



INSIDE:

- TSI'S QUEENSLAND PROJECT
- MEZCALIFORNIA
- THE LION SPIRIT
- THE FUTURE OF AGAVE SPIRITS

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Australian Agave Tequilana at TSI

THE GLOBALIZATION OF AGAVE SPIRITS, FROM AUSTRALIA TO MEZCALIFORNIA. IN THE WORDS OF GLOBAL PRODUCERS.

***We plan on
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Australian
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by creating the
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***Drew Fairchild,
CEO, Top Shelf
International***



TSI's Proof Of Concept Australian Agave Spirit

**Cover Photo Credits:
TSI's Eden Lassie Farm
Leonista's Karoo Agave**

A new project to cultivate over a million Blue Weber Agave Tequilana, the raw material of Tequila, is taking root 7,800 miles away from the town of Tequila, Mexico. Welcome to Queensland Australia, and the new Agave Spirits project undertaken by Top Shelf International (TSI), a publicly traded Australian spirits company with global ambitions. Less than two miles inland from Australia's famed Gold Coast and the Great Barrier Reef, one of the 7 wonders of the world, lies 130 miles of Agave Tequilana growing under the tropical sun on TSI's farm near Bowen. "We plan on defining the Australian Agave Spirit by creating the Australian Agave Spirit," says TSI's CEO, Drew Fairchild.

The cultivation of agaves spans almost every continent, and while some cultivation projects are focused on agaves as sources of biofuels, feedstock, agroforestry, fiber, and carbon drawdown, producers around the world are cultivating agaves as the raw material for distilling Agave Spirits, the de-facto label for an agave spirit produced outside of a protected Designation of Origin (DO) and its regulations. Tequila and Mezcal, for example, are protected under Mexican DOs and their mandatory regulations known as Norma Oficial Mexicana (NOM) that control labelling as Tequila or Mezcal.

With a 24% rise in 2020 exports, Tequila's growth is driven by its global expansion, according to statistics released by Tequila's Regulatory Council (CRT). While the US dominates global Tequila consumption, demand is surging in markets like Australia where Tequila imports have doubled in the past four years to over 1.8 million liters, while through April 2021, Australian Tequila imports have risen 26% for a market valued at over \$100 million annually.

AUSTRALIA



TSI's Eden Lassie Agave Tequilana Farm

With a capacity to cultivate over a million Agave Tequilana's, TSI's 430-hectare Eden Lassie Farm counts 420,000 plants either in ground or in nursery, according to Master Distiller Sebastian Reaburn, "all thriving in this unique terroir and its micro-climate known as the Dry Tropics with ideal soil, ample sunlight and dry conditions created by The Dome, an atmospheric effect that keeps rain storms from the Coral Sea focused on surrounding mountains and away from the farm, giving us an ample water supply, without wet tropical conditions."

The TSI project began in 2019 when the company purchased a largely uncared-for plantation at a sugar refinery in Ayr, north Queensland, where 2,000 Agave Tequilana plants had been planted a decade earlier as an experimental crop but had evolved untended and were about to be ploughed down "and so we harvested these plants to begin production trials," explains Sebastian who previously had visited a number of Tequila production facilities in Jalisco, Mexico "to understand their production philosophies and to see first-hand just how similar our landscape is to that of Jalisco."

With proof of concept top of mind, Sebastian's first production batch from the Ayr agaves "contained all of the signature agave profile we wanted which proved to us that a distilled 100% Australian Agave Spirit was possible and most importantly tasted great." While the Agave Tequilana is the same plant as that used in the distillation of Tequila, "our agave has acclimated to Australia, specifically Queensland's dry tropical north, and has consequently developed a flavor and character that is unique to the world," says Sebastian.



Sustainable Farming With Goat Silviculture at TSI

Nearly 75% of TSI's current agave population are from pups and bulbils harvested from the Ayr plantation agaves. "To ensure a genetically-diverse population at our Eden Lassie

farm, the balance of our plants were derived from imported tissue cultures from a supplier in Mexico," confirms Sebastian, "and we now have enough plants to reach our goal of one million in the ground, while at the same time we continue to fine tune agave cultivation using **cover crops for field management and carbon sequestration, experimenting with silvipasture and goats, all with organic practices as our goal.**"



Aerial View Of TSI's Agave Farm

"To date around 4,000 liters of TSI's agave spirit have been produced, the most recent were fermented with fibers using natural yeasts, cooked at 95°C, and distilled down to 42% by going deep into the tails to capture even more flavor," explains Sebastian, "and we now have a Blanco, a Reposado and for 15 months we have been aging some in a second fill American Oak barrel."

