



POTATO vodka 101

Process converts spuds into potent potable

Story and photos by Ken Levy
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Grand Teton Vodka has begun operations in its distillery north of downtown Driggs, and the proprietors hope the brand will gain international recognition.

For now, however, its first batches will be distributed from the Idaho Liquor Dispensary. And its processes for creating the drink are still going through some tweaks.

Potatoes, water, yeast and nutrients combine for what will eventually become smooth and potent vodka.

The process starts at the 800-liter cooker, which is heated by a steam boiler that runs the cooker and distiller. The mash, as it's known, includes potatoes and water, and is brought up to about 170 degrees. Enzymes are added that convert the starch to sugar.

A large beater in the cooker keeps ingredients moving.

"What starts out as really thick mush [cooks] to really thin, syrupy very sweet fluid, to which we then add yeast and nutrients," said Lea Beckett who, with husband Bill, founded the new distillery.

The mixture is allowed to cool to 90 degrees to allow the yeast to be added. The mix is then pumped to one of four fermenters.

Motors attached to the top of the fermenters agitate the blend for 15 minutes every four hours "so they don't get any hot spots in them," she said. The temperature is kept around 25 degrees C to allow the

yeast to work. That takes 3-3-1/2 days to go from the sugar mash to a beer, or wash, that is between 15-18 percent alcohol.

A tube runs from the fermenter to a small bucket of water that shows active bubbling action from carbon dioxide, "which signifies that the sugar is being turned into alcohol," she said. "When the bubbling stops, it's done."

Gauges ensure that pressure isn't building up in the fermenter, since it's a zero-pressure process. Other gauges monitor temperature.

"There's a bit of chemistry involved. We have to constantly check pH. If it gets too acid, the yeast will die," she said.

A siphon port in the fermenter allows the distillers to check for pH. John Boczar, head distiller, was in the process of wiring the fermenters for sensor automation. Those sensors will automatically power the motors to cool the fermenters down if temperatures get too high, among other functions.

"The automation system controls the timing of when the fermenters actually need to agitate to keep the hot spots down, because the yeast actually creates a hot spot in the center, so we want to spin that out," Boczar said. "They're temperature controlled to turn water jackets on to cool the entire mash down."

When the mash is ready to distill, it loses its sweetness.

"The sugar is gone, and you can actually taste the alcohol," said Beckett. "It's sour now."



John Boczar, head distiller at Grand Teton Vodka, wires fermenters for automation at the plant.

"When it finally gets to the top, there's a condenser that we run cold water to, and it condenses. Eventually the gasses stack up in the column. Alcohols stack up based on their vapor points. When we get all the alcohol stacked up in the column, we start pulling it off with [roto] meters."

These control the flow of the vapor and the product, whether Boczar wants it to go back into the column to reflux, or direct it to the final condenser and start taking product out.

Vodka continued on B14

Grand Teton Vodka's 600-liter distiller, which is heated by steam at the bottom. Alcohol vapors rise along a 32-foot-tall column from the distiller. "The column is packed with stainless steel corrugated pipes. The vapor hits the cool part of the tower and falls back down," said Lea Beckett, a principal of the new distillery.

It reevaporizes and goes through the whole process again, several times redistilling and condensing over and over again.

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A bottle filling station at Grand Teton Vodka





TVN Photos/Ken Levy

Top right: John Boczar, head distiller at Grand Teton Vodka, holds a handful of garnet sand used for filtering the product.

Above: Lea Beckett, a principal of Grand Teton Vodka, pulls a sample of fermenting vodka for pH testing.

Left: Roto meters allow the distiller to control the flow of the vapor and the product, whether he wants it to go back into the column to reflux, or direct it to the final condenser and start taking product out.



Vodka continued from B1

“The water holds more heat and condenses before the alcohol does,” Boczar said. “By throwing cool product back into the top of the still, which is the reflux action, that helps capture the water and separate the water from the alcohol. The alcohol has a different condensation point, so it continues on past the cool corrugated boards in there, and the water gets recondensed and falls back down to the bottom of the still.”

When complete, the still will have only water and a small amount of potato residue, said Beckett.

The distilled product is measured and captured in 55-gallon stainless steel tanks.

“That will be 190 proof alcohol,” she said, “and that’s [actually] 95 percent alcohol. But that’s not what people drink. We add good Idaho well water to it. What you drink is 40 percent alcohol.”

From the distiller, the vodka is polished. In polishing, the proofed alcohol is put through charcoal and garnet-sand filters to remove any chance of off-tastes or fragrances.

“It polishes best when you get it ice cold,” she said. Copper pipes run through a freezer, and the alcohol is pumped through the freezer. The product is pumped through two charcoal filters and the garnet sand.

It’s run through the filtering system constantly over a 6-16 hour period. Grand Teton Vodka is still experimenting with the ideal time.

Finally, the product is run through paper filtration to remove any minute particles of charcoal or garnet sand before heading to the bottling area.

During test production runs, Grand Teton Vodka worked with raw potatoes, potato flour and flakes and ground potato flakes.

“Potato flour clumps,” she said, “and some of the potato flakes don’t go into solution very easily. Ground potatoes were the most difficult of all, and leaves the most residue at the end.”

Ground potatoes need longer cooking times, which requires more power.

That costs more than if Pacific Idaho Potato in Ririe, the processing plant GTV uses, cooks the potatoes and takes the water out of them.

“Potatoes are 75 percent water,” she said, “and if we



John Boczar

don’t have to deal with that waste, we don’t have to deal with disposing of that water, and we don’t have to grind them up. The price of the flakes is almost identical to using potatoes, “and it’s faster for our production methods.”

Grand Teton Vodka wants to open a tasting room and offer its product for retail sale onsite. But

the tasting aspect may have to find friendly legislators, to change the law, since it’s illegal to offer hard-liquor tastings at distilleries in Idaho. Beckett said she’s lobbying local legislators to allow a maximum of three, half-ounce tastings per adult over 21 in any 24-hour period.

“That’s what’s most reasonable distillers do,” she said. “We don’t want to pour full drinks for people, we only want them to taste it, and then they can decide if they want to buy it.”

“We’re just a local business that

wants the same rules that Utah has, and bring in tax revenue.”

Grand Teton Vodka will be sold in 750 ml and 375 ml bottles, which are filled and labeled onsite. Four bottles can be filled in 23 seconds. Beckett estimates the plant can bottle 400-500 bottles an hour at current full capacity.

At press time, GTV was preparing hundreds of bottles for delivery to the state liquor dispensary with initial distribution of six bottles minimum to every liquor store in the state, and three to smaller grocery-store sales locations.

TVN en Español

Ahora, Teton Valley tiene su propia planta de vodka. Grand Teton Vodka espera ganar fama internacional por su vodka hecha de la especialidad de Idaho, las patatas. La operación esta por vender su primera botella del alcohol. Las primeras botellas fueron enviados al dispensario estatal que las distribuirá a los supermercados y tiendas de bebidas alcohólicas. Deben salir en las tiendas para comprar en unas semanas. La destilería e instalación de embotellamiento fundada por Lea Beckett y su marido Bill se ubica al norte de Driggs.

