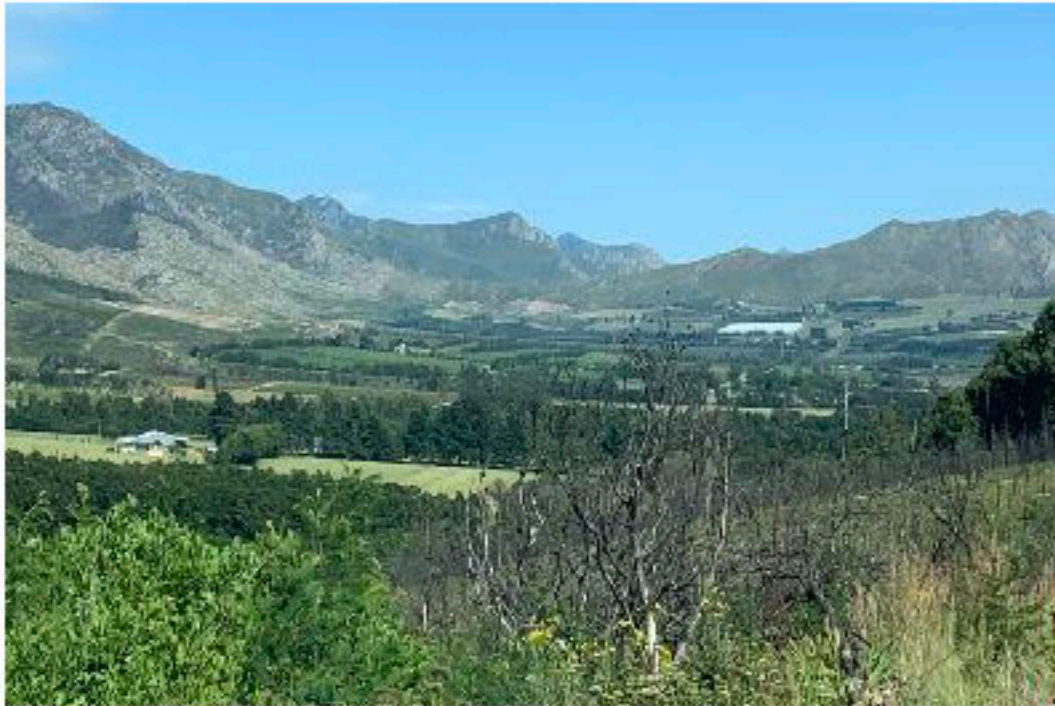


HQG Review of South African Hop Farms and Pellet Facilities-Matt Johnson Technical Brewing Consultant



HOP FARMS IN WAMAKERSKRAAL VALLEY, GEORGE SOUTH AFRICA

In an effort to provide the HQG membership with the latest information on the Hop growing and processing facilities in South Africa, below is a informational summary only of the current operations and protocols for processing hops from South Africa. This information is intended solely for the HQG membership and only the HQG membership. It is important to note that the drying and pelletizing operations in South Africa are currently owned and operated by SAB/ABI South Africa. They are unfamiliar with the HQG and it intentions. They were a little reluctant to let me take pictures and comment on their facilities by let me take a few pictures anyway. I assured them this was for our purposes only and not to be made public.

I was able to travel to George, South Africa and tour the facilities at the SAB/ABI hop processing plant. The individual farms do not have their own kilns for drying hops. They pick their own crop and transport it to the SAB kilns for drying. All hops that are produced in South Africa are dried in the kilns as SAB. There are two kilns that process all the hop from the farmers. There are currently 17 farms in a small valley in George, SA, with total hectares of around 800.



WOLF PICKERS CIRCA 1970



WOLF PICKER



SOUTHER PASSION



SOUTHERN TROPIC

All of the farms that I visited had Wolf pickers from around 1970. They were all clean and in good working order. There were no issues that I saw, all equipment was in good working order. All farms had a smaller operation but worked efficiently. Most growers

operate from around 20 to 50 Hectares and farm all varieties. Farmers are paid based on the amount of hops they ship to the SAB facility. They are not paid per variety just on how many Kilos of hops they produce. They have been running this way for a long time. Many of the farmers are looking to do some upgrades to their facilities by adding more hectares and some are starting to think about adding kilns to their facilities to take advantage of the growing hop market over seas. I talked with one farmer that really wants to put their own kiln in by next harvest. Most of the farmers have seen hop farms across the world and they are really trying to step away from the control that SAB/ABI has and go toward being more independent. They all want to plant the more popular SA hop varieties and are currently working on some experimental plots now. Just like the US, many of the proprietary hops are coming off the list and will be public soon. The hop farmers are realizing this and are trying to produce more hops for the craft beer market. It may take a few years to build this up but the desire is there.



HOP FARMERS FERGUS AND BEVERLY JOSEPH

The Kilns and pelletizing facilities are all owned and operated by SAB/ABI. They have two kilns, one is fired by coal using a heat exchanger and the other one is fired by propane. All hops arrive from the farms in large bins and are dumped into the kilns. (see pics below). All hops are kilned at 150 degrees F with a bed depth of 38" for about 4 to 6 hours. Kiln area is clean and posted with signs for safety and food safety. The roof of each kiln are in good condition with nothing hanging or dropping into kilns or hop beds. Everything is clean and in working order. I did see one corner that had a bird's nest in it. I did point it out to the supervisors there. They do have a Certificate of Acceptability of Food Premises from the South African Government and a Quality and Food Safety Certification from ABI. They have safety signs in place and visible as well as food safety signs. If you are familiar at all with ABI, you know they are very strict on food safety and general safety and it is not lost here. They have a full lab where all samples and testing is done. PPE and visitor passes are expected at all facilities. I

had to blow into a breath-a-lizer to make sure no one was drinking or drunk before entering the plant. Overall a very clean and well run operation. One small bird nest was observed but everything else was in great shape.