"So what is the flavor of our land?," asks Sebastian, "**our agave produces a spirit that has the signature cut grass agave profile with notes of honey and lime peel, a generous texture, mineral structure and complexity, and a super soft, round luscious earthy character.**"

Sustainability is a cornerstone of TSI's project explains Matt Slade, Head of Marketing and Brands at TSI, where "as stewards of our terroir we have a responsibility to focus on quality of spirit, sustainable cultivation, minimal energy use, run off management, and production innovation." Matt confirms that TSI is currently developing a brand name.

TSI is acting from a position of research, continues Drew, noting investments of over \$6 million in R&D since inception. "We are committed to transparency, and to pay homage to the agave pioneers and their traditions of past, without being bound to the traditions of their heritage that protect their industry but constrain growth and innovation," concludes Drew, "**this gives us the opportunity to experiment and find new ways to develop proprietary processes to create great products that the market loves.**"

Over 800 miles due south, Black Snake Distillery is crafting their Agave Spirit ASp from Agave Americana and Angustifolia (Espadín in Mexico), explains Rosemary Smith, who co-founded the distillery in 2016 as **“55 acres of wild Agave Americana west of the range in New South Wales inspired us to produce an Australian Agave Spirit that would present the best agave flavors possible.”**

“We have such a unique terroir,” adds Rosemary who recently began a cultivation test of Agave Tequilana, “with fertile loam and sandy soil where agaves grow at around 700 feet below extinct Volcano Mt. Kaputar.” Blacksnake’s water supply also comes down from Mt. Kaputar, says Rosemary, “which adds mineral and earthiness to our distillate.”

“Our biggest challenge is the low agave sugar content, so we struggle with fermentation and have to add glucose to our starter yeast, but we hope that will change this summer with our new 500 liter wooden open fermenting vessels,” says Rosemary who confirms ASp agaves are cooked in an earthen oven using Eucalyptus wood for 3-5 days “then fermented, and double distilled in a 300-liter copper pot still with ASp expressions including a Joven, Pechuga, and a Reposado.”

ASp currently releases 800-900 bottles per year, with plans to rapidly increase production. **“There is definitely a market here, but as we discovered it is just not the easiest spirit to produce, but we are ramping up production as we believe demand growth is coming.”**

NEW ZEALAND

About 1,400 miles southeast lies Golden Bay New Zealand, home of TeKiwi Agave Spirit, and where Kiwi Spirits Distillery began the cultivation of Agave Tequilana which “we originally let grow in the wild just down the road from our distillery” shares Isabella Knight, Sales Director and daughter of Kiwi Spirits founder Terry Knight, “and after our first harvest five years ago we started our own agave farm where today a population of over 6,000 Agave Tequilanas thrive in our tropical sea level terroir and our rich alluvial soil.” Tequila exports to New Zealand rose 12% in 2020 to over 257,000 liters, according to CRT reports.

What started as “an experiment with no expectations, has resulted in the successful cultivation of the first Blue Agave Tequilana ever grown in New Zealand,” continues Isabella, “TeKiwi’s agaves are steam cooked for 3 days, originally shredded in a mulcher, where the extraction is fermented to 8%-10% ABV, and then one time distilled in a copper still.” Still strength of 70%-80% is brought to bottling proof of 40% ABV with “the addition pure water drawn from deep aquifers of Golden Bay, and then rested 30-60 days before bottling” adds Isabella, “and until we can reach full production we are only releasing 300 bottles of TeKiwi per year.”



Agave Cultivation At Kiwi Spirits Distillery

CALIFORNIA, USA

US sales of Tequila doubled in the past 10 years, now nearing 200 million liters, according to a report published by the Distilled Spirits Council, with 2020 sales of high end/super premium Tequila surging 23%, while entry level segments remain flat. The United States consumes more Tequila and more Mezcal than any other country in the world, and in the first quarter of 2021, the US imported nearly 60 million liters of Tequila, over 50% of Mexico’s entire production, according to CRT statistics, while the US has imported more than 46% of all Mezcal produced as previously reported.

This surging US demand for premium Tequila and Mezcal has inspired entrepreneurs to farm, harvest and distill California grown Agave. Seven years ago, Craig Reynolds, a former Chief of Staff in the California Legislature set out to lay the foundation for an industry he calls **Mezcalifornia “by successfully cultivating Agave Tequilana in Yolo County, California, near Sacramento, to prove that these plants could adapt to cool weather climates and provide locally harvested raw material and a terroir for the Mezcalifornia industry of Agave Spirits.”**

Today, tens of thousands of Agave Tequilanas are growing in fields near Woodland, California, confirms Craig who sees first hand that “climate change and global warming are making it possible for these populations of agaves to thrive in Northern California.” Encouraged by these results, Craig has recently supplied his agaves to Ventura Spirits co-founders Anthony Caspary and Henry Tarmy, whose distillery is located 30 miles south of Santa Barbara. “We have just finished fermenting and distilling our next release with the Agave Tequilana sourced from Craig’s Yolo County farm,” confirms Henry.

