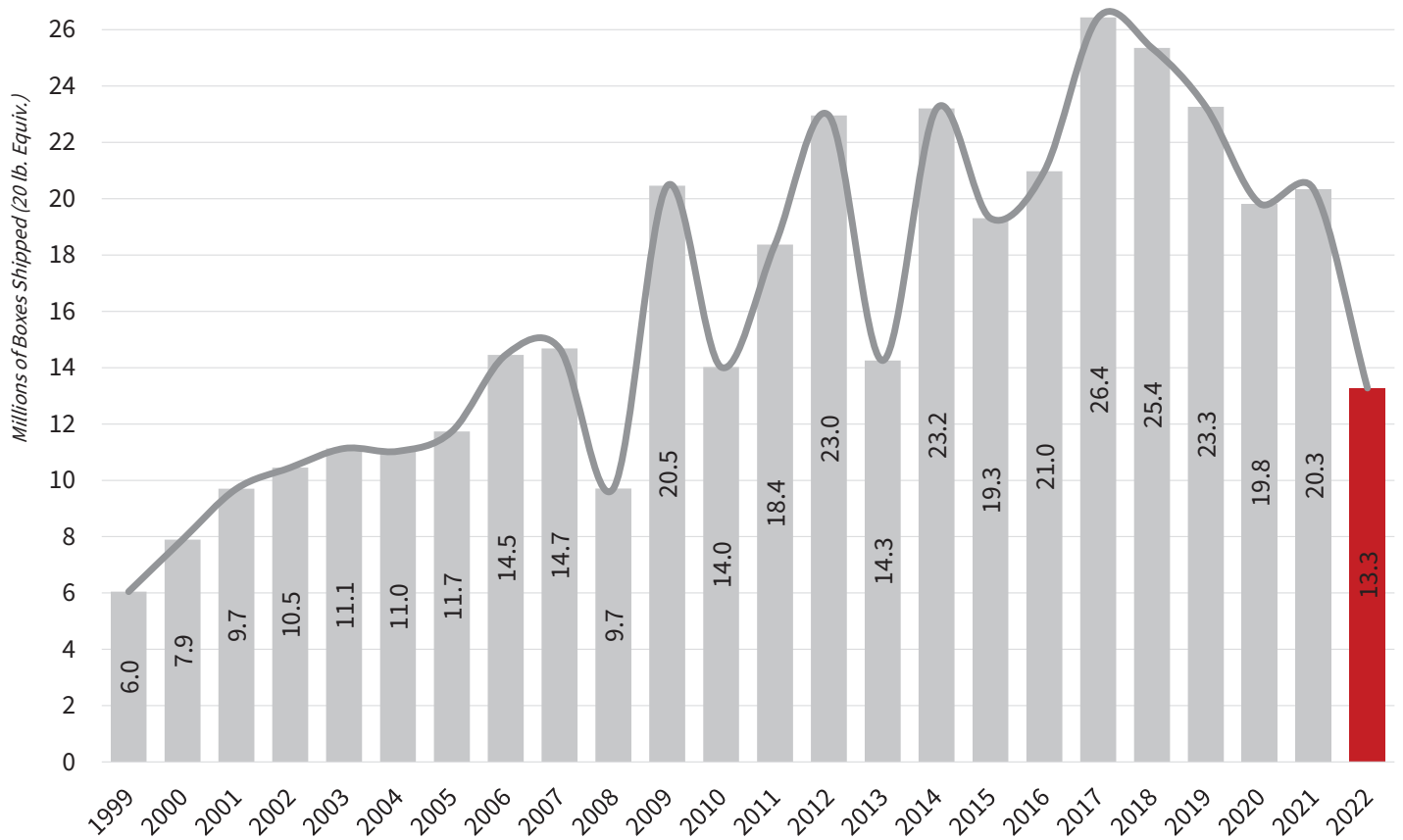


## DAILY CHERRY SHIPMENTS

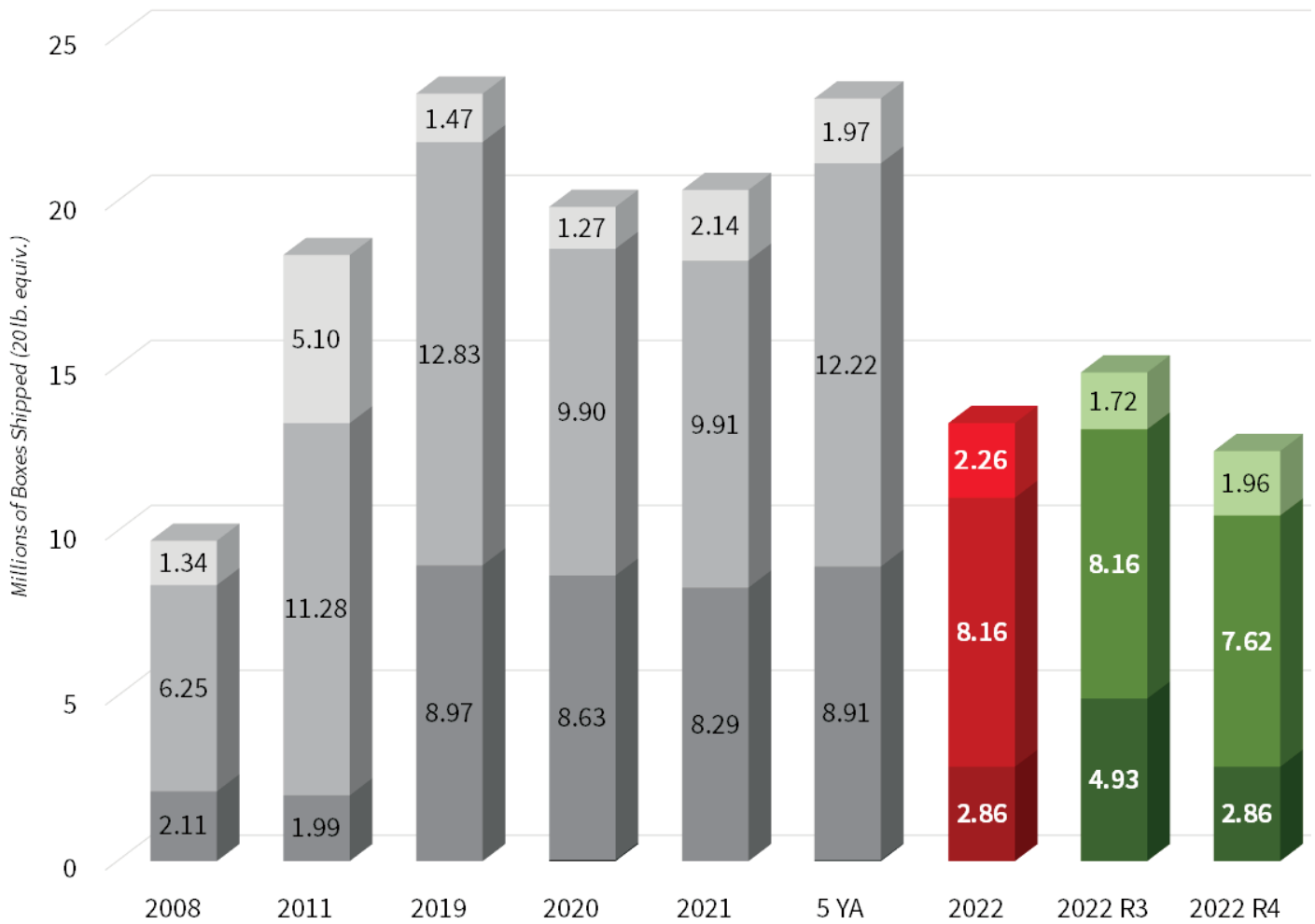
*2022 & 5-Year Average with:*







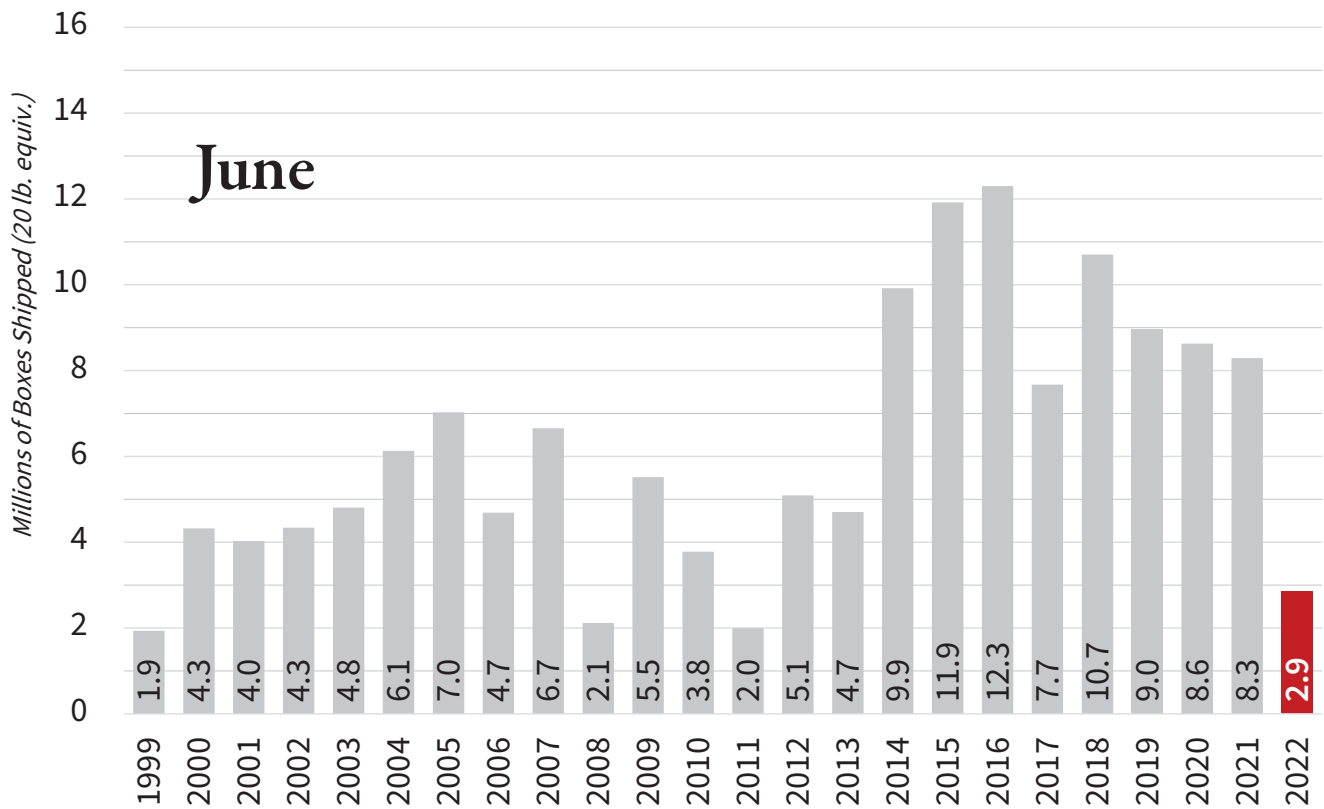
# **NORTHWEST CROP TOTALS** *Combined Shipments of All Varieties*



