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## The next step in artisan-distilled vodka by Duncan Holaday/Vermont Spirits

**B**ill Owens of the American Distilling Institute traces what he calls the “renaissance in distilling” to the work of Jorg Rupf, currently at St. George’s Distillery in Alameda, California, beginning about twenty years ago. Rupf’s Hangar One vodkas, especially his fruit infusions, did indeed change the definition of vodka in the U.S. and broke the price barrier that favored imported vodkas over domestic ones.



*Author Duncan Holaday of Vermont Spirits and his still.*

Looking at changes in the spirits market over the past 20-30 years, we see that the popularity of vodka in the U.S. can be traced back to the very successful Absolut advertising campaign, which started in the early eighties. Bellvedere's introduction of the super-premium bottle and matching product followed in the nineties and started the upward trend in price expectations. Then came flavored vodkas produced by the large-scale manufacturers, which promised more than they delivered in sales and new directions. This, I believe, was the point at which the opening for real change occurred.

These trends in the vodka market brought the discerning American drinker to the point where high-priced, flavored vodkas could be appreciated, and Rumpf's work was there and ready to fill the opening. His hand-distilled fruit infusions cannot be produced on a large, industrial scale. They continue in the tradition of European, small-scale, highly-skilled eau-de-vie production, and thus began the movement in American artisan distilling.

The next step in this development is illustrated quite clearly by Vermont Spirits. This involves using the techniques of artisan distilling, namely small-batch, labor-intensive methods to bring out the special character of the substrate from which the vodka is made. The substrate is the substance from which the alcohol is fermented and can include various grains, potatoes, grapes, apples, cane, and in the case of Vermont Spirits, milk sugar and maple sap. This most recent step in the development of the vodka market requires a fundamental change in the perception of what vodka is and how it can be made. It requires, first, that we debunk the myth that vodka is "flavorless and odorless" which has been the basis of the ATF, now TTB, definition of vodka for many years. And second, it requires that we question the assertion that it is only the water that gives distinct character to any particular vodka.

We know now that there can be Character with a capital "C" in spirits distilled above 190 proof. So, the technical definition of vodka as any spirits distilled over 190 proof should replace the old definition based on lack of flavor and odor. We also know that the water is important, because the clarity of good vodka allows the water to express itself. But, we know also that the substrate is at least as important if it is given the proper expression in the final product.

To anyone who has worked with different substrates in beer and wine making it is obvious that the result product is distinctive. Indeed, this should be obvious to anyone. But, carrying these distinctions through to the bottle in spirits making in a way that highlights their special and salubrious characteristics requires special distilling techniques and a matching set of characteristics in the distiller and the taster. By meeting these requirements, the final product is elevated from an industrial commodity to a work of art. For this transformation to be successful, the distiller, the taster and all those who appreciate the resulting spirits need to cultivate a new set of skills.

For vodka distilling to be an art – for this is what we mean by artisan distilling – three conditions must be met:

- 1) the distillery itself must be an instrument that can express the art;
- 2) the distiller and taster must possess some of the characteristics of the artist;
- 3) and, the particular quality of art that involves keeping the production process alive and sensitive to change must be present.

Let me briefly discuss these conditions.

Looking at the distillery as an instrument for the art, scale and precision are most relevant. The finishing still should not be too big. It should easily handle small batches that can be monitored and evaluated. There should not be too much at stake if a batch needs to be rejected or re-distilled. Continuous distillation at the final stage is out of the question, because this would necessarily involve too much compromise between quality and expedience.

Nor should the finishing still be too small. A home-still is not the best size. Like a toy piano or ukulele it can produce modest results, at best, in the hands of a master. This is because the medium (namely, the spectrum of major and minor compounds of alcohol) and the technique (which involves selecting and rejecting parts of that spectrum) do not lend themselves well to a pallet that is too small.

In addition, the distiller needs to be in touch with the fermentation process and the early stages of the distillation process. One cannot simply be a rectifier and accomplish the desired results. The raw material for the art is formed in the fermenter. Knowing the range of results from the fermentation and bringing them to the finishing process intact, is essential to good results.

Another important element of the instrument is location – location in various senses. Perhaps the most important sense is “terroire”, the geographical position and place of the distillery. The particular source of water and the availability of substrate play important roles in the enjoyment of the process and the quality of the product. The space inside the distillery is also important. A basement or closet is not the best place for a still, despite the legal pressures that have put many of them there. A light, airy space for working and tasting is necessary.