“Our first agave spirit was made from Agave Tequilana grown at La Paloma Ranch in Goleta, California,” explains Henry, “where we have harvested approximately 30,000 lbs of trimmed piñas from over the last two years that we cooked with atmospheric pressure steam for 36 to 48 hours, and fermented in stainless steel tanks with a wine strain yeast, and double distilled in a 300 gallon hybrid pot still to about 65% ABV before resting the distillate for a couple months prior to bottling.”

“So what does Agave Tequilana grown in Goleta, California taste like in the bottle?” asks Anthony, “La Paloma tends to favor fruit and caramelized agave notes.”

“Our hope is to make a small contribution to the rich tapestry of Agave Spirits by producing the purest expression of agave flavor possible,” adds Henry, “while giving spirits distilled from California grown agave their own unique character.”



Agave Tequilana harvested from Yolo County, CA for Ventura Spirits
Photo Credit: Craig Reynolds

ECUADOR

Heading 3,500 miles southeast to Ecuador where in the Andean Highlands the harvesting of Chawarmishki, the sap of Andean Agave Americana, **“is a tradition that likely dates back 2,000 years,”** according to Eliot Logan-Hines Co-Founder and CEO of Andean Spirits and Chawar. Also known as Miske, Chawar is distilled from raw Andean Agave sap “collected by Mishkita, Ecuador’s first indigenous women’s agave co-op” explains Eliot, “who work on their communal land where Andean Agaves grow in the rich volcanic soil at the foothills of the Cayambe Volcano and then deliver the sap they collect to our distillery in Yaroqui City at an elevation of 9,500ft.” Confirming that while most agaves grow wild, Eliot has begun working with the coop on cultivation efforts.

“The sap ferments for 5 days until it reaches an alcohol content of around 5%” adds Eliot who jump starts each fermentation “by adding previously fermented sap, similar to a sourdough starter, before it is double distilled and bottled at 40% ABV.” Eliot produces a Blanco and a Reposado, aged 3-6 months in French Oak each with marked differences from Mexican Agave sap distillates,” says Eliot, “due to a higher concentration of sugars and minerals stemming from our elevation and intense solar radiation.” Eliot describes Chawar’s Blanco flavors as grassy, floral, creamy, sweet, and easy to sip while the Reposado is slightly smoky with hints of spice, and a medium to long finish.



A Mishkita Co-op worker gathers Andean Agave sap for Chawar

“In our distillery, we produced around 8,000 liters of Chawar in 2020, and a portion of which we export to the United States,” confirms Eliot who projects that “we will produce 20,000 liters in 2021, and 40,000 liters in 2022.”

In Pomasqui, near the nation’s capital Quito, and a mile from the equator is Casa Agave, producing Miske since 2006 “from agaves grown in the middle of the world, which are 90% wild and 10% cultivated,” explains Diego Mora CEO of Casa Agave, “we choose only mature Agaves between 9 and 12 years old, and its sap is extracted 2 times a day for approximately 3 to 5 months when it undergoes the fermentation process for about 20 days using a native yeast and once finished, it is distilled twice and rested in glass, or aged in oak barrels in the case of our Reposado.”

“Casa Agave Miske is the recent winner of double gold medals at the San Francisco World Spirits Competition,” proudly adds Diego, who’s distillery also boasts an Agave Museum and Agave nursery, “where Casa Agave’s annual production is around 900-1000 liters.”

SOUTH AFRICA

Nearly 7,000 miles away from Quito lies the Karoo region of South Africa where over 400 hectares of Agave Americana have been growing in the wild for hundreds of years, “with initial populations thought to have arrived aboard Spanish ships using agaves as ballast,” according to Sarah Kennan co-owner and founder of South Africa’s Leonista Agave Spirit “distilled from 100% Agave Americana, grown and harvested from the Karoo.”

“I grew up in Zimbabwe and that’s where I fell in love with Tequila which led me to Mexico where I met amazing master distillers of Tequila and Mezcal,” explains Sarah an avid surfer and adventurer, “so when I came back to South Africa I thought, well, we have the same plant growing in the Karoo and so let’s build an oven designed to bake these agaves with a wooden fire.” **With the goal of crafting an African distillate inspired by the traditions of Mexico, 4 years ago Sarah launched Leonista** “as a spirit that is much closer to Mezcal than it is Tequila.” ‘Leon’ means lion and ‘Ista’ means someone who embodies that, “so Leonista is Lion Spirit,” explains Sarah, “and our goal is to promote the values of Agave Spirits, a positive culture, sipping slowly, and to experience the lion energy of Leonista.”