## NORTHWEST CROP TOTALS

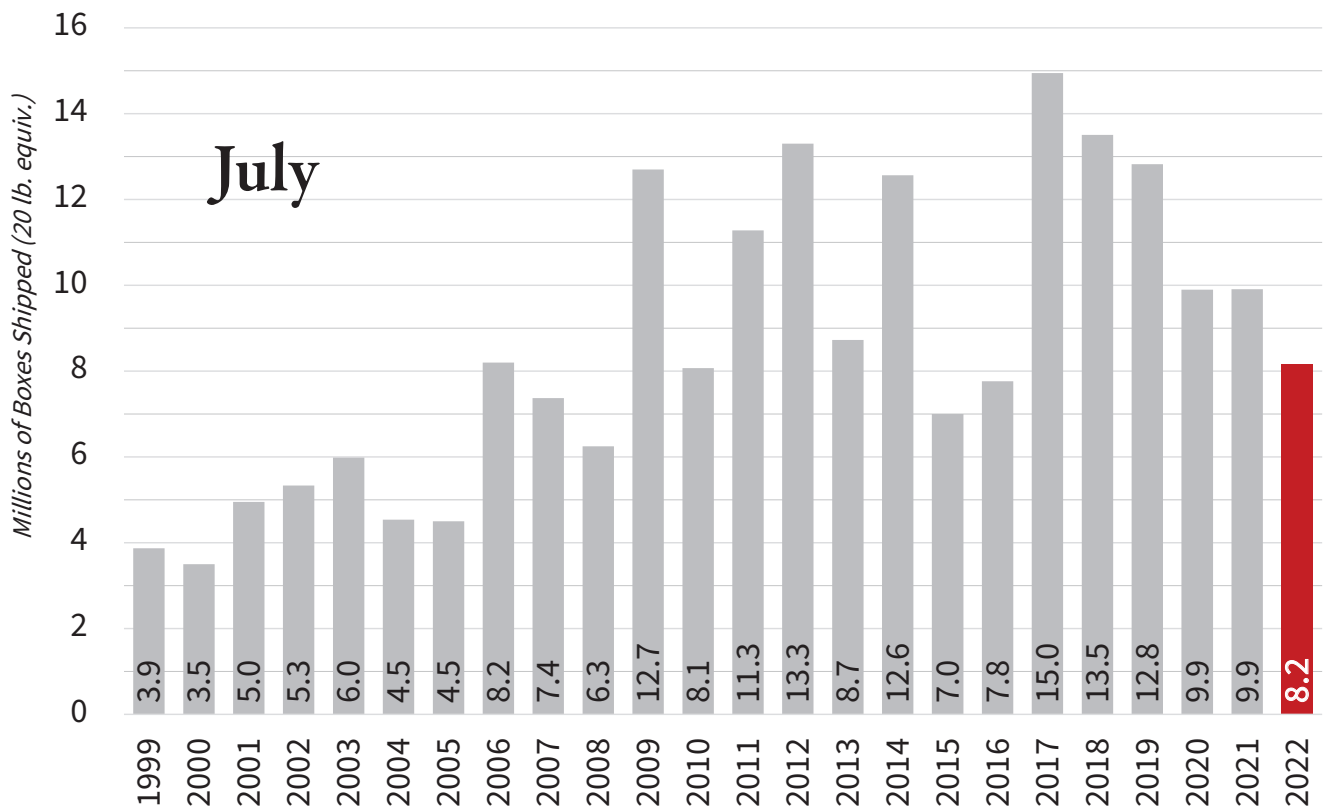
*Combined Shipments by Month*

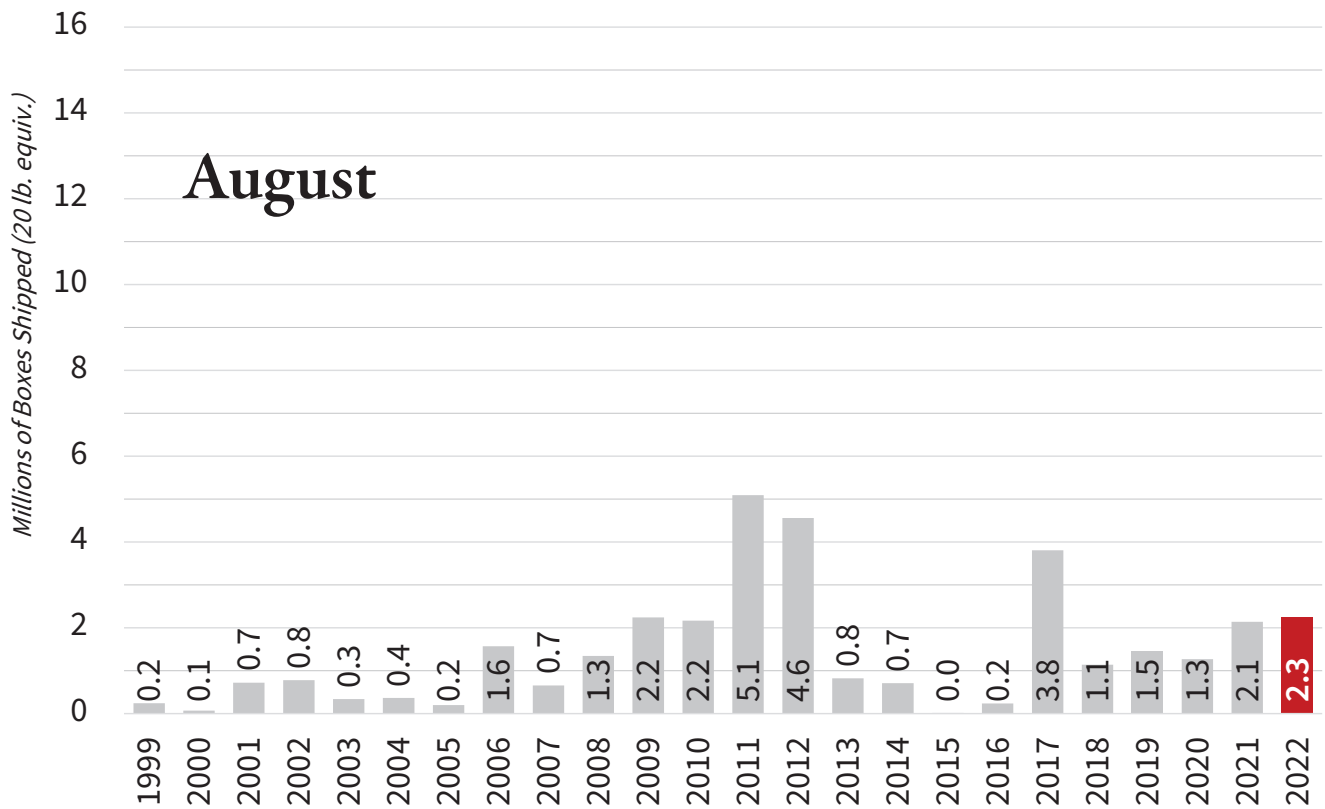




## SHIPMENTS BY MONTH

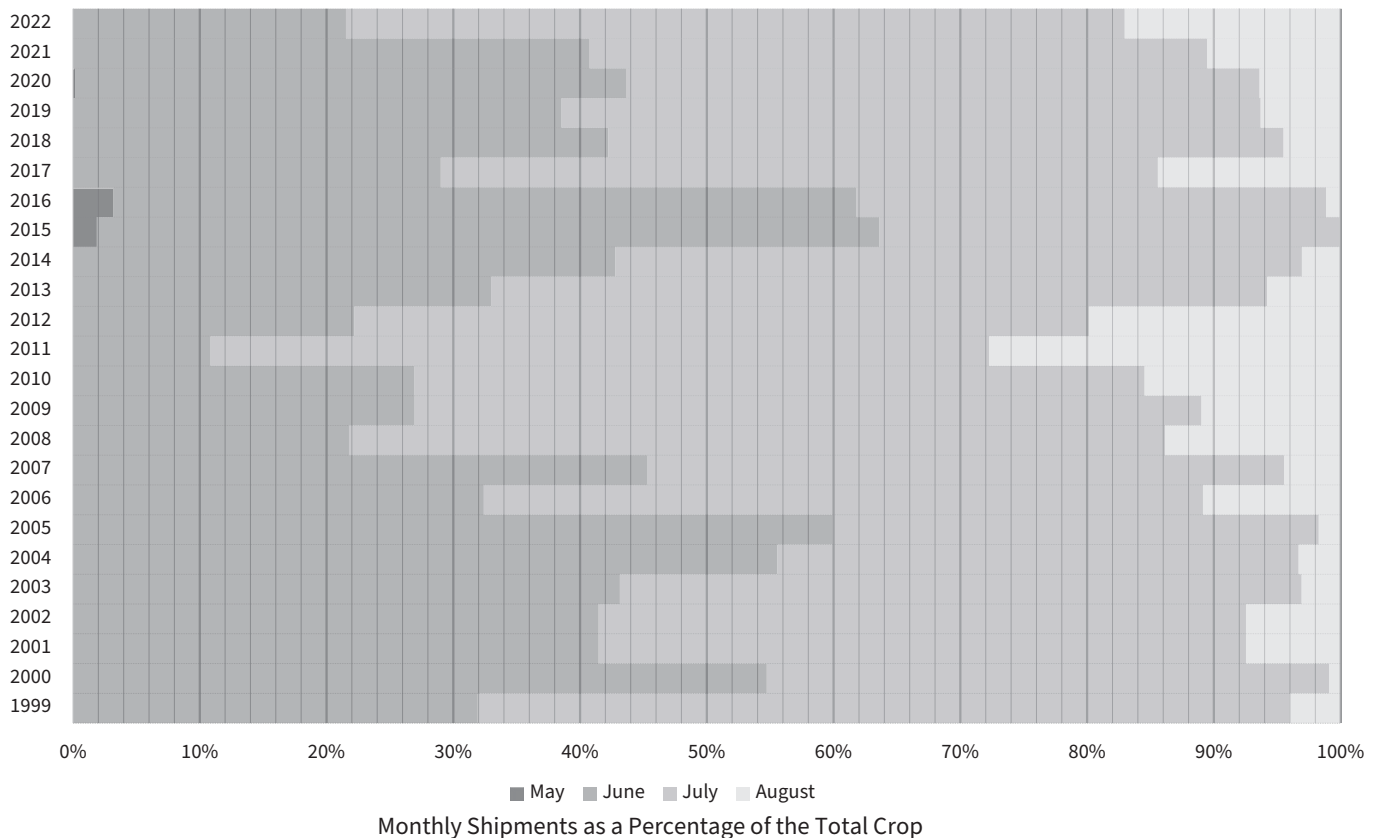
### *Historical Comparison of Total Shipments*