Regarding the distiller, let me preface my remarks by saying a few words about myself. The first thing I would like to say, is that I backed into this profession. My wife and daughter and I found an old farm in Vermont and fell in love with it. We set up a tent fifteen years ago, and almost immediately started working on schemes for how to live there full-time. It took ten years to come up with the idea of using maple sap from our trees to make vodka. We quit good jobs with promise of early retirement to return to the farm and begin this new life on the land. From this experience, I can say that being at a place that we loved and having a dream we wanted to live helped us greatly to overcome some of the hurdles and hazards of starting the distillery.

After a year and a half of building and working on the product, the distillery burned to the ground. This felt like the end of the world at the time. The building was made of trees from the land and most of our resources had been spent. We were devastated. But, this turned out, of course, to be a blessing in disguise. I can say now that having a second chance to build the distillery was essential to its eventual success. The third one will be better yet.

I should also say about myself that I spent thirty years as an anthropologist working with rural people in Southeast Asia, studying their efforts to eke out a living under difficult circumstances. This turned out to be excellent training for our attempt to eke out a living in northern Vermont. But, more important than this, as a young student at the University of Chicago Lab School, I was told that I should pursue a career in the sciences.

It took something fun like this to finally bring me around to it. But, I would say, in general, that an aptitude if not a proclivity for the physical sciences is essential for success as a distiller.

To be an artisan distiller, however, one must also possess some of the qualities of the artist. What I mean by keeping the production process alive is not letting it become too routine and not allowing the results to be too safe from error. A healthy curiosity that seeks continually to improve the process is perhaps the most positive way to describe the quality that leads to these results. A convenient lack of rigor might be the some other would choose to describe it.

But, let me switch the focus now to the taster and appreciator of the spirits, because the qualities I am trying to describe must be embraced by all of us if we are to participate in the development of artisan-distilled spirits. The key to our success here requires a change in perception about what vodka is and what it can be.



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We need to view these new vodkas more like wine than like medicine. Medicine was the underlying and usually unspoken metaphor for defining vodka. We want our medicine to be unvarying, precise to the point of boredom so as to predictably perform the desired result. This is how vodka has been perceived. The Absolut metaphor, the idea that vodka should be nothing more than pure water and pure ethanol, points to this medicinal root metaphor. It is safe, and the desire for safety is understandable in an environment where prohibition and moonshine presented clear dangers. But, it is also boring!

When we think of wine, on the other hand, we want our wine to be able to be surprising. We want it to be sensitive to micro-changes in climate and place, to vary and change from the moment the cork is put in place *au domaine* to the moment it is pulled. And, after the cork is pulled, during the period of our appreciation we keep our senses alive to its continuing change. Good vodka, really good vodka, is not very different.

So, how can we look at vodka in this new light. Let me illustrate with two brief examples from our own Vermont Spirits Gold and White vodkas.

Maple fermentations are characterized by sweetness at the head, unlike apple, where the flavor of the apple appears most clearly at the tail. Cutting the heads too deeply in a maple distillation can cause the loss of this desirable quality. Cutting too close to the head can make the resulting spirits too sweet. This question of sweetness is, of course, a matter of taste. My position has been that we need to overcome the idea of maple as a sweetener. So, I worked to make this inherent sweetness as subtle as possible without eliminating it all together. Another characteristic of maple fermentations is a natural bite. I chose not to eliminate or disguise this “burn” with heavy filtering, but to let it come through as a distinctive quality of Vermont Spirits Gold.

