

Positively Pennsylvania



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GROWING
YOUR PINT
HOW PENNSYLVANIA GRAINS
BECOME PENNSYLVANIA BEER



Alan Gladish, right, business manager and owner of Double Eagle Malt, and Scott Broussard, malthouse manager, show off malt produced from Pennsylvania grains in front of the malthouse kiln.

Story and photos by Liam Migdail

Crafting Local Brews

Montgomery County malthouse works with Pennsylvania farmers and brewers to put locally grown grain into craft beer.

There's a kiln in a small industrial park minutes north of Philadelphia that plays a crucial role in putting a taste of Pennsylvania agriculture into pint glasses across the state.

It's nondescript and from some angles could almost be mistaken for a commercial dumpster—although what happens inside is a lot more exciting. But the words printed on the front of the device alongside a logo of a soaring eagle tease the story of why it's there: "Grain with a higher purpose."

That's the slogan of Double Eagle Malt, a Montgomery County company that crafts malt from grains grown by local farmers and sells Pennsylvania



Brothers Dustin, left, and Cody Musser grow barley for Double Eagle Malt on their farm in Lancaster County. (Photo courtesy of Double Eagle Malt)

Barley is harvested on the Musser brothers' Lancaster County farm. It will be malted by Double Eagle for Tröegs Independent Brewing to use in a special edition beer. (Photo courtesy of Tröegs)

brewers and distillers on the chance to work with ingredients right from their backyards. Its founder and business manager is Alan Gladish, an avid homebrewer and marketing and communications consultant. He crafted the slogan in an effort to sum up what the malthouse—or as he jokes his most needy client—is all about.

“We are in favor of farmers,” said Gladish, a Farm Bureau member. “We are trying to support farmers, to give them something of higher value to grow than a commodity.”

As interest in both craft beer and local food seem to have exploded simultaneously, it would follow that brewers would want to use local ingredients in their beer. The problem is there's not a whole lot of malting barley—the primary ingredient for most beers—produced in the Keystone State. It's a hassle to grow in Pennsylvania's climate. And because there are very stringent quality standards for grain used for malting, farmers risk not being able to sell the crop if something goes awry.

That's where Double Eagle steps in. The malthouse pays a premium price for malting barley, incentivizing local production by giving farmers a chance to produce a high-margin crop. And because barley grows over the winter, farmers are able to use it as a cover crop to prevent soil erosion instead of taking away field space from their mainstay crops such as corn, soybeans and hay.

The malthouse works closely with farmers to select seeds and help ensure quality grain. The company also engages educational programs, such as Penn State Cooperative Extension, to improve strategies for producing malting barley in the state.

Since opening in 2015, Double Eagle has established a sturdy

How Grain Becomes Malt

You can't make beer starting with raw grains. For the starch to break down into sugar (which yeast then converts into alcohol during fermentation), the grain has to be malted.

Double Eagle Malt uses a three-step process to convert raw grains to malts that can be used by brewers and distillers.

“It seems really, really simple but it's really, really hard to do right time and time again,” said Alan Gladish, Double Eagle owner and business manager.

First, the grain is steeped in water to trick the seeds into thinking it's spring and starting the germination process. But just as the grains are about to sprout, they are dried to halt germination.

Starting to germinate the grains does two things. It breaks down protein barriers that would make it harder for yeast to metabolize sugar during fermentation. At the same time, the process produces enzymes that are needed to break down the starch into sugar.

Finally, the grain is kilned to give the malt its color and flavor. All barley malt—from the lightest to the darkest—begins with the same grain. What makes the difference is how much it is kilned, or in some cases, roasted. Some malts are also made from wheat, rye and oats.

After the malt is finished, it goes through a cleaning process to remove any sprouts or debris.



What: Malthouse that supplies Pennsylvania breweries and distilleries with locally produced grain

Where: Huntingdon Valley, Montgomery County

Learn more:
www.doubleeagle malt.com

All About Malts

The same crop of barley can be used to make a wide variety of malts that impart different flavors, colors and mouth feels to the beer. The difference is in how they're kilned or roasted. Some beers also include other grain malts, such as wheat or rye. Here's a sampling of a few of Double Eagle's malt varieties:



RUSTIC ALE: Double Eagle's signature pale ale base malt, it's kilned slightly more than most to give the beer a more nutty, aromatic and complex malt flavor.



CARAMEL: Kilning gives this malt more complex sugars that are not as easily converted to alcohol. That leaves more sugar in the beer, adding sweetness.