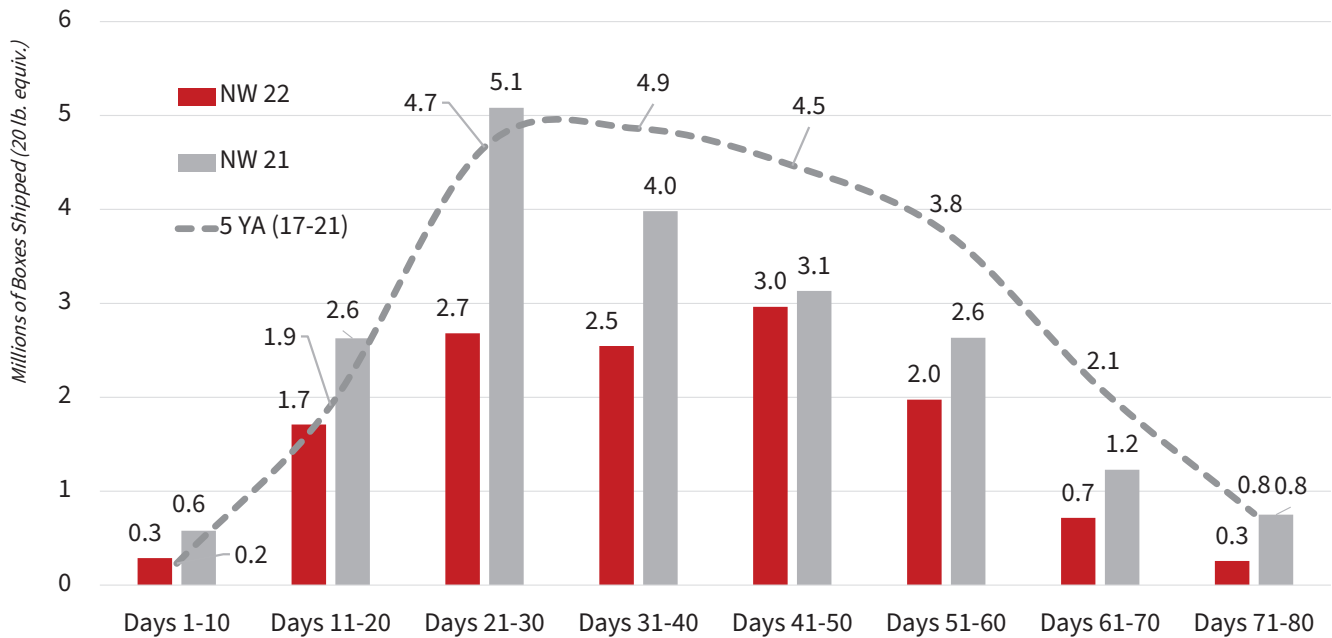
## SHIPMENTS BY MONTH

### *Historical Comparison of Total Shipments*



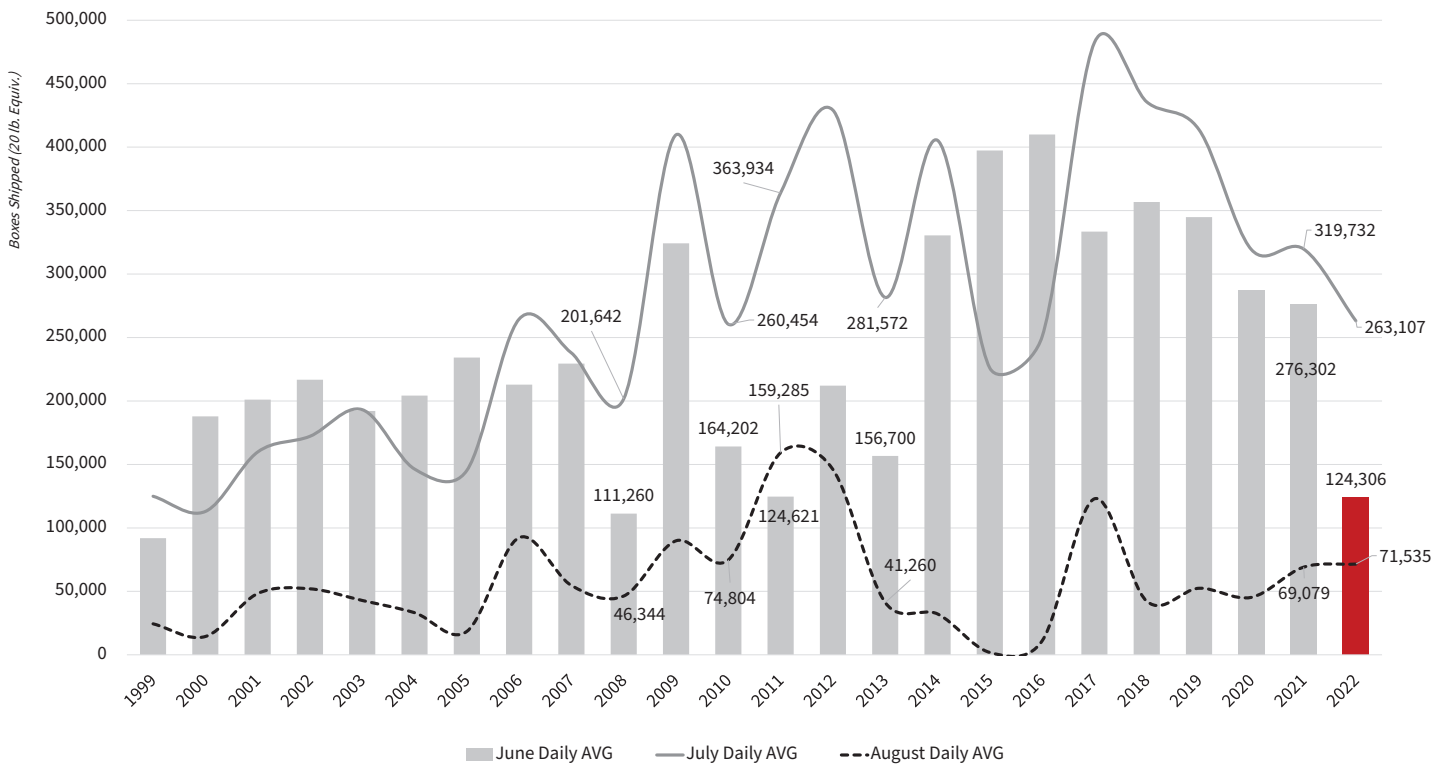


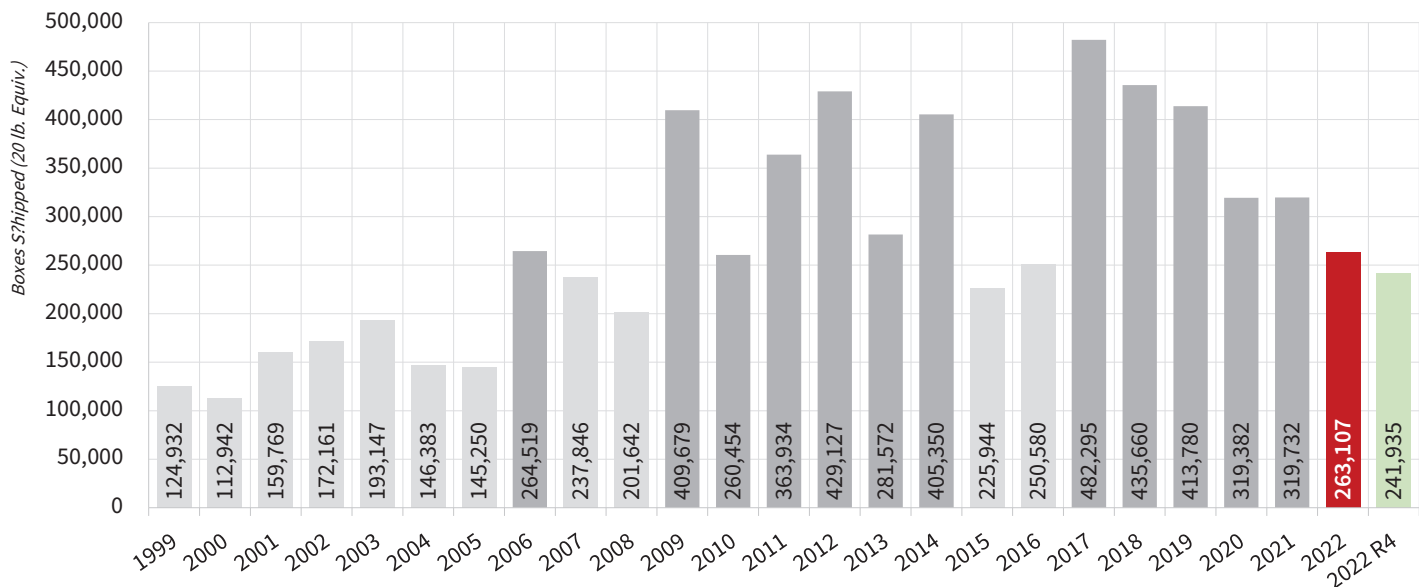
NW Shipment Comparison - 10 Day Periods



## SHIPMENT VELOCITY

### *Periodic Volume & Monthly Daily Averages*

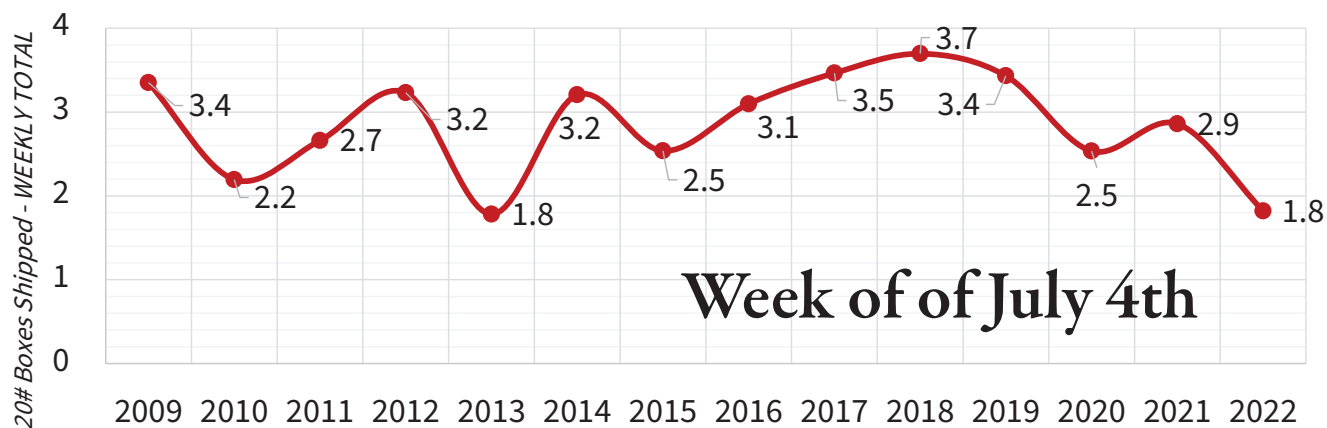