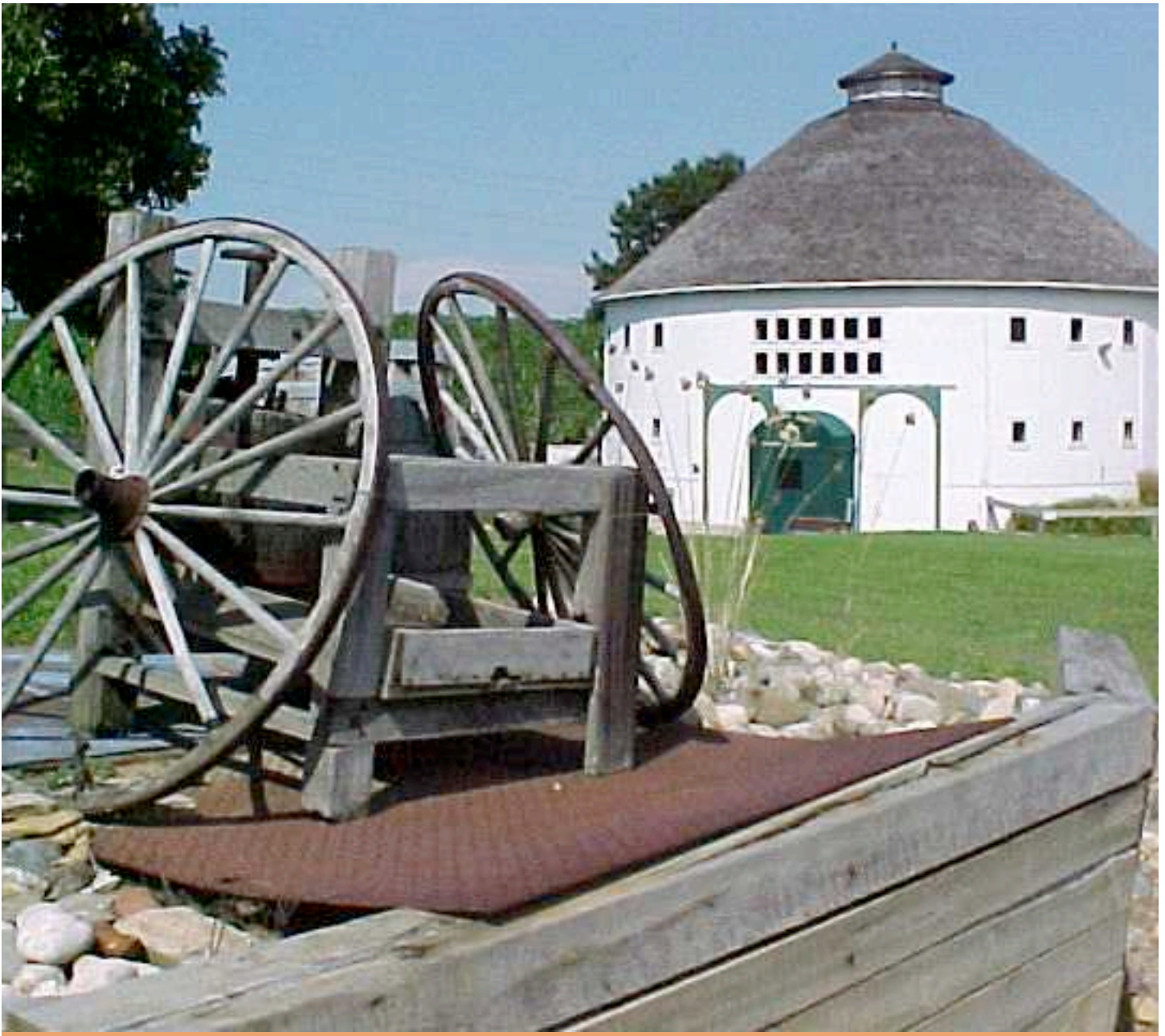
Vermont Spirits White is a milk vodka. Lactose fermentations have a stronger head than maple, rich in light alcohols, including acetone. It would not make a suitable beer for drinking, whereas maple as an old reputation as a substrate for beer among maple producers in Vermont. Cutting deep into the lactose ferment one still finds subtle flavors of vanilla and an extraordinary smoothness probably expressed by residual complex sugars. Catching a hint of these characteristic is the art of making Vermont Spirits White.

## Michigan Leads The Way for Artisan Distilling

By Rex Halfpenny

The Great Lakes State of Michigan has risen to the challenge of pioneering a path for entrepreneurs interested in small batch distilling. Michigan already has a relatively large number of small distilleries with more being planned. Add to this a program at Michigan State University (MSU) developed to assist those interested in or already distilling and it becomes evident that for those exploring this business, Michigan is a must visit along the way.

The person everyone in the industry identifies as most responsible for guiding the way along the path to successful small batch distillation is Kris Berglund, Distinguished Professor with the MSU Dept. Of Chemical Engineering & Materials Science and the Dept. of Agricultural Engineering. Berglund set out to discover distillation as a means to add value to Michigan agricultural fruit crops.



Berglund was joined in his search by several members of the already established Michigan grape and wine industry. Foremost among the wine makers was Michigan's largest wine producer, St. Julian Wine Company, located in Paw Paw, southwest Michigan.

There are 39 wineries in Michigan. Five of these wineries operate an additional 14 tasting rooms located around the state. In terms of volume, St. Julian produces about 50 percent of all the wine made in Michigan. Four of the additional tasting rooms belong to St. Julian.

I interviewed Berglund to learn more about the excitement within Michigan's distilling industry. To collaborate Berglund's interview, I also interviewed Dave Miller, VP of Wine Making at St. Julian. What follows is an infusion (pun intended) of my interviews.