Leonista's organically farmed Agave Americana piñas, with 20 tons harvested annually near Graaff-Reinet, are transported by truck to the distillery outside of Johannesburg where they are "roasted for 48 hours in a wood fired oven, using wood from forest clearings," adds Sarah, "then fermented in stainless steel vats with natural organic yeast followed by a single distillation." Leonista produces a "100% Karoo Agave Blanco and a Reposado aged 3-6 months in oak barrels, each with distinctive flavors of cooked agave and smokiness," details Sarah, "along with our honey Reposado and our brand new Reposado Black as a less smoky expression aged for 8 months."



Agaves harvested in the Karoo for Leonista

Sarah and her team at Leonista have implemented sustainable practices of replanting 3 agaves for each agave harvested, and upcycling agave leaves and fibers into animal feed and organic fertilizer to support their farmers. "We also contribute a percentage of Leonista sales to fund local conservation," confirms Sarah. Sales of Leonista continue to develop, according to Sarah, totaling 7,000 cases sold in 2020 with South Africa as "our main market, along with our exports to Australia, Zimbabwe, Taiwan, Japan and the Netherlands where we reach all of Europe through an on-line store. Of course we'd be keen on exporting to the United States as well."

INDIA

Agave Americana is also at the heart of India's Agave Spirit industry where, twenty years in the making, DesmondJi Agave spirits were launched "as a distinctive Indian Agave Spirit, reflecting the Deccan Plateau terroir and the use of autoclaves rather than cooking agaves in open hearths, which would not be permitted in India," says Desmond Nazareth, the Founder and Managing Director of Agave Spirits India.

"We are not currently involved in agave farming as there are huge wild plantations of agave Americana available on the Deccan Plateau which extends over 100 million acres at an average elevation of 2,000 feet," adds Desmond who is actively promoting the use of the Deccan Plateau to local tribal corporations to "utilize the area for agave agriculture as sources of bio-fuels and fibers."

"There is ample historical evidence that agaves migrated to India at least 125 years ago, probably 200 to 300 years ago, which means that today's plant populations are the descendants of 20 generations that have adapted over time to the Indian conditions on the Deccan Plateau," explains Desmond, "and this is what we mean when we speak of a

terroir where the Agave Americana flourish in the red and black volcanic soils of India's Deccan Plateau and its semi-arid microclimate, a climate similar to that of Central America." Desmond has an agro-facility and craft distillery producing around 13,000 9L cases of Agave Spirits annually distilled in small batch pot-stills including a 100% DesmondJi Agave Spirit and a 51% DesmondJi Agave Spirit (49% raw cane sugar) in both a silver and gold presentation.

THE FUTURE

With nearly 300 million liters of Tequila, Mezcal, and other agave distillates imported around the world from Mexico, the future of the global agave distillates produced ex-Mexico may depend equally on consumer recognition of Agave Spirits as a category and the evolution of Agave cultivation practices, sustainability and production innovation.

"We've discussed with groups that offer tasting competitions to create a category for international Agave Spirits," concludes Desmond Nazareth, **"the category should allow for recognition of terroir and distinguish between agave spirits distilled from agave piñas and those produced from agave syrup or desiccated agave."** A sentiment shared with Craig Reynolds "for me there is a clear distinction between an Agave Spirit distilled and fermented from agave piñas and everything else" noting that distillation "from powdered agave or agave syrup to me is closer to making vodka than it is a true Agave Spirit."

Sarah Kennan does see "a bright future for Agave Spirits distilled from 100% agave piñas **which deserve their own category like Destilado de Agave in Mexico, still our biggest challenge remains education on agave spirits, and developing an appreciation for quality agave spirits."**

In Ecuador the creation of a DO for Miske has been underway for a number of years, according to Diego Mora, "but there is a lot of bureaucracy in Ecuador." Chawar producer Eliot Logan-Hines remains "skeptical of DO efforts which have nothing to do with ancestral knowledge or quality, and tend to stifle competition, exclude other producers and artificially increase prices."

Looking to the future of the Californian Agave Spirits Industry, Henry Tarmy considers the "evolution of the California wine industry as an analog for Agave Spirits given its lower intervention production philosophy, importance of terroir, and its closer connection to the actual cultivation." Henry concludes that **"for us this is the beginning of a meaningful California based Agave economy, and an exciting and important chance to think hard about what this new economy could and should look like,** and how to collectively engage with the associated social, environmental and agricultural issues to work deliberately toward a good system."

"The Australian market is basically served by imported brands for all agave distillates," concludes TSI's Drew Fairchild, **"so our goal in creating an Agave Spirit is to go beyond the egalitarian nature of Tequila and the wild side of Mezcal in order to create a new category for domestic and international markets, that truly embraces the Queensland spirit and builds on our agaves, our ambitious approach and our terroir."**