

Hops use up to 3 gallons of water per day per plant

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“We have seen changes in the amounts and types of hops produced over the years, similar to any agriculture crop. We own and operate hop farms in the U.S., Argentina and Germany and also work closely with global hop suppliers to ensure that our hop needs are met. We monitor market conditions and adapt as needed,” said Pete Kraemer, head brewmaster at Anheuser-Busch in St. Louis, Mo., the nation’s leading brewer.

“If the craft industry continues to grow at 15 to 18 percent (nationally), it’s hard to see how the hop industry keeps pace with it in 2016,” said Doug MacKinnon, president of 47 Hops, a Yakima hop dealer.

Early word-of-mouth estimates are that Washington is adding more than 4,000 acres this year, Idaho 1,100 and Oregon 500 to 600. It’s difficult to envision banks financing similar growth next year even without continued drought in the Yakima Valley, MacKinnon said.

A one-year drought shouldn’t slow planting but a longer drought could, he said.

Hops use a lot of water, up to 3 gallons per day per plant, Kemme said.

“That probably depends on what type of irrigation system he’s talking about,” Mackinnon said. “We’re on drip so I don’t know that it’s that much.”

Oasis Farms, between Prosser and Benton City, is among the Washington farms expanding acreage this spring. Brenton Roy, a co-owner, declined to comment on exact amounts.

Yakima the top region

Germany leads the world in hop production and is only slightly ahead of the U.S.,



Dan Wheat/Capital Press

Efrain Pena dons boot coverings to wade into hop drying bed to check moisture content during hop harvest at Roy Farms, Moxee, Wash., in 2013. Facilities such as this are being pushed to capacity during harvest by increased production.

China and Czech Republic in the top tier of producers. Half a dozen other nations also grow hops.

In the U.S., Wisconsin and New York were huge producers in the early 1860s, with Wisconsin peaking at 11 million pounds in 1867 before a mildew outbreak caused the state’s industry to crash in 1870, MacKinnon said. In those days, growers had no means to combat mildew.

For decades, U.S. hop production has centered around Yakima. It’s in a zone slightly north of the 45th parallel north latitude, regarded as best for yields due to the length of the daylight hours during the growing season.

The area also has a dry climate, plus good growing temperatures, soils and water.

In 2014, the U.S. produced 70.9 million pounds of hops, valued at \$272 million, according to USDA’s National Agricultural Statistics Service. Washington accounted for 79 percent of the production.

Washington grew 73.9 percent of the acreage at 29,021 acres, Oregon grew 14.2 percent at 5,559, Idaho grew 9.7 percent at 3,812 and other states grew 2.2 percent at 880 acres, according to Hop Growers of America. In 2014, the average price per pound of Washington hops was \$3.89 per pound, according to NASS. It was \$4.34 in Oregon and \$2.75 in Idaho.

Other states expand

Other states have been so minor that USDA’s National Agricultural Statistics Service doesn’t track their hop production. But there’s discussion of adding Michigan next year, said Dennis Koong, deputy director of the NASS Northwest regional office.

In northwestern Michigan, Empire Hops Farm harvested 118 acres last year and plans to add 200 acres this year and next. Michigan totals about 400 acres of hops right now and Empire is the largest producer in the state.

The company also grows

apples but co-owner Dan Wiesen said he sees a strong future in hops.

“We have a lot of water and (lack of) water is an issue out West,” he said. “We are close to major markets and we have plenty of labor.”

“We are basically starting an entire industry here. Brewers have been leery. They want high quality and consistency. We had our profiles tested and they came out well.”

Wiesen said he visited the Haas operation in Yakima recently and discussed the future with Mahony.

“The scope of things out there is amazing,” Wiesen said. “We’re just a drop in the bucket compared with Washington.”

Lynn Kemme, the hop propagator in Zeeland, Mich., said small craft breweries experienced 40 percent growth across the Midwest last year and can’t get contracts with hop growers in the Pacific Northwest. They have to buy on the open market, he said.

“Grower groups are start-

ing in Montana, North Dakota, South Dakota, Colorado, New York and Pennsylvania. Growers are selling regionally or locally to craft brewers,” Kemme said.

Hop Growers of America is starting a small grower council to help small growers nationwide, he said.

Many growers in the Midwest and New York are small, just a few acres, but they are ramping up, with craft breweries linking up with specific hop yards and sponsoring them, Kemme said.

Craft brewers want different hops and “we have well over 60 varieties compared with the four to six big ones (aroma varieties) for craft brewers out West,” he said.

Yields are on par with the West and Midwest climate is better for some English varieties of hops than the Yakima Valley, which can get too hot, he said.

“We are getting bigger but we will stay craft. We don’t have the volume and consistency to supply Anheuser-Busch,” Kemme said.

Yakima perspective

Mahony, at John I. Haas in Yakima, said some other areas are not as conducive to growing hops as the Pacific Northwest, but growers see good demand and good money.

Minnesota, Iowa, Illinois, Indiana, Ohio, Virginia, Vermont, North Carolina, Ontario and British Columbia are all growing hops but Michigan, New York and Wisconsin, at a few hundred acres apiece, are the big three newcomers, he said.