**Rex:** "Kris, can you address how this whole distilling thing began in Michigan?"

**Kris:** "We got into distilling about six years ago, I don't remember the exact year, it was when Michigan passed a new law allowing for the lower priced brandy distilling license. Previous to that, there was only one license and that one was \$10,000 a year, which of course was prohibitive. The new license was made available to small winemakers and brewers for a much more reasonable \$150."

**Rex:** "I understand you took some wine makers with you to Germany to investigate stills and distilling, can you elaborate on that?"

**Kris:** "When we began investigating the cost and operation of stills we figured out early on that US made stills were expensive and the technologically was too complex for small scale operators -- that it is better suited to large scale manufactures. This discovery led to three trips to Europe. The first was to Germany with interested winemakers (Chateau Chantel and St. Julian) to visit manufacturers of distilling equipment. We found Holstein and Christian Carl were similar in quality, cost and operation but Holstein was not very motivated. Christian Carl on the other hand was much more agreeable. They offered more product support, showed more enthusiasm

and seemed genuinely interested in the US market. This led us to a purchase of four stills all at the same time, which turned out to be a big sale for them and of course were very excited about. Those first four stills went to MSU, St. Julian, Chateau Chantel and Black Star Farms -- who did not go on the trip but got in on the initial purchase." (Each still was purchased at a cost of \$25 thousand in 1997 according to a newspaper report.)

**Rex:** "Dave, that makes St. Julian one of the first commercial stills then?"

**Dave:** "Yes. We purchased our still in 1997. Our initial research into distillation was before the law was changed to allow the lower cost license. We joined Kris on his trip to Germany in March 1997. Christian Carl was decided to be the company we wanted to do business with. So we purchased one, as did the others, all in 1997. We then sent Larry Gilbert to school at UC Davis to become our Still Master."

**Rex:** "Kris, how many stills are in Michigan today and who runs them?"

**Kris:** "There are nine stills in Michigan. The first four, MSU, St. Julian, Chateau Chantel, and Black Star were followed by Heart of the Vineyard, Corey Lake Orchards, Local Color Brewing Company, Leopold Bros. Brewing Company and myself."

**Rex:** "You have your own still?"

**Kris:** "Yes, it is not commissioned yet, I bought it for my own company but we have just been so busy with other projects that we have not had to time to get around to it."

**Rex:** "What's the company name?"

**Kris:** "The still, which runs on electricity, by the way, is actually in my name right now, but my company is Diversified Natural Products. You can learn all about what we do by visiting our website at [dnpc.com](http://dnpc.com) (Diversified Natural Products is focused on natural, environmentally safe products for personal use and

consumption and for industry.)

**Rex:** “An electric still? That can’t be very efficient.”

**Kris:** “Well, actually it is. It has its own power generator that uses low cost 483-phase electricity. It is cheaper than a steam system because it does not require a boiler or steam generation and all the related piping. It’s actually ideal for small distillers.”

**Rex:** “Let’s get back to small distillers and your role at MSU.”

**Kris:** “Our program at MSU concentrates on helping what I call ‘artisanal distillers.’ We do a do a lot of research and development and act primarily as a support group for small distillers. There are other university distilling programs but I believe we are unique in this approach. MSU is the only one in the US apparently serving in a support capacity to small distillers. We thought our work would be only utilized by those just looking into or new to the industry, but we are getting a lot of interest from advanced distillers as well. We understand the challenges of getting through this thing. We offer academic support for smaller entrepreneurial people in the way of analytical, experimental and process support. Some need more help than others. St Julian became self-sufficient right away.”

**Rex:** “Dave, tell me about your initial distilling efforts at St. Julian.”

**Dave:** Larry Gilbert is the person to speak to about the actual distillation process. Our interest all began with the (Michigan) cherry people who informed us that there was a lot of unused fruit that is not retailable so it never gets picked. Of course it is perfectly fine for our use, for distilling. We began making all kinds of distillates, learning about the different cuts, aromas, and flavors. One major learning point was the need for ripe fruit. Some of the initial fruit we used was picked too green, it distilled but was lousy. As a result of those efforts I sort of became the fruit guy, the person responsible for sourcing good ripe fruit or allowing fruit to ripen further

before use. We experimented with everything we could get their hands on including fruit, berries, and even maple syrup. Our focus of course was to use Michigan fruit.”