HERITAGE RYE: One of a few malts that isn't made from barley, it's the base malt used to make rye beers, such as a rye IPA.



PENNYPACK PILS: This is the base malt for a pilsner-style beer or other light variety. It's only very lightly kilned.



COCOA: Roasting gives this malt a dark color and smooth, chocolaty flavor, both of which are incorporated into the beer.



LEGACY WHEAT: Another non-barley variety, it's the base malt for wheat beers, such as a hefeweizen.

Building a Brew

Brewers often use a variety of malts in a particular beer to achieve the right flavor notes and color. The malts used depend on the beer type. Here are the malts that might be used in a porter, a dark ale variety.

Cocoa

Added for color and to give a roasty flavor.

Munich

Added to give a sweet, malty flavor.

Black Magic

Added to achieve dark color.

Caramel

Added to impart sweetness and more-complex flavor.

Vienna

This is the base malt used to produce most of the body of the beer.



foothold in Pennsylvania's craft beer scene. Grains are sourced from a handful of farmers in Montgomery, Bucks, Dauphin, and Lancaster counties as well as a few nearby in New Jersey. And the malt is used by breweries all across the state—from Urban Village Brewing in nearby Philadelphia and Sly Fox across Montgomery County, to the Harrisburg Millworks and Selin's Grove Brewing in the midstate, to East End Brewing Company in Pittsburgh.

Some on-farm breweries that produce their own grain, such as Great Barn Brewery in Bucks County, contract with Double Eagle to malt their grains. The malthouse even works with a few distilleries looking to bring unique flavors to their spirits.

"More and more these days, these craft distillers are looking to push the flavor," said Scott Broussard, the malthouse manager.

As customers want the opportunity to buy local, the malthouse has carved out a niche helping brewers meet that demand. Breweries can get PA Preferred certification—recently made available for beer—by using Double Eagle's malts. And drawing on Gladish's expertise, the company offers brewers some help in marketing that beer produced with local malts.

"It's something that is really easy to believe in and it's something I personally believe in," Gladish said. "So it's no stretch at all to take that and run with it as a marketing professional."

When Double Eagle sells malt to a brewery, it provides information about the farmers who produced the grain so that the brewery can help its customers better understand where their beer came from.

Gladish also recommends that breweries market the beer made with the local malt as a premium product, something unique. Using craft malt is more expensive, he said, but that cost can be recouped because customers are willing to pay a little extra for a special beer made from local grains.

"Where our product places really well is in the taproom itself," Gladish said. "This is a different product. You want to use it and promote it properly."

"Part of what we're selling is a marketing opportunity," Broussard added.

Broussard said his dream is for every brewery in the state to keep a "local tap" that rotates between beers sourced from Pennsylvania ingredients.

It would be impractical, if not impossible, for a brewery to source all of its grain locally, he said. For one, buying all craft malt would be expensive. But it would also be difficult to meet that demand. If one of the state's larger craft breweries were to decide it wanted to source one of its flagship beers locally, it would need all the malting barley grown in Pennsylvania and then some.

That's why Double Eagle isn't aiming to be any brewery's exclusive supplier of grain. Instead, the malthouse has positioned itself as one brewers work



Chris Trogner, co-owner of Tröegs Independent Brewing, inspects soon-to-be harvested barley on the Musser brothers' Lancaster County farm. Double Eagle is malting the barley for Tröegs to use in a special edition beer. (Photo courtesy of Tröegs)

with for small-batch creations and one-off special edition beers that embrace the farm-to-glass connection.

"What we're looking for is not necessarily to take over everybody's business," Broussard said. "We're looking to do something different."

That's the aim of Hershey-based Tröegs Independent Brewing, which plans to produce a Scratch Series beer with Double Eagle malt made from barley grown by brothers Dustin and Cody Musser of Lancaster County. Representatives from Tröegs visited the Mussers' farm, just 30 miles from the brewery, as the grain was harvested recently.

The Mussers, Farm Bureau members, got connected with Double Eagle through Penn State Extension a few years ago and have been producing malt for them since. They try to avoid putting all their eggs in one basket and saw malting barley as a good addition to the operation.

"This was just another thing that we could do to easily diversify ourselves on the crop side," said Dustin Musser.

The farm grows cash crops, raises beef cattle and also raises heifers for nearby dairy farms. The barley—although it's grown on just a small scale—has been a nice addition because it's a high margin crop, Musser said. And he said, it's also less risky for his farm than others because it could be used as cattle feed if it wasn't up to par for malting.