“They will have more challenges with mildew, disease and pest pressure. Their yields likely will not achieve the levels we have, so they will be a more expensive source of hops,” he said.

“Still it’s something for us to keep an eye on. We’re in

discussions with some of the larger growers to see where it goes, to learn more about their plans on acreage and varieties,” Mahony said.

Haas is a industry leader in growing, processing and research and development.

“The big question is whether these other states will become a viable source of supplemental hops into the U.S. industry,” Mahony said. “Right now they serve very local craft brewers. In many cases it’s wet tops for fresh hop ale, not processing, pelletizing or storing.”

“We’re looking at the sensory aromatic characteristics of these hops versus the Pacific Northwest. They do take on a different aroma and flavor based on the growing region. We don’t know if brewers will accept these as interchangeable with what they buy here.”

That’s true but it can be a good thing for craft brewers looking for different aromas and flavors, MacKinnon said.

“Each brewer wants something unique and that filters to hop yards,” Kemme said.

“The big advantage Washington has over everyone else in the world is that Washington can plant in the spring and harvest in the fall. Idaho can a little. Everyone else has to wait two to three years to get a full yield,” MacKinnon said.

That more than anything else will temper financing and growth of growers outside the Pacific Northwest, he said.

Larger farms are evolving in Michigan and New York but are only beginning to reach the consistency of product the Northwest can provide and that brewers big and small want, he said.

“All the states have their strengths and weaknesses,” MacKinnon said. “Washington’s strength is it can respond to the market quickly and its flavor profile is dominant and is the standard.”

Declaration added 13 more watersheds in Washington

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Friday’s declaration added 13 more watersheds, mostly in northwest and southwest Washington, where the drought’s impact on fish is the dominant concern. Some municipal water systems also could suffer shortages, according to the state Department of Health.

Washington State Department of Agriculture hydrogeologist Jaclyn Hancock said producers in the areas anticipate having enough water. “Growers and cattlemen are feeling positive about the water supply in those regions,” she said.

Agricultural hardships, however, are anticipated in two Eastern Washington watersheds that were added to the drought declaration.

Between early March and early April, the snowpack in the Okanogan watershed in north-central Washington declined from 55 percent to 6 per-

cent of normal.

Meanwhile, the snowpack feeding the Alkali-Squilchuck watershed, which includes parts of four south-central counties, went from 50 percent to 11 percent of normal.

“We fully expect there will be hardships for farmers and ranchers in those areas,” WSDA spokesman Hector Castro said.

Columbia Basin growers in Eastern Washington are expected to weather the summer because of near normal flows in the Columbia River. The state’s westside population centers — the Seattle, Tacoma and Everett areas — report ample water supplies in their reservoirs.

But conditions are expected to deteriorate in rivers and streams that depend on melting snow to get through the summer.

The Northwest River Forecast Center predicts summer flows in the Lower Yakima,

Upper Yakima and Wenatchee basins will be about half of normal.

Before Friday’s declaration, DOE requested \$9 million from the Legislature to increase water supplies for farmers, fish and cities.

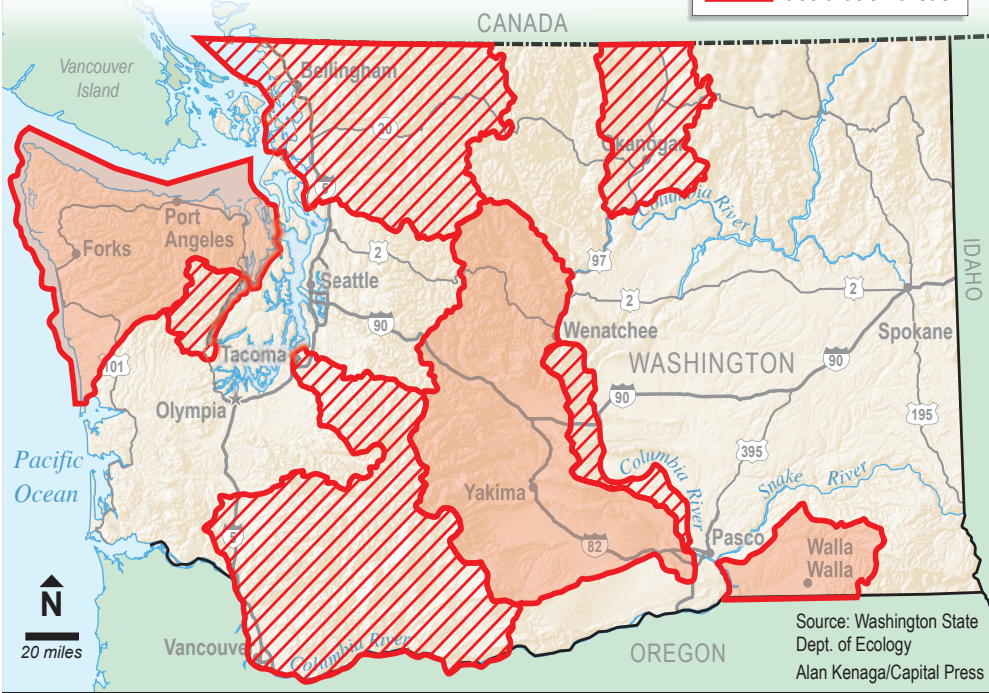
“We are still under the belief the \$9 million request is adequate,” Bellon said.