**Rex:** “Such as apples?”

**Dave:** “We recognize the apple industry is on the ropes here in Michigan, especially with the Chinese concentrates flooding the market. But we are not currently doing anything with apples. Apples make good distillate, but we wanted to limit our exposure so our focus is only on peach, pear, cherry, and raspberry.”

**Rex:** “You have not mentioned grapes.”

**Dave:** “Grapes. We do a lot of grapes every year. After we chill the juice, it gets racked, leaving behind fermentable byproducts that distill very well. We use oak, never new oak, but aged oak, typically aged at least 24 months outdoors -- 36 months is better but cost a premium. We use Michigan oak, Hungarian oak, and a Balkans Oak, which we have found works the best. This year we released our first brandy, we call it B&C. It sold out almost immediately which surprised us because it was so expensive, selling at \$60.00 a fifth. This is a product the consumer understands. Especially the wine consumer. We now have more in the pipeline and will continue making this product. We learned something here.”

**Rex:** “Can you address why the product is so expensive?”

**Dave:** “Distillation is expensive, in part due to the tax structure in Michigan. Infusion is more affordable than eau de vie as well as being more recognizable to the Michigan consumer, so this is where most of our production is. Eau de vie is 80 proof spirit and clear, subtle in aroma and flavor and expensive. Infusions are more like port wine at 18-20 proof, they have the expected color, fruit aroma and flavor, and are sweet. We make the distillate with the fruit, cut it

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to the appropriate alcohol level and then infuse it with fresh fruit to give it the expected color, aroma, flavor, and sweetness. This lowering of alcohol also lowers the price.”

**Rex:** “Dave, how does your brandy compare to your other fruit eau de vie and do you use oak with them?”

**Dave:** “Our fruit eau de vies never see oak. We tried, but the aroma and flavor is too subtle -- it gets masked by the oak. We have three eau de vies out there right now -- if successful we will develop more. We have won gold medals for our eau de vies in Europe. Europeans use eau de vie as a drink, as an aperitif, in their cooking, etc., but Americans don’t understand this. They ask questions like, “If its cherry, shouldn’t it be red?” You have to explain to them that pigments and most volatiles don’t carry over in the distilling process. At this level, there is a lot of education required. We can only devote so much time and resources into our distilled products because it takes away from our primary product, which of course is wine. California is very different, they are much more educated with huge markets open to distilled spirits because wine industry is so old and strong there. We recently spoke to a distiller in Australia and when they learned where we are located, between Detroit and Chicago, they said they would give anything to be where we are. Detroit and Chicago are widely recognized as huge markets. So we are in a perfect location to develop the industry and market our products. We have to focus on production volume and frequency, and lots of one-on-one education.”

**Rex:** “Kris, why so much interest in Michigan and how does Michigan compare to other states?”

**Kris:** “Michigan is a good center for this activity because Michigan’s agriculture is so diverse, with so many (agriculture) products available to ferment -- with the possible exception of citrus and we can get citrus if we wanted it. I would say that Michigan ranks very high with respect to distilling activity compared to other states. We have nine already and will have two or three more distilling operators with the next year or so. With this kind of activity, Michigan has to have a sizable influence on the US. Not that many other states have this kind of activity. California is dominated by the wine industry and their brandy/cognac distillers.

Michigan is more about collaboration, networking, and communicating. Our distillers are not alone, not by themselves – as a group, they are like a club in a way. In this industry, the more the better. We are not competitive, everybody helps each other. Michigan distilleries are all about sharing and helping each other. We enjoy working together.”

**Rex:** “Thank you Kris, I know you are very busy and you have been very generous with your time already, but before we close, can you comment briefly on the work you are doing with the still you have on campus?”

**Kris:** “Certainly. We try to distill a little bit of everything; Michigan cherries, apples – we have an interesting product where we blend apple brandy with sweet cider for a 4-5 % ABV beverage that I think is very interesting. We are also looking at a lot of other innovative products, like brandy cherry dessert toppings. We envision a wider range of products in the future and our job is to help people get there.”

**Rex:** “Dave, care to make any last comment?”

**Dave:** “The Michigan wine industry is undergoing great improvements right now with new labs and testing equipment, providing improvements in quality and most especially in consistency. Demand is growing in an expanding market, which currently exceeds supply.”