July Daily Shipment Average

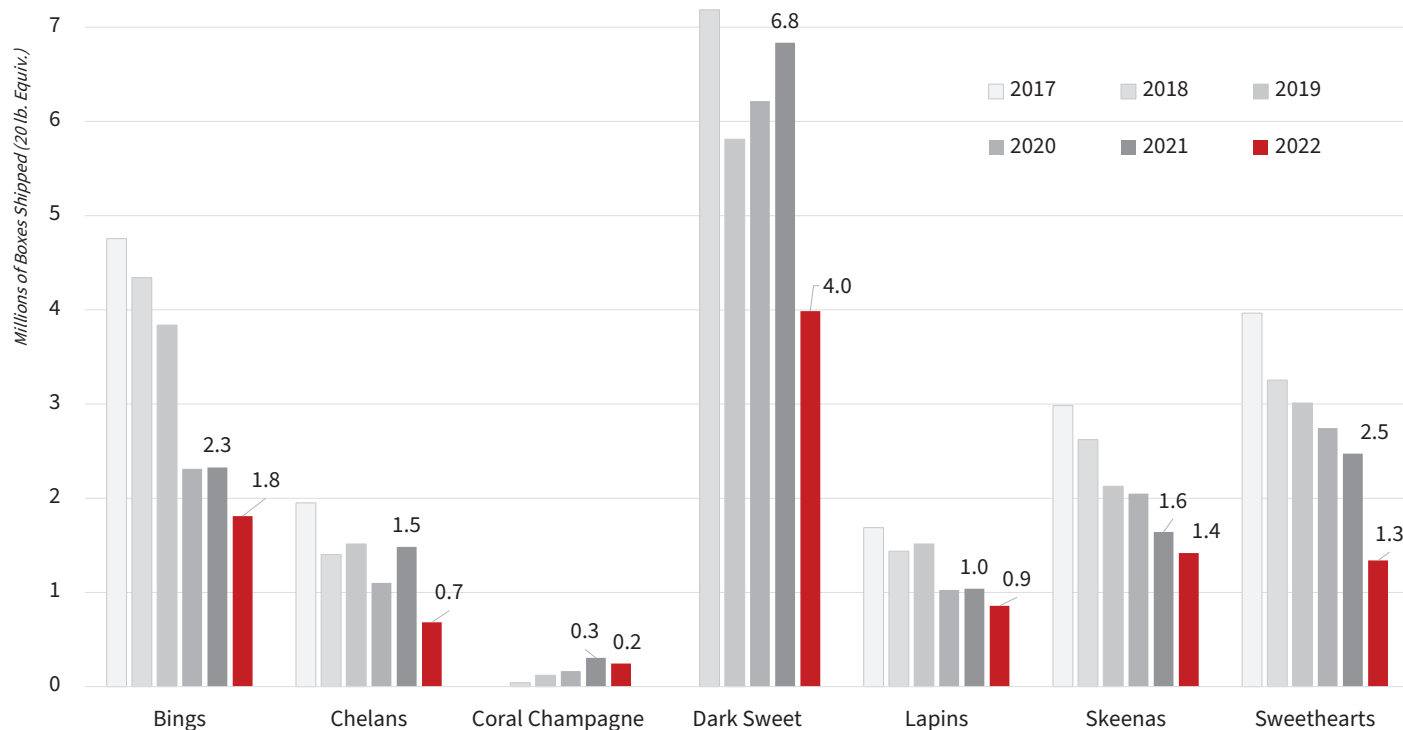
## SHIPMENT VELOCITY

### *Historical July Velocity & Holiday Week Volumes*



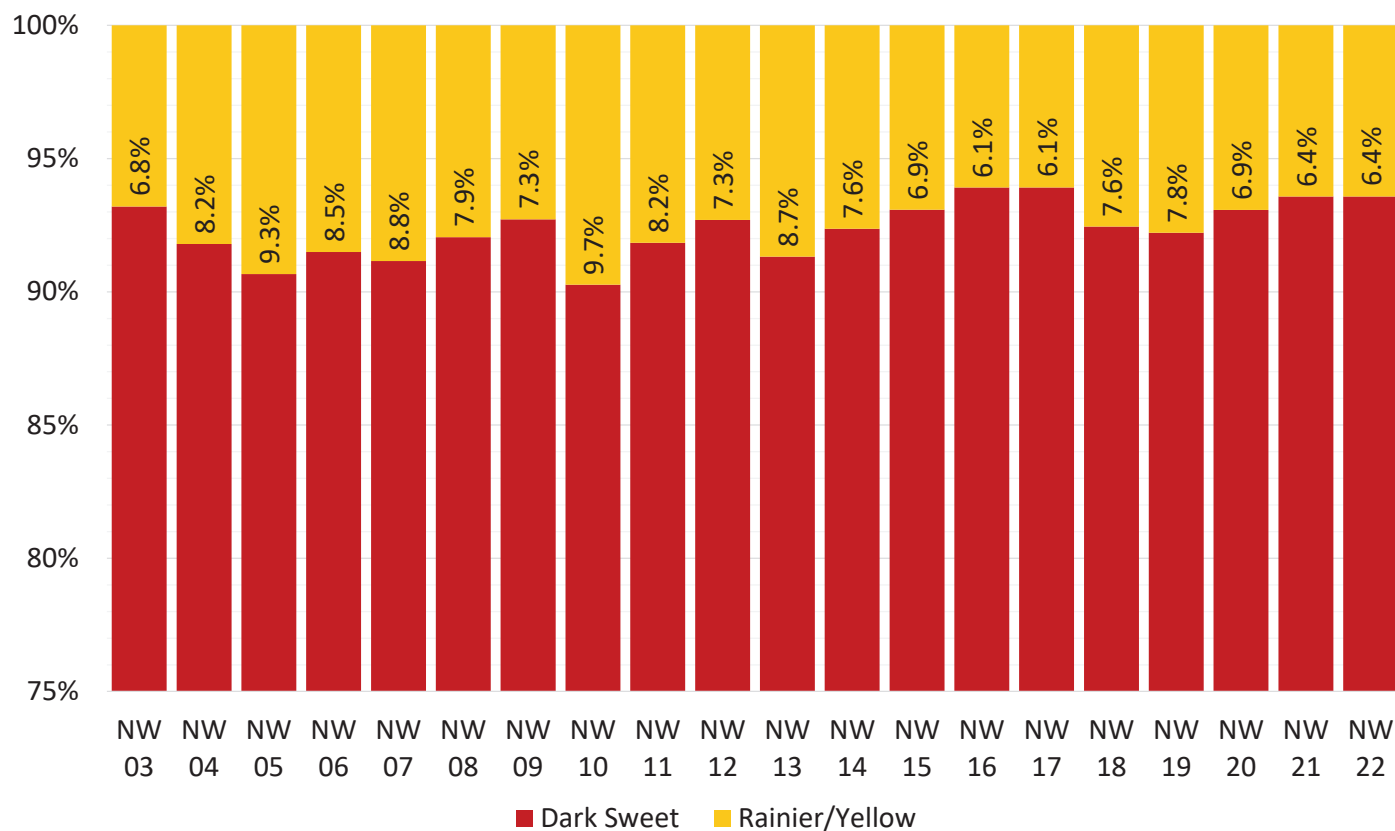
Week of July 4th

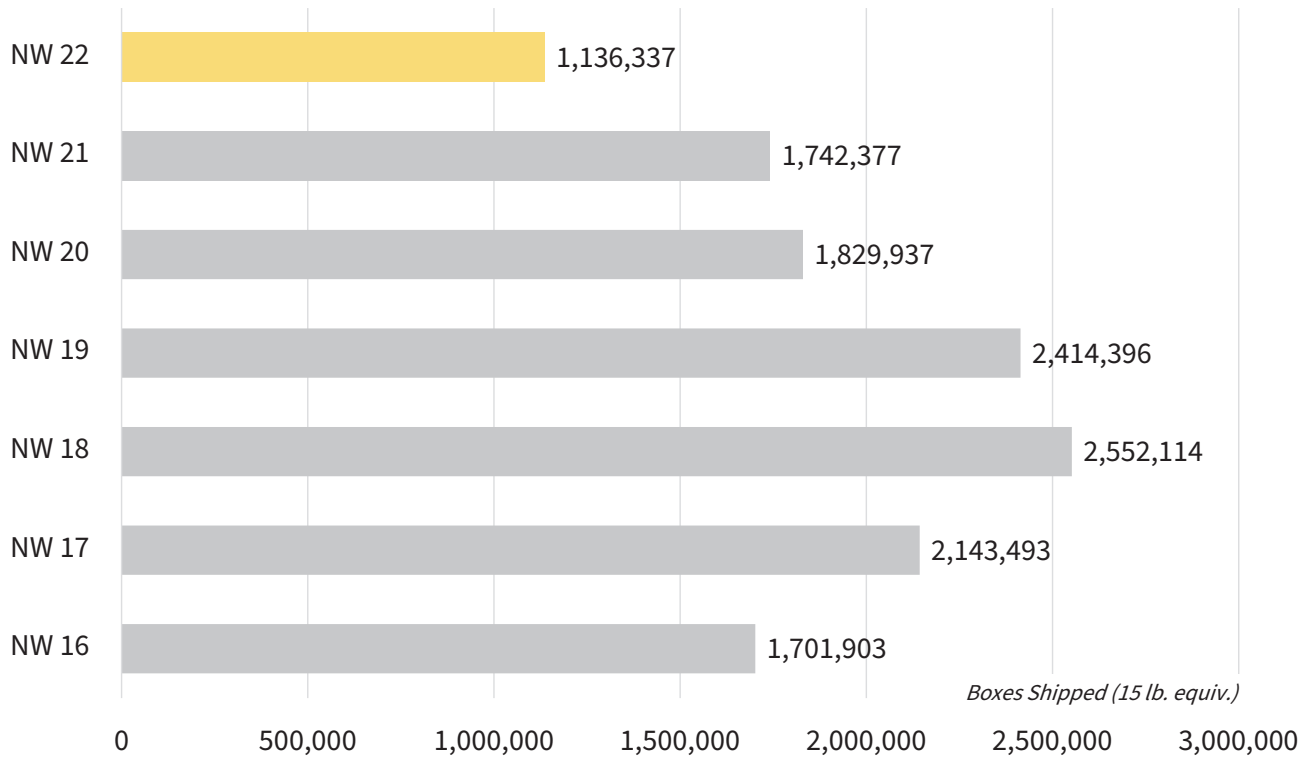




# DARK SWEET & RAINIERS

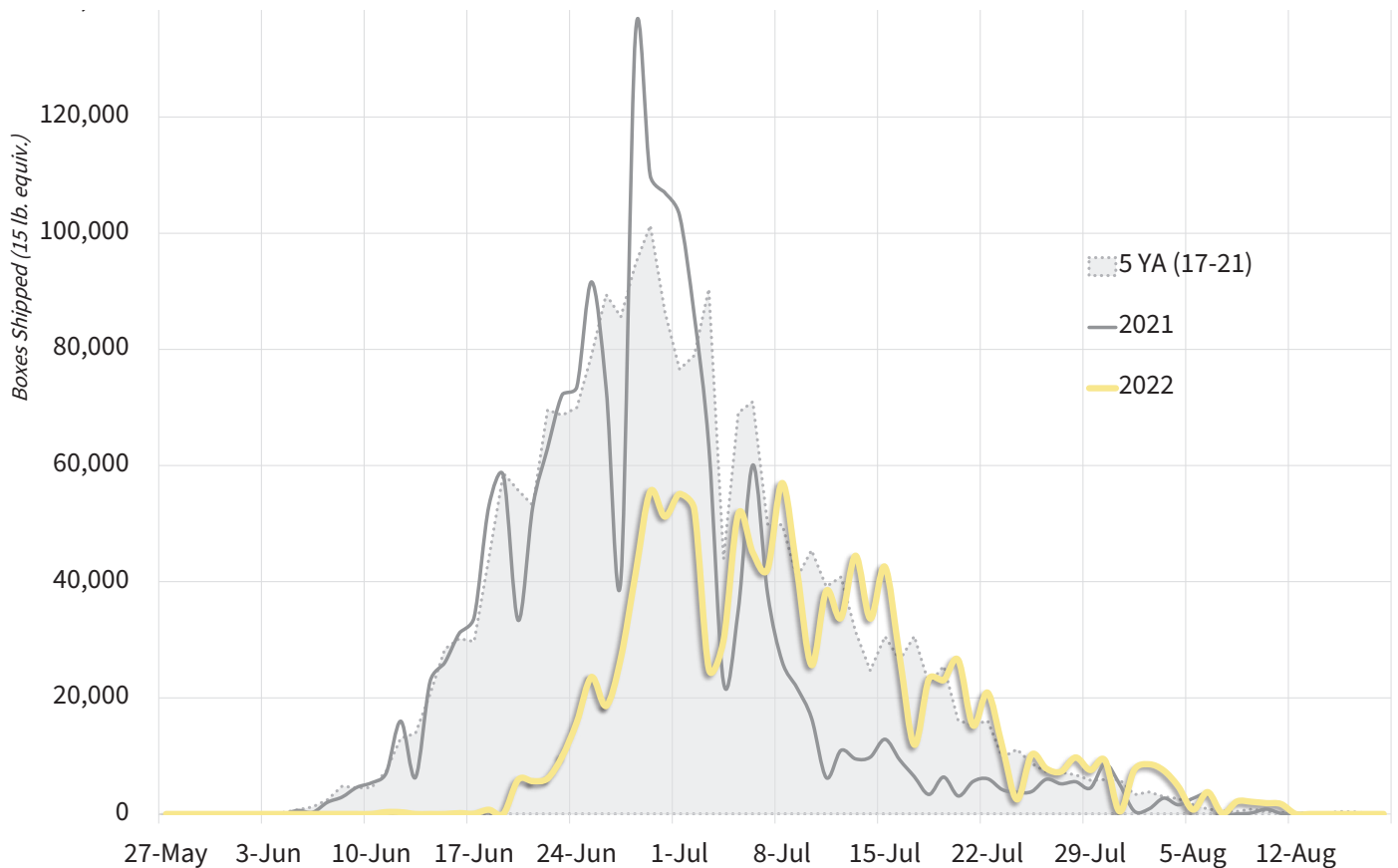
## *Representation of Some Common Varieties*