The declaration Friday added all or parts of Whatcom, Skagit and Snohomish counties in northwest Washington.

Also added were portions of Skamania, Clark, Cowlitz and Lewis counties in southwest Washington, as well as Pierce, Mason, Jefferson and Kitsap counties around the Puget Sound.

Snow has fallen in the mountains recently, but the statewide snowpack remains at 24 percent of normal, according to the Governor’s Office. Snow is a fraction of that or nonexistent in some places.

Washington state drought declarations, 2015 (As of April 17)



Frustration that little has been done to solve water shortage situation

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surface water to irrigate.

But the business owners aren’t necessarily pessimistic about the financial situation for their companies. They have dealt with water shortages over the past dozen years, so another year of drought for farmers and ranchers — and the businesses that support them — is nothing new.

But there is frustration that little has been done over the years to solve the water shortage situation.

“We need to develop off-stream storage,” said Ron Linman, co-owner with his father Archie Linman of Klamath Basin Equipment, a 26-year business that has stores in Klamath Falls, Lakeview, Redmond and Central Point. “The economic impact of agriculture needs to be considered hand-in-hand with the environmental impact. We need politicians who will deal with it using a common sense approach.”

Archie Linman said it has been suggested that winter and spring runoff water be pumped to Clear Lake southeast of Klamath Falls for storage and



Craig Reed/For the Capital Press

Klamath Basin Equipment employees Joe Fuentes, left, and Ken Smith, right, check over features on a New Holland baler with KBE co-owner Archie Linman on April 13 in Klamath Falls, Ore. Linman says the 26-year business has survived previous drought conditions in the Klamath Basin and is optimistic it will survive the anticipated dry conditions of this year.

that Klamath Lake be dredged to hold more water and to lower the overall water temperature in the lake. Neither idea has been developed.

While the Linmans are hopeful their company won’t have to lay off employees later this year, they admit there is the possibility their mechanics won’t get as many overtime hours this summer and commissions may be down for sales people.

“But we’ll survive,” Archie Linman said. “We sure as hell plan on it.”

Bob Bunyard owns Klamath Pump Center of Klamath Falls, a 24-year-old business with six employees. He said the company has diversified beyond agricultural projects to keep its employees busy.

“I don’t know what the answer is,” said Bunyard, who also owns 100 acres of hay ground east of the city. “The

growers have already done a lot for water conservation. We can’t get too much more efficient than what we are.

“We thought we were high on the pecking order, but the government has over allocated the (Klamath) river ... the whole watershed,” he added.

Todd Greer, owner of D&D Seeds of Klamath Falls, a business his parents started in 1993, said he doesn’t know how much more belt-tightening can be done. He said he’ll continue to pursue different markets outside the Klamath Basin, selling seed north to Bend and Madras, Ore., and south to Redding, Calif. He’s also developed a market with landscape companies.

“I’m sure we’ll survive,” Greer said of his business that employs four. “But when outside forces don’t realize what is going on, that makes it more difficult. I’m sure plenty of people understand the situation, but plenty don’t.”

Chuck Johnson, co-owner of Pelican Tractor in Klamath Falls, explained that his business has also expanded its marketplace over the years, selling equipment south in

Northern California and east to Lakeview. The 46-year, family-owned business has also added different products and parts lines.

“We have 10 employees and we plan to keep them. We’ll find work for them,” he said. “When you start putting fish and owls before people, this is what happens.”

Michael Ugalde, the territory manager for California in the Pape Machinery store at Merrill, Ore., said some customers recently have been asking about buying used equipment rather than new machinery.

He and Billy Conrad, the territory manager for Oregon at the Merrill store, said that less land will be put into production due to a lack of water to irrigate and in turn that will mean less equipment is needed to grow and process the crop.

The Merrill store has 18 employees. Ugalde said Pape has been good at maintaining its employees through tough times, but there’s still uncertainty for the workers.

“We’ve got a vested interest in this ... it’s our livelihood,” he said.

“Until you’re in the middle

of it, you just don’t realize how bad it is ... the degree of its severity,” Conrad said.

Chris Moudry, a managing partner with Basin Fertilizer & Chemical Co. of Merrill, said land not being put into production will impact his business. He said he expects some substantial cutbacks for some ag-related companies. But he added the 41-year, family-owned Basin Fertilizer endured similar situations created by water shortages in 2001, ’02 and ’03 and survived.

“We didn’t lay off anybody then,” Moudry said of the business’ 40 employees. “We’re committed to our people on a long-term basis. Whether we can maintain that is decided one year at a time.”

“Due to the nature of our business, working with hazardous materials and large expensive equipment, if we lay somebody off, we lose a lot of experience and knowledge,” he added.

Moudry said the dam on the Upper Klamath Lake was put there to store water for agriculture and irrigation, but now the water is being sent downriver for fish.