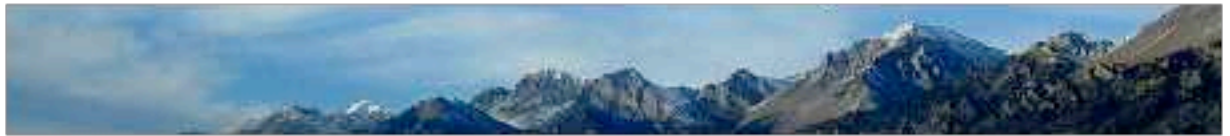
Great gentlemen, thank you for sharing your time and efforts. It appears certain that with the help of MSU and the interest of producers like St. Julian that Michigan will remain on the cutting edge of small batch distilling for some time to come.



*Kris Berglund, when he finds the time, is also presently writing a book called “Artisan Distilling.”*

*Rex Halfpenny and his wife, Mary, publish Michigan Beer Guide from their home office in Leonard, Michigan. You can visit them at [michiganbeerguide.com](http://michiganbeerguide.com)*





## Silver Creek Distillers: Distilling New Ideas

by Gray Ottley - Director

*“All vodka is  
made from  
potatoes.”  
Right...?*



**N**ot even close. Silver Creek Distillers established itself in the late 1980s to take advantage of the potential to produce high quality neutral spirits from the famous Idaho potato. Then, as well as now, Silver Creek is the only potato beverage alcohol producer in North America, and for good reason. Those little brown tubers have proven themselves a difficult beast to handle and process. Understanding this, Silver Creek Distillers has spent the past two decades researching and creating new technologies developed to handle the spuds. Originally, in Eastern Europe and Russia, “all vodka was made from potatoes”, but today, nearly all vodka sold in the world is made from grains, primarily corn, which is the least expensive and most readily available. In the US, the myth has become a reality, where Silver Creek Distillers is at the forefront of the processing methods for handling, fermenting, and distilling potatoes, as well as other exotic raw materials, into high-quality, crafted neutral spirits with today’s most modern high rectification technologies.

Silver Creek began with the grand idea of converting a fuel alcohol plant, built in 1981 under the Carter Administration’s alternative fuels program, into a beverage alcohol distillery. When the energy crisis ended and the multitude of small distilleries that had been built around the country went out of business, many were scrapped. There were a total of three in Idaho at the time, one of them was located in Eastern Idaho, which is known as the beating heart of the Idaho potato growing region. This plant was bought and transformed over the next three years into modern-day Silver Creek Distillers.

With beginning the process of getting a federal license through the then Bureau of Alcohol, Tobacco and Firearms (BATF), now known as the Alcohol and Tobacco Tax and Trade Bureau (TTB), for a distilled spirits plant (DSP) and local special use permits as well as a permit from the State of Idaho, re-engineering of the plant began. Included in the re-engineering was the special design of a fourth column for distillation (the ethanol plant previously had only three for high fuel rectification). The engineering was done almost entirely internally with the aid of a handful of key expert engineers. This equipment and technology was later named the Hydropulse 8100B purge column by the engineers. Other modifications that were performed included creating innovative ways for handling potatoes, managing the new waste stream (stillage or Distillers Dried Grains (DDG) that really should be DDP at our company), and the purchase of tanks to use as storage facilities.

The period of time that it took to achieve approval for all of the special use permits coincided with the completion of the plant reengineering. Of all of the permits that had to be gained, the Federal DSP license approval process took the longest in 1989, stretching over 18 months. Silver Creek Distillers' application for local special use permits also initiated a number of town meetings considering the fact that this facility was proposing to process agricultural products and would most likely create a large amount of "waste", or DDP. Not to mention the fact that Silver Creek was hoping to craft a product that was essentially highly explosive.

The startup of the plant was not assured by any stretch of the imagination. However, as fate would have it, one of the engineers had a Eureka! moment in the very first day of operations. In one batch, the Hydropulse column had proven its worthiness and out poured essentially what today can be found in such brands as *Blue Ice* and *Teton Glacier Potato Vodka*. Think of it, the very first try we got it right! The cooking, fermentation, special yeast strains, and distillation equipment and methods, which all had a bazillion different permutations and combinations, came together in one exact moment that was as much a result of good work and talent as it was of luck.

The original mission statement of Silver Creek Distillers in 1988, had been to construct a distilling plant to process famous Idaho potatoes into the highest quality beverage alcohol and successfully sell a brand in the marketplace. It would seem by 1992 that all the heavy lifting and work was done,...game over – we're rich! The mission had been accomplished, and in only three years to boot! But, as time would prove, there is much more to being successful in the domestic alcohol business than just being able to make a good spirit.