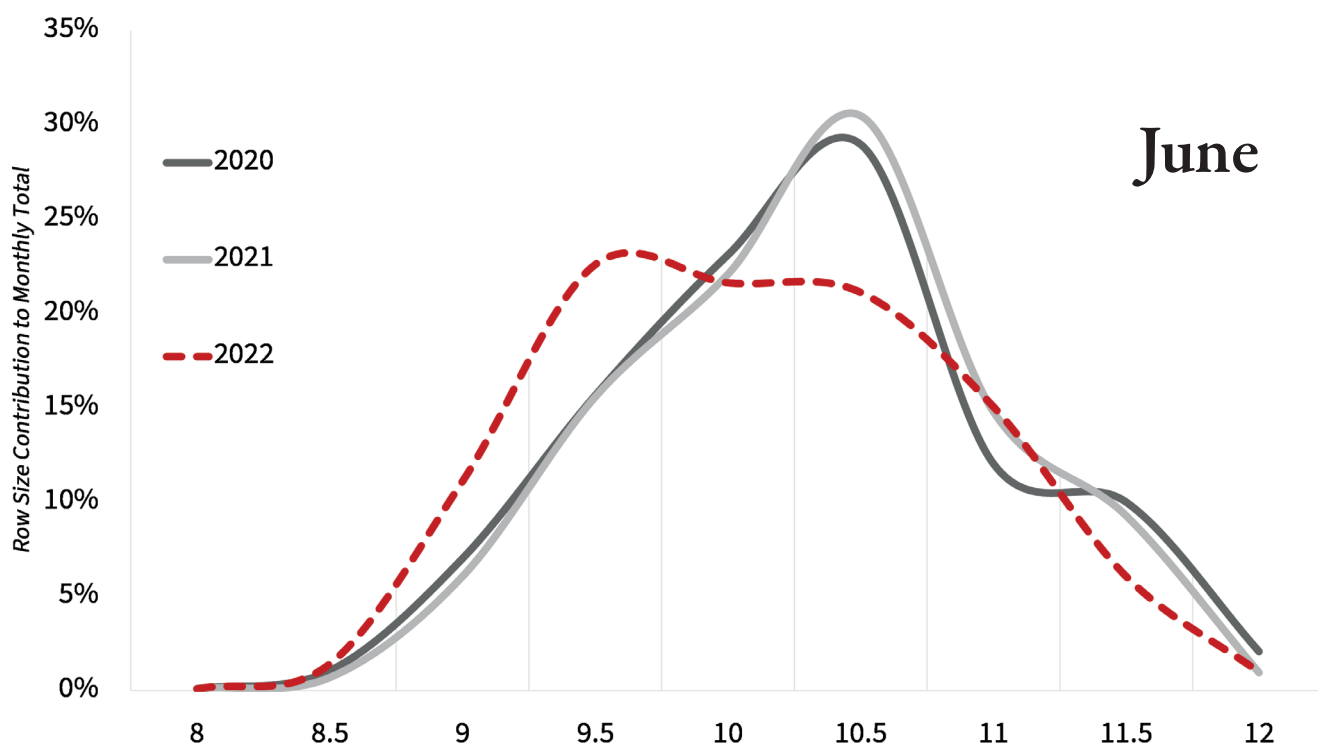


# RAINIER & YELLOW CHERRIES

## *Historical Shipment Comparisons*

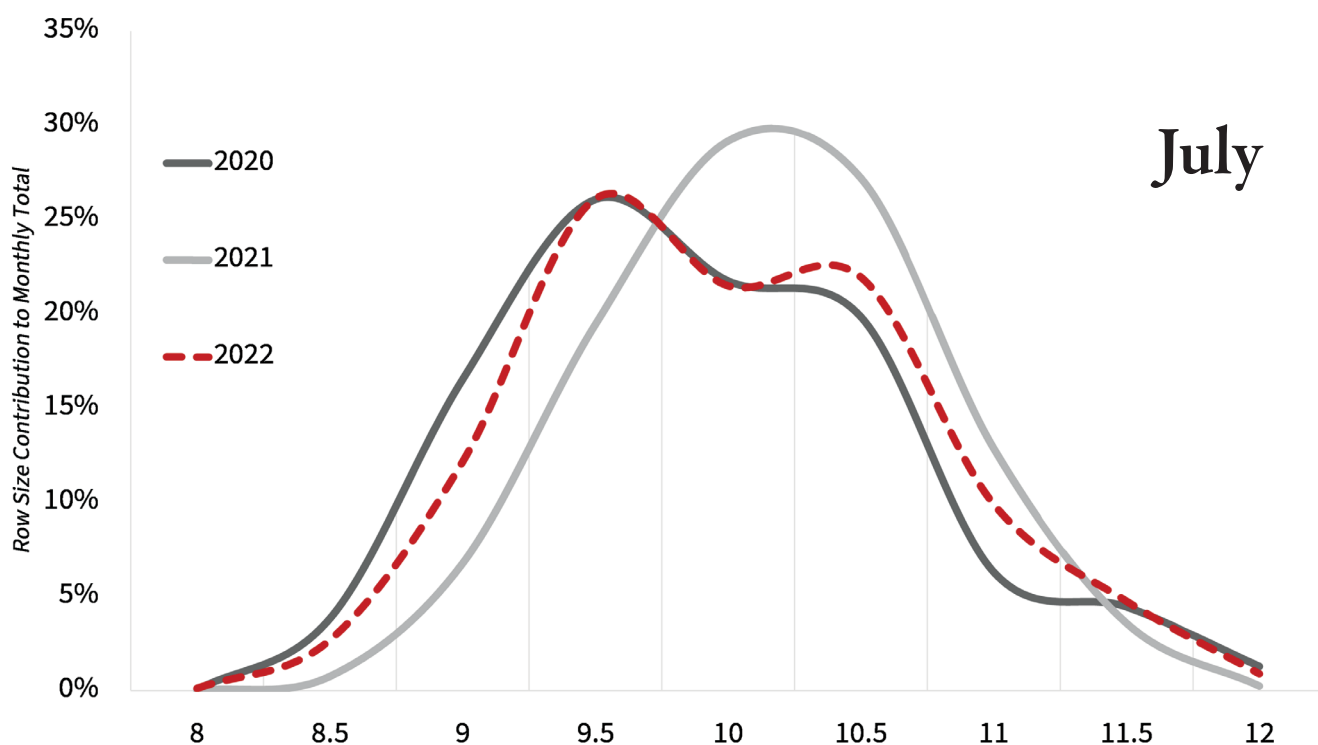


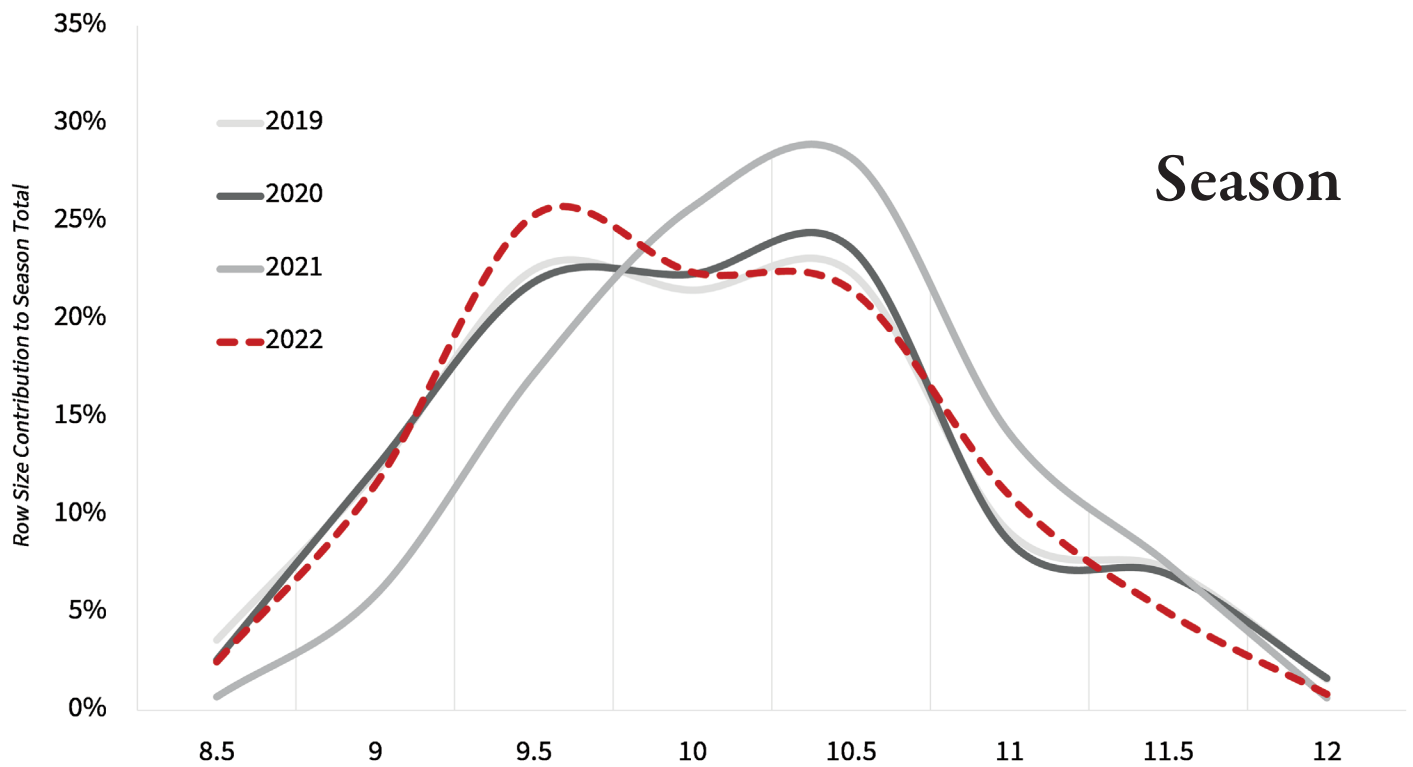




## SIZING THE DARK SWEET CROP

### *Row Size Contributions to Monthly Total*





## **SIZING THE DARK SWEET CROP**

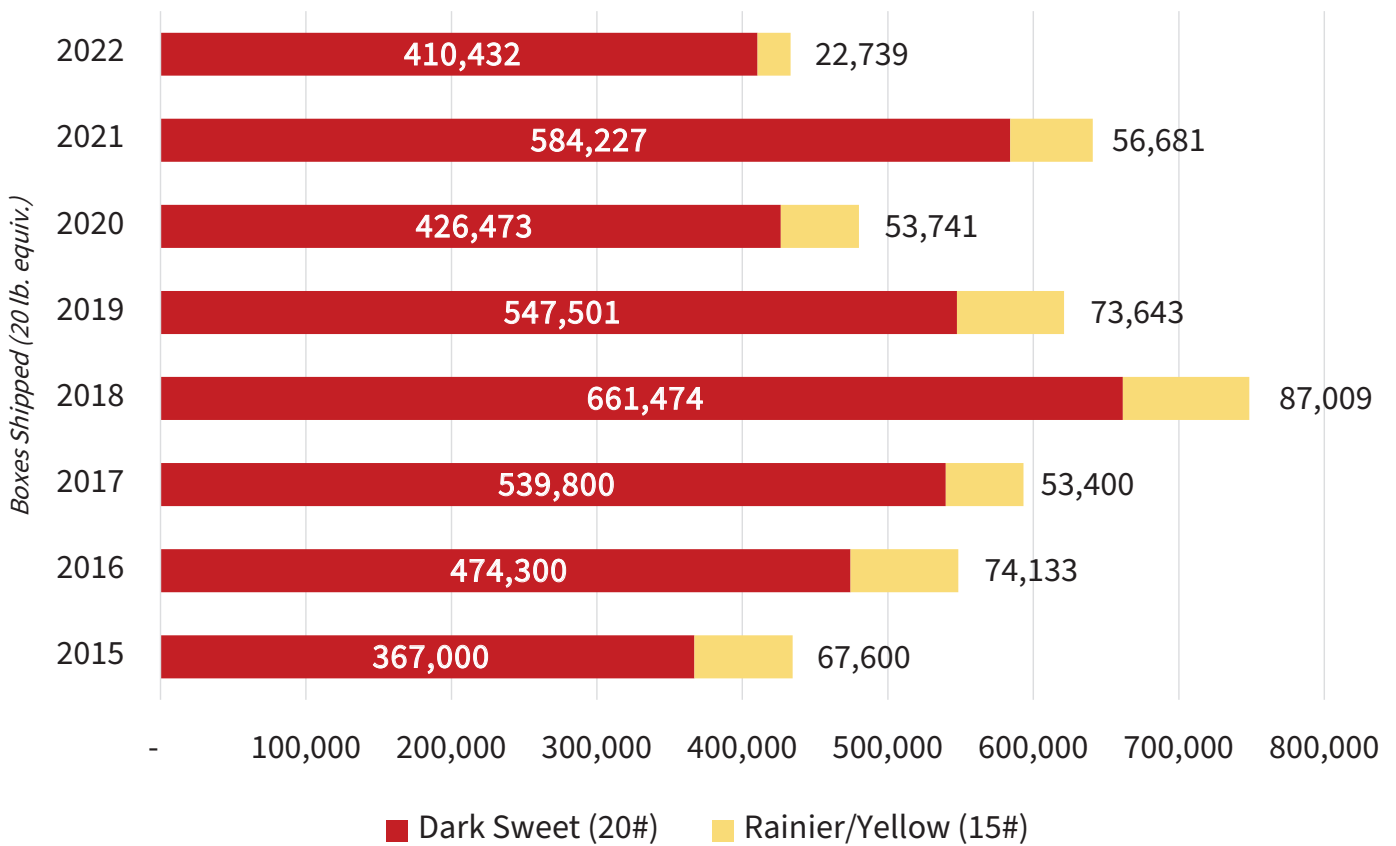
*Row Size Contributions to Monthly Total*





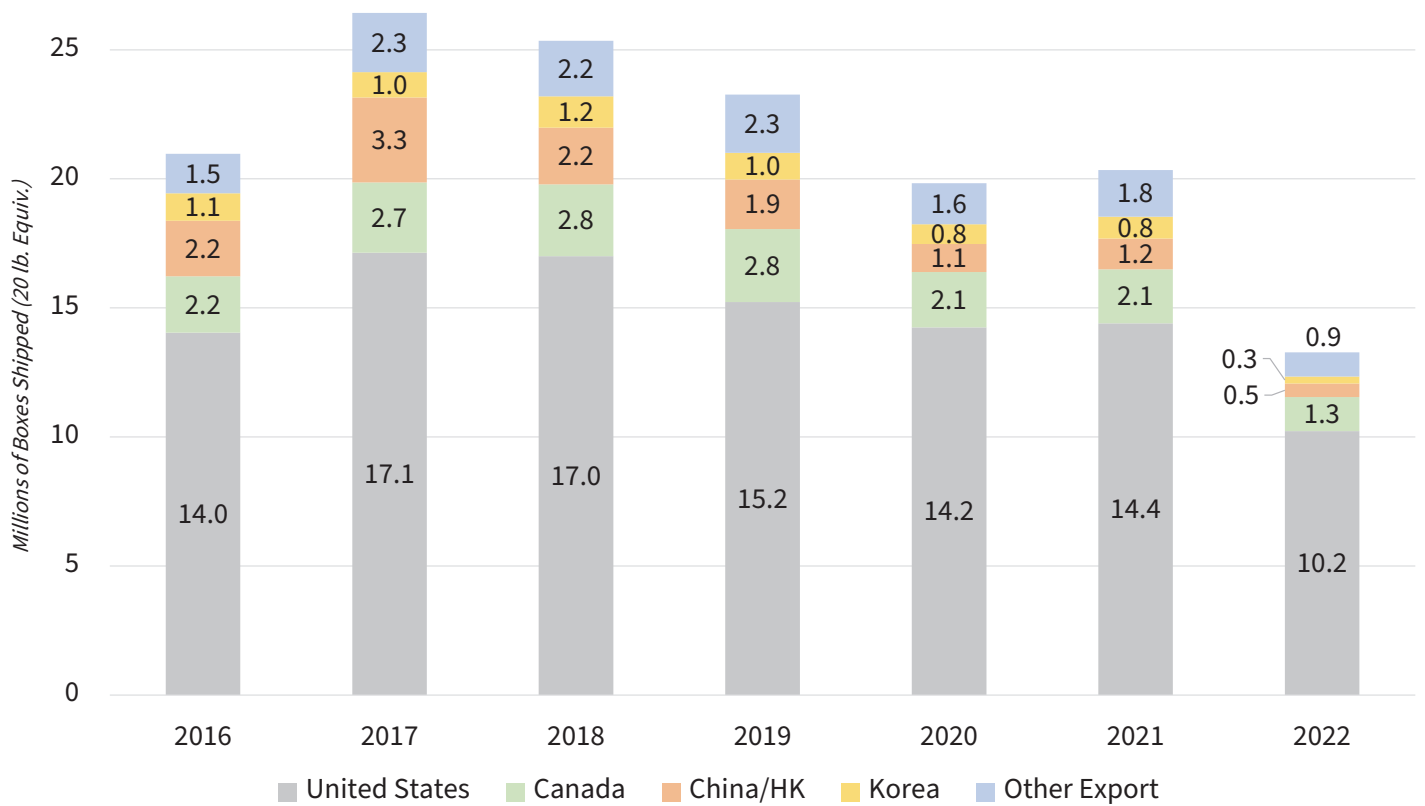
# ORGANIC SHIPMENTS

*Washington-Origin Only*



# SHIPMENTS BY DESTINATION

*Dark Sweets & Rainier/Yellow*



## 1 Keep pain at bay with anti-inflammatory properties

Sweet cherries contain anthocyanins, which appear to shut down enzymes that cause tissue inflammation in a similar manner to ibuprofen and naproxen. Increased inflammation is the underlying cause for numerous chronic human diseases, such as:

- Arthritis • Diabetes • Cancer • Hypertension • Cardiovascular disease

Biomarkers of these diseases and C-reactive protein, a common marker of inflammation, have been reduced in human studies of cherry consumption.