Musser has to laugh a little when he thinks about being part of the story behind a local beer. Having



Scott Broussard, left, and Alan Gladish inspect grain during the malting process.



Scott Broussard holds a handful of grain that's in the process of being turned into malt.

an operation that does most of its direct business with other farms, he never thought he'd be tied into enthusiasm over buying local. It's exciting, he said, that people are interested in learning about the farmers who play a role in producing their beer.

"They want to know the history of where it started and where it ended," he said. "It's pretty cool how it all comes full circle."

While malting barley is still a small part of Pennsylvania agriculture, Musser suspects that may change as more and more brewers demand locally produced grain. Homebrewers could also ramp up demand, he said, as they look to produce beer made with ingredients from their communities.

"I think there's potential for it to blow up and get pretty big," Musser said. "I think it's going to take a little time. But good things do take time."

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Q&A: Brewing Local

Tröegs Independent Brewing is developing a special edition beer made with malt produced by Double Eagle from grain grown on the Musser brothers' farm in Lancaster County. *Positively Pennsylvania* spoke with co-owner and brew master John Trogner to learn more about how the brewery is using local ingredients.

What is the importance of using Pennsylvania-grown ingredients in your products?

We were born and raised in Pennsylvania, and our brewery has grown with the support of our Pennsylvania neighbors. When we found a malt we really loved, it made sense for us to commit to our backyard. Because the farm and the malthouse don't have the same economies of scale that larger farms and malthouses have, this malt is more expensive. It reminds us of when Tröegs was very young and we were trying to get a foothold. We owe a lot to the local restaurants and bottle shops who were willing to pay a little extra for our small-batch beer back then, and this seems like a good way to pay that forward.

Our priority is buying the best ingredients in the world. A lot of times that's grain from Germany or Canada or the U.K. Or it's hops from the Pacific Northwest. But we're lucky because other times that's right here in central PA. About 30 miles south of the brewery is the Pennsylvania Fruit Belt, 20,000 fertile acres covering the slopes of South Mountain. The soils are deep, well-drained and gravelly, and it's one of the finest fruit-producing regions in the United States. So, that area provides us amazing fruit—cherries, peaches, nectarines, strawberries—and it also helped us develop the house culture used to ferment our line of wild-fermented Splinter beers.

The relationships we've developed with local growers over



Tröegs co-owner and brew master John Trogner holds up a crate of locally sourced peaches to be used in the brewing process. (Photo courtesy of Tröegs)

the years are really beneficial. When you have an idea, it's easy to pick up the phone, go out for a visit and taste some fruit or grain. We like getting out of the brewery to see, smell and taste the ingredients, and oftentimes, our co-workers pitch in with planting or harvesting. We've had teams out in the local fields planting and training hops, picking strawberries and harvesting pumpkins. And back at the brewery, we'll occasionally call all hands on deck to help cut the stones out of pit fruit or de-stem strawberries or cherries. The more our team knows and works with our ingredients, the better.

And sending a local grower a check feels good. Keeping the money in our community is better whenever possible.

How much of your beer is made using Pennsylvania-grown ingredients?

In the big picture, not a lot. It takes a lot of raw materials to brew beer, and we can't really source the amount we need locally. There are a handful of hop growers, for example. Some are developing quite well, but the volume just isn't there.

We are getting more and more grain locally though. We work with two Pennsylvania maltsters—Deer

Creek and Double Eagle—and a lot of the grain they are sourcing is from Pennsylvania and neighboring states. In fact, we are working with Double Eagle to get us 100,000 pounds of barley from Mount Joy, about 30 miles from the brewery as the crow flies.

How do you let your customers know that your beer is derived from Pennsylvania-grown ingredients?

Three key ways of talking to customers are through our Hershey brewery and tasting room, our packaging and our social media. Through all three of those avenues, we call out Pennsylvania-grown ingredients whenever possible.

Do you get a lot of feedback from customers or farmers who appreciate that you use local ingredients?

Absolutely. About 60 percent of our sales are in Pennsylvania, so sourcing Pennsylvania ingredients resonates with a lot of our customers. They know a lot of the farms, have emotional connections to certain locales, maybe they went to school with one of the farm owners. When we share those stories, our fans have a stronger connection to our beers, and it gives them a sense of pride and ownership.

Dauphin
County