### ***Part II: New Business Model***

Producing an excellent product is one thing, getting consumers to buy it is another. Silver Creek Distillers' executives had gained a lot of experience in business management, manufacturing, and process production systems, but nearly none in the beverage alcohol business or in brand development and management. The Silver Creek distillery, named after a famous fly fishing stream in Idaho, began with a million-gallon-a-year plant capable of producing 190+ proof ethyl alcohol. However, by the summer of 1997, five years later, total sales-to-date were a mere 1,244 cases, or less than 250 cases a year. Anyone want to do the math on percent of plant capacity used on an annual basis? Try 0.00025%. What was wrong?

It is one thing to put a bad product in a bad package, it is practically expected. It is another thing entirely to put a superior product in a bad bottle with a run-of-the-mill label and graphics. Essentially, "Silver Creek Vodka" was a Pinto with a Ferrari engine. It was viciously good with a whole new definition of a sweet and smooth flavor, but a lame package. Something had to change.

### *Part III: The Growth Curve*

In 1996, it was imperative for the survival of the company that Silver Creek's business model undergo a change. The fundamental skill we had was that Silver Creek Distillers was an expert in processing exotic raw materials into high quality beverage neutral spirits. Not in branding or distribution. At that time, Silver Creek chose to focus on its core strengths: production, processing, distilling, blending and the bottling of vodka. The decision was made to stay out the branding business. A core business philosophy that lasts until today is Silver Creek does not own any part of any brand nor does any brand we produce have any ownership of us. Conflicts of interest are kept to a minimum.

In the Fall of 1996, World Wide Wine and Spirits was the first client to produce a potato vodka brand with Silver Creek and the product was launched that same year. Over the next nine months, it gained national distribution, a consumer following, and was available in 38 states. A grand feat then - and a monumental one on today's crowded vodka shelves.

When word got out about the unique smooth and sweet flavor of Teton Glacier Potato Vodka and Idaho potato alcohol, other inquiries of brand development began to trickle in. Originally it was Teton Glacier, then ZODIAC, Blue Ice, ZYGO, Liquid Ice Organic Grain, Orange V, Kensington Gin, and "3". Despite the growing number of clients, Silver Creek has continued to maintain each brand's distinctive flavor and characteristics to prevent overlap or consumer confusion. Separate filtrations and eventually different raw material types have given birth to each of these markedly different spirits. But the flood gates were just beginning to open...



Silver Creek Distillers did not have a website until the Fall of 1997, a latecomer to the internet generation. Once the site was crafted and posted, though, the company would never operate the same way again. The use of the internet to locate and source suppliers, manufacturers, and overall distillation information certainly proved its worth to a still relatively new and unnoticed distillery in Idaho at that time. Soon, not only did entrepreneurs with cutting edge ideas for marketing and recipes begin to light up the phone lines at the distillery sales office, but "resellers" also found themselves with a potential new supplier. Agri Trading Corp., a Midwest grain broker and processor, saw a market for certified organic grain alcohol for the food and cosmetics business and contacted Silver Creek with ideas for a partnership.

After nearly two years of the certification process by an organic certifying agency and the development of new enzymes and other fermentation ingredients that previously had not been certified organic, the distillation process and the plant as a whole gained official organic certification. The very first bottle of certified organic grain alcohol rolled out the door in December of 1999. With this, Silver Creek had launched into another branch of the business entirely... custom alcohols.

With the arsenal of now two unique alcohols that were readily sellable in the spirit marketplace, Silver Creek was beginning to see the light on two fronts: that there was a demand for processing exotic raw materials which the "big guys" would not be able to handle or even have the time to pay attention to, as well as the demand for custom alcohols. The difference between the two is that one is a modification of an existing alcohol Silver Creek Distillers currently makes from raw materials, and the other is an entirely new alcohol crafted from a completely new raw material. The custom alcohol business appeared to be here to stay, so Silver Creek Distillers followed up with soy alcohol, rice alcohol, and custom alcohol blends.

While concurrent operations were beginning to take form in standard potato vodka processing and bottling, custom alcohols, and R&D on new products, a little clarification of the Silver Creek Distillers' claim seemed necessary. Silver Creek was not making vodka, but rather "neutral spirits", a product which is one of two major ingredients in making vodka. (Water is the second.) But neutral spirits, or 190 proof beverage alcohol, is also used in wine fortification, making gin, cordials, liqueurs, spirit whiskeys, and other creative "specialty" spirits products. This specialty category is practically boundless; limited only by the human imagination in what can be concocted using neutral spirits. Figuring out how to fulfill the various requests that came in created a whole new set of challenges. Because of the technological hurdles and the desire to create nothing less than an excellent product, many of these specialty products are still in the research, testing, and development stage. Silver Creek recognizes that these new products have tremendous market potential, so therefore holds themselves to strict terms of confidentiality until the product is officially launched into the marketplace.