## 2 A tastier way to fight cancer

More research is suggesting that sweet cherries may possess cancer-fighting properties. Among other compounds, cherries contain ellagic acid and anthocyanins, which appear to be potent inhibitors to the growth of cancer cells. Along with other phytonutrients, their individual and synergistic benefits are the focus of several new studies.

## 3 Take the bite out of gout attacks

A painful form of arthritis caused by elevated levels of uric acid in the blood, gout affects more than 8.3 million Americans. Eating sweet cherries can lower the levels of uric acid in the blood, according to research conducted at the USDA Western Human Nutrition Research Center. A study done at the Boston University School of Medicine reports patients who eat cherries and take their medicine have a 35% to 75% lower chance of experiencing an attack.

# -6- Cherry-licious Benefits for Better Health

## 4 Sweet cherries, sweeter dreams

One of the few plant sources of melatonin, sweet cherries are a natural and flavorful aid in improving the quality of sleep. Eating cherries about an hour before bedtime may help stabilize and regulate sleep patterns.

## 5 Snack on a source of fiber

A cup of sweet cherries delivers 3 grams of fiber, or about 12% from USDA Dietary Guidelines. Eating a cup of fruit daily can contribute to weight maintenance, diabetes prevention, and improved cardiovascular health.

## 6 A sweet fix without busting GI levels

Satisfy a sweet tooth without worry. Cherries boast a lower glycemic index than almost any other fruit. They release glucose slowly and evenly, so blood sugar levels stay steady longer.

# SWEET HEALTH

## CHERRY GROWERS WORK TO UNDERSTAND CHERRIES INSIDE & OUT(SIDE)

Healthy eating is key to a brighter future, and the world is catching on. For single-ingredient, whole, plant-based foods, that's a great thing. For a food such as sweet cherries, which are loaded with anthocyanins and other phytonutrients that deliver a host of benefits, that's even better.

From their anti-inflammatory powers to their melatonin-induced sleep benefits, sweet cherries are not only sweet, but healthy all the way to the center. The dark red color of cherries grown in the Northwest is caused by a high concentration of anthocyanins, those same compounds that are at the center of several ongoing studies right now.



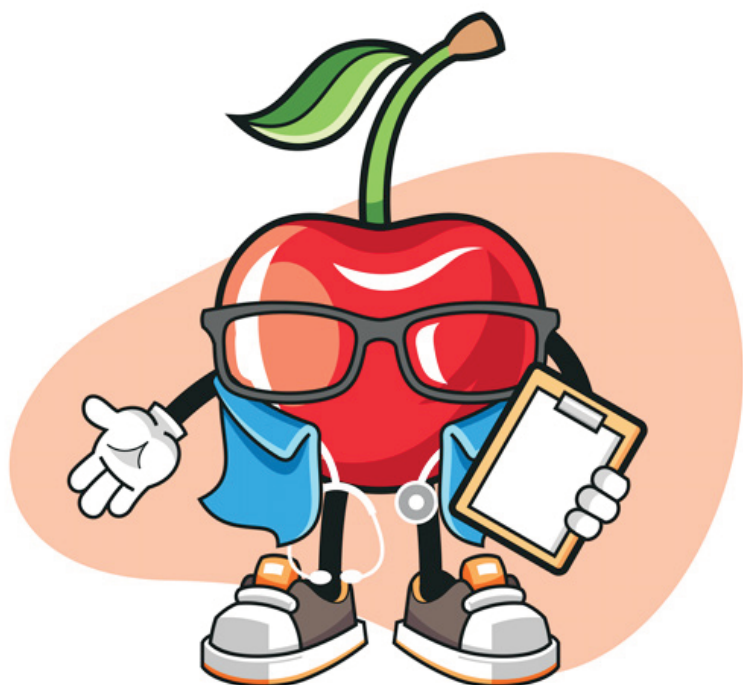
sweet  
fiber

provides about three  
of the daily value  
of fiber. Just two cups  
of cherries can help  
with healthy weight  
management and  
heart health.



Not only are the Northwest Cherry Growers funding several of these studies in the United States, but researchers worldwide are increasingly looking to the sweet cherry as a topic of further research. Some of the most promising of these results have been summarized and approved in forms more easily distributable and digested than lengthy white papers.

To help bring the world together on the state of cherry research, the NWCG produced several infographics using this information and have begun distributing them at conferences, trade shows and through digital channels. To learn more or view other cherry health materials, visit [nwcherries.com](http://nwcherries.com).







## Studies Show...

Sweet cherries are a flavorful source of potassium<sup>1</sup> as well as important nutritional properties and bioactive compounds, including:

- *Polyphenolics:*  
*anthocyanins, flavonoids, hydroxycinnamic acids*
- *Indolamines:*  
*tryptophan, melatonin, serotonin*

These compounds, gained through consuming dark sweet cherries, contribute to a host of beneficial effects on certain diseases and conditions.



### BLOOD PRESSURE

- Hypertension is a risk factor in cardiovascular disease, and studies suggest phenolic acids found in cherries and produced by anthocyanin metabolism exert vasorelaxing and antihypertensive effects.<sup>2</sup>

### CANCER

- In lab studies, the phenolic compounds of sweet cherries appear to inhibit breast cancer cell growth without toxicity to normal cells.<sup>3</sup>
- Sweet cherry extracts have been shown to inhibit proliferation of colon and breast cancer cells in several published studies.<sup>4</sup>
- Sweet cherries contain perillyl alcohol – shown to be capable of inhibiting pancreatic, breast, liver, colon, skin and lung cancers – which raises the fruit's anti-carcinogenic activity.<sup>5</sup>

### CARDIOVASCULAR DISEASE (CVD)

- Anthocyanins found in foods like sweet cherries inhibit lipid peroxidation, which has a hand in reducing CVD risk factors.<sup>6</sup>
- Anthocyanin interference with inflammation pathways can help in prevention of CVD.<sup>7</sup>

<sup>1</sup> "Sweet and sour cherries: Origin, distribution, nutritional composition and health benefits." Federica Blando and B. Dave Oomah. *Trends in Food Science & Technology* 86 (2019) 517-529.

<sup>2</sup> Blando, et al.

<sup>3</sup> "Dark sweet cherry (*Prunus avium* L.) phenolics as dietary chemopreventive/therapeutic compounds for aggressive breast cancer cell growth with no toxicity to normal breast cells." Layosa MA, Lage NN, Martens-Talcott SU, Talcott St, Pedrosa ML, Chew BP and Noratto GD.

<sup>4</sup> "Nutrients, Bioactive Compounds and Bioactivity: The Health Benefits of Sweet Cherries." Ana C. Gonçalves, Catarina Bento, Branca Silva, Manuel Simões, Luís R. Silva. *Current Nutrition & Food Science*, 2019 15, 208-227.

<sup>5</sup> Gonçalves, et al.

<sup>6</sup> Blando, et al.

<sup>7</sup> Blando, et al.

<sup>8</sup> Blando, et al.

<sup>9</sup> Blando, et al.



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## COGNITIVE FUNCTION

- Improved brain and visual function may result from anthocyanin's interference in inflammation pathways.<sup>8</sup>
- Anthocyanins appear to exert neuroprotection, resulting in a beneficial effect on cognitive decline and neurodegeneration associated with aging.<sup>9</sup>
- Consumption of anthocyanins from cherries appears to improve memory and cognition in older adults with mild-to-moderate dementia.<sup>10</sup>

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## DIABETES

- The polyphenols in cherries appear to help diminish hyperglycaemia, oxidative stress and inflammatory markers that are predictors of diabetes mellitus.<sup>11</sup>
- Cherry extracts reduce glucose blood levels and protect pancreatic beta-cells from oxidative damage, enabling them to continue balanced production of insulin.<sup>12</sup>

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## GOUT

- Consumption of cherries can significantly decrease plasma urate, which provides anti-gout efficacy.<sup>13</sup>
- Phenolics appear to interfere with the oxidative process as free radical terminators, ultimately decreasing formation of volatile decomposition products that contribute to gout.<sup>14</sup>
- Sweet cherries compared favorably to NSAID controls using ibuprofen and naproxen to alleviate gout symptoms.<sup>15</sup>

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<sup>10</sup> "Acute reduction in blood pressure following consumption of anthocyanin-rich cherry juice may be dose-interval dependant: a pilot cross-over study." Katherine Kent, Karen E. Charlton, Andrew Jenner and Steven Roodenrys. *International Journal of Food Sciences and Nutrition*, 2016, 67:1, 47-52.

<sup>11</sup> Gonçalves, et al.

<sup>12</sup> Gonçalves, et al.

<sup>13</sup> Blando, et al.

<sup>14</sup> "Is there a role for cherries in the management of gout?" Marcum W. Collins Kenneth G. Saag, Jasvinder A. Singh. *Therapeutic Advances in Musculoskeletal Disease*, 2019, Vol. 11: 1-16.

<sup>15</sup> Collins, et al.

<sup>16</sup> "Consumption of 'Bing' sweet cherries lowers circulating concentrations of inflammation markers in healthy men and women." Kelley, D. S., Rasooly, R., Jacob, R. A., Kader, A. A. & Mackey, B. M. *Journal of Nutrition*, 2006, 136, 981-986.

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## INFLAMMATION

- Eating cherries significantly decreased C-reactive protein and nitrous oxide concentrations, both known pro-inflammatory factors.<sup>16</sup>
- Consuming cherries was found to decrease plasma concentrations of eight biomarkers associated with inflammatory diseases (CRP, ferritin, IL-18, TNFα, IL-1Ra, ET-1, EN-RAGE and PAI-1).<sup>17</sup>
- Polyphenols in cherries may minimize or prevent inflammation and oxidative stress, which may be risk factors for diseases like arthritis, diabetes, cancer and hypertension.<sup>18</sup>

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## SLEEP

- The presence of tryptophan, serotonin and melatonin in sweet cherries interact with cherry phenolics to help regulate sleep cycles.<sup>19</sup>

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## STRESS

- Cherry phenolics appear to protect neuronal cells from cell-damaging oxidative stress.<sup>20</sup>
- Various studies have shown serotonin is an important neurotransmitter that reduces stress and improves mood.<sup>21</sup>

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<sup>17</sup> "Sweet Bing Cherries Lower Circulating Concentrations of Markers for Chronic Inflammatory Diseases in Healthy Humans." Darshan S. Kelley, Yuriko Adkins, Aurosis Reddy, Leslie R. Woodhouse, Bruce E. Mackey and Kent L. Erickson. *The Journal of Nutrition*, American Society of Nutrition, 2013, doi: 10.3845/jn.112.171371.