There are two words that have special meaning to Silver Creek: Quality Control. Highly rectified alcohol is a gentle beast that only likes to touch glass, stainless steel or copper. Nearly every other material will add flavor to the alcohol or leach elements into the spirit. Another large quality control item is water, a whole other ingredient that is used in cooking, steam generation (distilling), tank and line cleaning, and the final component used to dilute and bottle every product. Two foreign brands that were being made outside the US, sought Silver Creek out for brand production because of the poor quality control they were experiencing with the original distiller and blenders..... One initial conversation started, "what is the shelf life of your 80 proof vodkas?" Uhhh... forever. If anyone ever says that their unflavored, unadulterated vodka has a shelf life, put it back.

Today, Silver Creek Distillers has achieved a knowledge base that encompasses the processing of numerous raw materials through the fermentation process and distilling methods that accompany each of the materials.

Each product has its own, unique flavor profile. Silver Creek has become, in a single sentence, an expert in processing exotic materials into high end beverage alcohol products. In the most well-regarded annual spirits competition in 2003, Silver Creek entered three products into the "vodka" category and secured the first, third and fifth rankings (out of a total of 34 domestic and imported spirits) for the best domestic vodka brands judged on flavor alone. Today, Silver Creek Distillers is a certified kosher and organic plant, as well as inspected regularly by the TTB, FDA, OSHA, Organic certifiers, kosher certifiers, and local departments of water and health. Silver Creek produces over twenty different brands with an exponential growth curve of new products expected over the next year... Is there an end in sight? Why have an end?

Silver Creek Distillers is the best company you've never heard of.



*On April 6th, Distillery 209, in San Francisco was featured in the business section of the San Francisco Chronicle.*

*Distillery 209 will produce and bottle high-quality gin, using grain natural spirits and natural botanicals, by the “single-shot” distillation method. The copper pot still and condenser are by Forsyths of Scotland.*

*Distiller/project manager Colin Macphail can be reached at [colin@distillery209.com](mailto:colin@distillery209.com)*



**Q: Can anyone tell me why the majority of spirit beverages are produced with a final alcohol content of around 40%?**

A: The main compounds responsible for flavour (congeners) in whisky are very soluble in alcohol but less so in water. At bottling strength 40% or above, these congeners remain locked in the solution (hence the minimum 40% alcohol bottling law, agreed by wise men to preserve quality). When water is added, the congeners become less soluble and are released as vapours into the atmosphere.

The standard bottling strength for whisky is 40% ABV (Alcohol By Volume - alcoholic strength as a percentage of alcohol by volume at a temperature of 20°C invented by Gay Lussac) below this it cannot be called Scotch.

Only the English could invent ‘proof’ in 1762, which was the technical standard by which strength was measured until 1st January, 1980. If gunpowder and alcohol were mixed and the spirit was weaker than proof strength (57% ABV), there was just a damp fizzle. However, when whisky and gunpowder were mixed and there was enough alcohol in the mixture to cause ignition, then the gunpowder flashed, providing the ‘proof’ of stronger alcohol.

**Gay Lussac’s ABV to UK and US Proof**

Purity/ABV	UK Proof	US Proof
ABV	x 1.75	x 2
100%	175	200
50%	87.5	100
46%	80.5	92

**For sale:** Used alambic pot still. Complete with pot, burner, preheater, condenser, porte-alcoholmeter, etc. Very good condition \$40,000  
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Word	Agathodaimon Symbol	Alchemy Letter
alum (see F,K,L)	K	
boiling, fermentation		n
compose		q
copper		T
decompose		o
distill, to		
distillation, dissolve, the act of distillation		r
essential oil or essence	c	t
ethyl alcohol	Z	
Fermentation, ferment or boiling		n
filter		!
fire		N
Fire		4
furnace, refractory, or stainless steel 1903-1912		i
glass	e	
iron	Y	a
lime, the metal (metal lime)	k	
olive oil	S	
precipitate	t	
the precipitate		z
retort, dissolution, aludel		s
retort, receiver		v
saltpeter	E	
stainless steel or refractory oven		i
steel	w	
sulphur	I	
brimstone	v	
tin		f
vinegar	d	y
water		P
wax	z	
wine		#\$
zinc		1



# ADAMERICAN DISTILLER

## AMERICAN DISTILLING INSTITUTE 2004 MEMBERSHIP APPLICATION

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