<sup>18</sup> Kelley, et al., 2013.

<sup>19</sup> Gonçalves, et al.

<sup>20</sup> Blando, et al.

<sup>21</sup> "The consumption of a Jerte Valley cherry product in humans enhances mood, and increases 5-hydroxyindoleacetic acid but reduces cortisol levels in urine." María Garrido, Javier Espino, David González-Gómez, Mercedes Lozano, Carmen Barriga, Sergio D. Paredes, Ana B. Rodríguez. *Experimental Gerontology*, 2012, 47, 573-580.







## COMMON CHERRY VARIETIES

Our dark sweet and yellow cherries are recognized throughout the world for their sweetness, firmness and consistency in color. Here are some of the leading varieties we grow to provide cherries for your table from June clear through the summer.

### CHELAN®

The Chelan variety is a leading early-ripening sweet cherry of the Pacific Northwest. They have a sweet, rich flavor and a firm texture. Chelans® have a unique round, heart-shape.

Available through June

### TIETON™

Another early ripening cherry that is extraordinarily large in size, with excellent firmness and a mild sweet flavor. Tieton™ is a glossy mahogany-red cherry.

Available through June

### SANTINA™

An early variety that is dark to almost black in color. It has a unique flattened heart shape with lustrous skin. Newer variety/Limited availability.

Available through June

### EARLY ROBIN

Quite similar to Rainiers, Early Robins ripen several days earlier, giving customers the chance to enjoy a yellow fleshed cherry earlier in the season.

Available through June

### BENTON

A mid-season, dark red cherry that closely resembles the Bing variety. This large cherry has excellent firmness with superior flavor. This cherry was developed at WSU Prosser Research Center. Newer variety/Limited availability.

Available  
mid June – mid July.

### BING

The leading and best-known sweet cherry in North America. The Bing originated in Milwaukie, Oregon in 1847. They are firm, juicy, sweet and have a deep mahogany-red color.

Available  
mid June – mid August

### LAPINS

A firm, large mahogany red cherry that has great flavor and good quality. It's a great backyard cherry because you can plant just one tree. This late season variety is known for it's large size

Available  
late June – mid August

### RAINIER

A very attractive, exceptionally large yellow cherry with a red blush. Rainiers have a distinctive and vibrant appearance among sweet cherry varieties. Delicately sweet flavored, the flesh is pure yellow, very firm and finely textured.

Available  
mid June – end of July

### SKEENA™

Large, sweet and extremely firm, Skeena™ continues to grow in popularity with consumers and growers. This dark red to almost black variety has a very firm texture. A great late-season variety.

Available  
early July – mid August

### SWEETHEART™

A medium to large sized, heart-shaped cherry that is deep red in color. The Sweetheart™ has a mild, sweet flavor and outstanding firmness.

Available  
mid July – mid August

### REGINA™

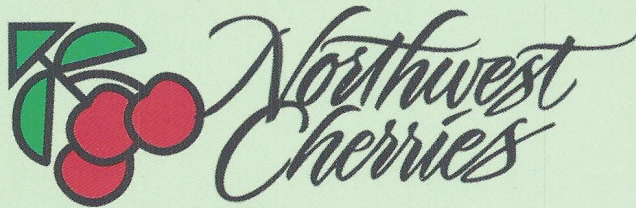
A popular dark red cherry that is fairly large in size. Reginas™ have a firm texture and sweet flavor that is driving demand for this variety.

Available  
late June – late July



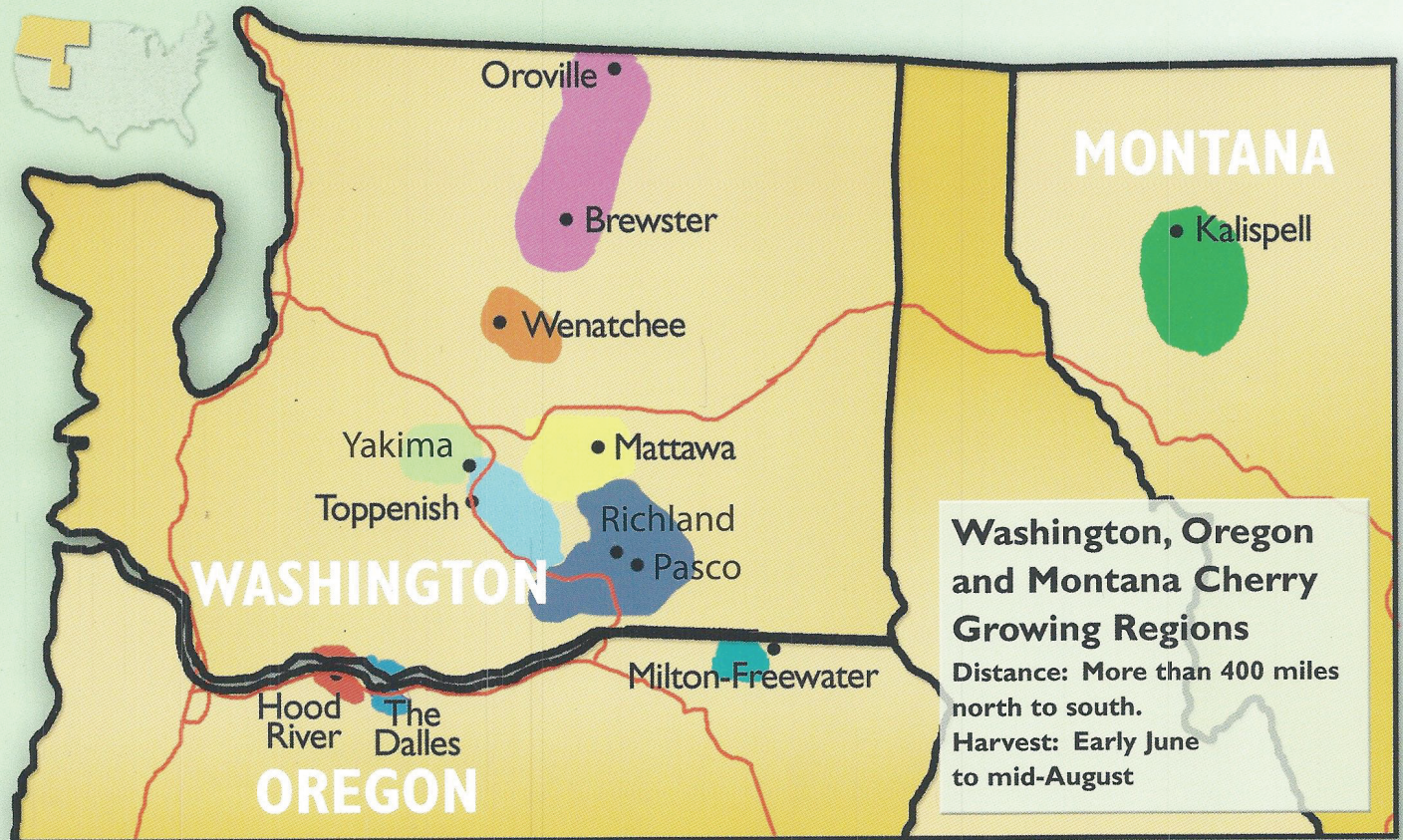
CHECK WITH YOUR SUPPLIER FOR THESE AND **OTHER VARIETIES.**





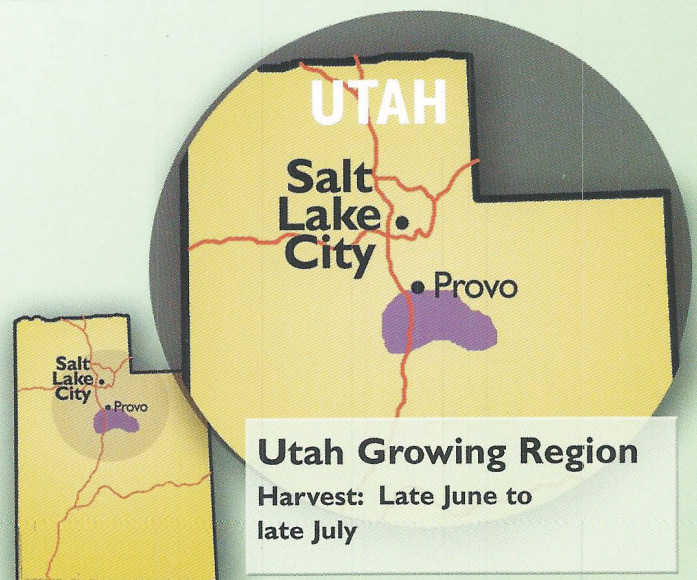
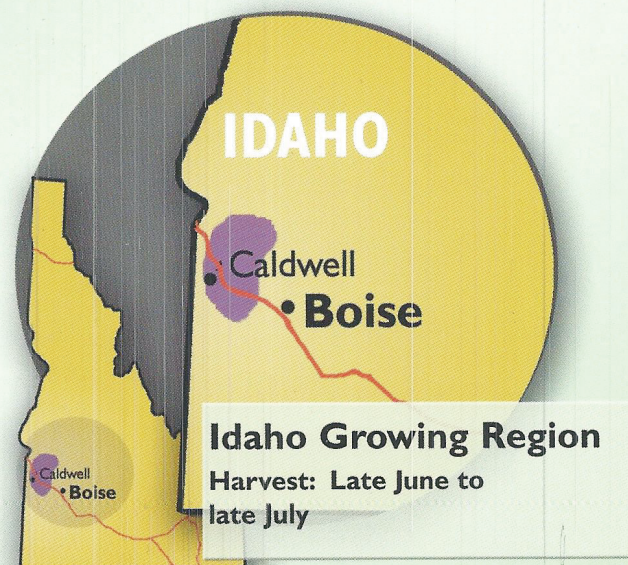
# FIVE-STATE GROWING REGION

**Washington • Oregon • Idaho • Utah • Montana**



- Upper Wenatchee
- Lower Wenatchee
- Upper Yakima
- Lower Yakima
- Mattawa

- Columbia Basin
- Milton-Freewater
- Hood River
- The Dalles
- Montana





# 4 Great reasons to eat cherries

## Cherries contain antioxidants

Antioxidants found in cherries may help to reduce the risk of cancer and heart disease



## Good source of potassium

Cherries are a good source of potassium. Increasing evidence shows that a diet rich in potassium may help to control blood pressure and reduce the risk for hypertension and stroke

## Promoting overall healthy sleep patterns



Cherries are a source of melatonin. Melatonin is an effective means for reducing jet lag and promoting overall healthy sleep patterns

## Eating sweet cherries can have a beneficial effect



Beneficial effect on inflammation, arthritis, blood pressure, cancer, cardiovascular disease, diabetes, cognitive function, sleep and stress



**"Results after consumption of Bing cherries are consistent with those reported with tart cherry juice in marathon runners."**