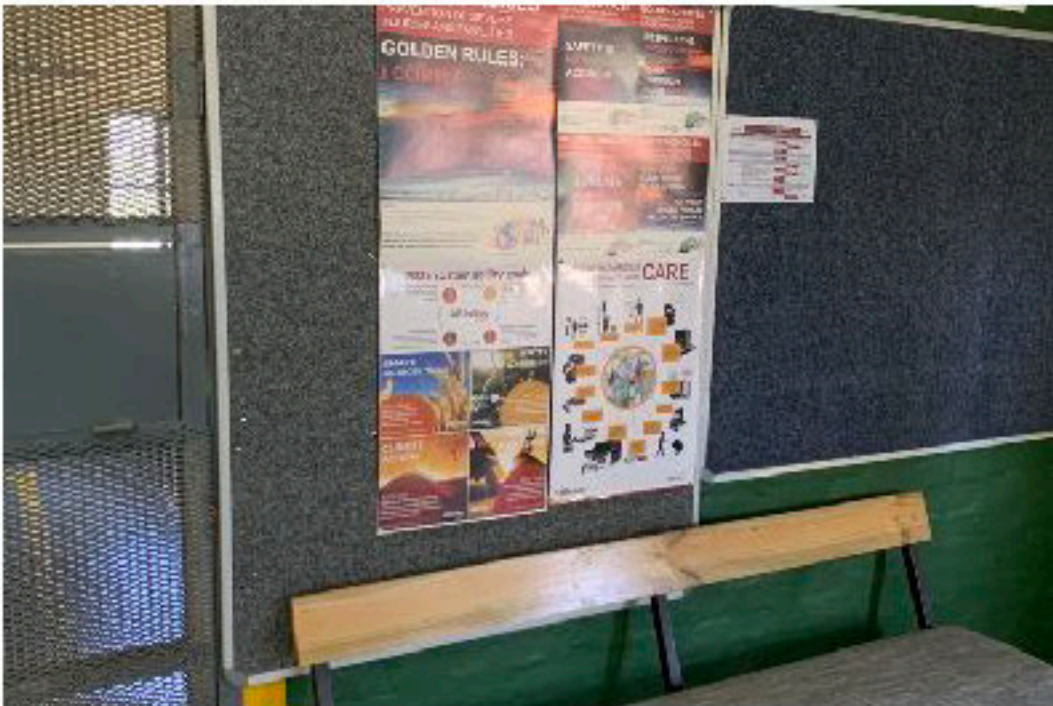
BINS OF PICKED HOPS WAITING TO BE PUT INTO KILNS



DRUM THAT DUMPS BINS OF HOPS INTO KILNS



KILN READY TO RECEIVE HOPS



SAFETY AND SUSTAINABILITY



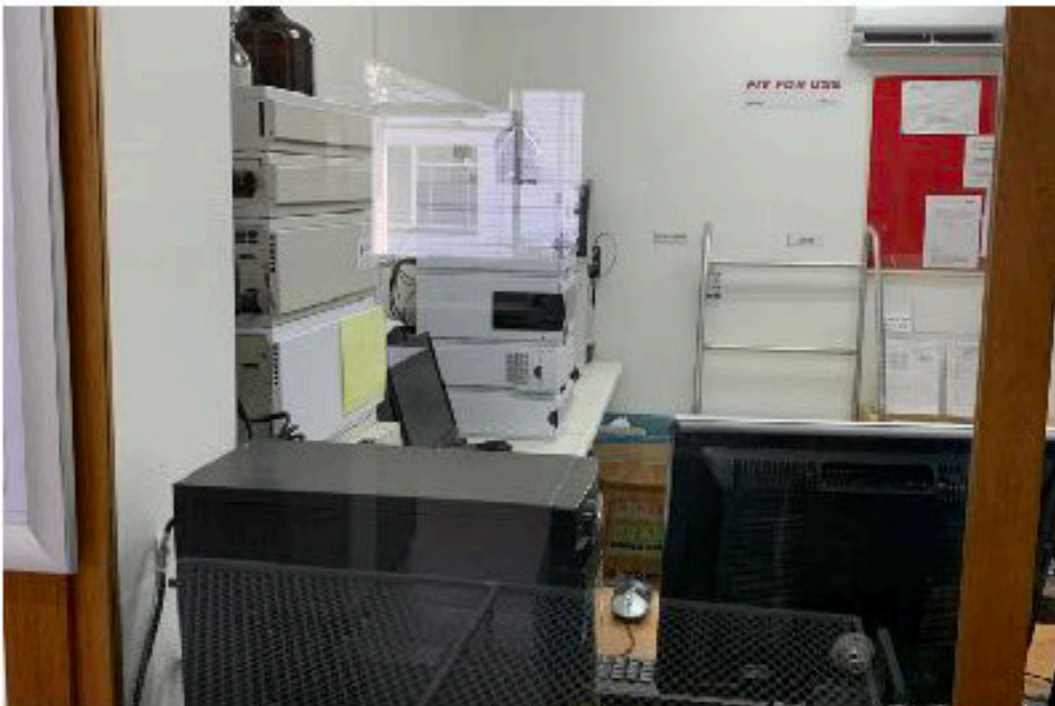
HEADING BALING AREA



BALE STORAGE IN COOLER



HOP SAMPLING IN LAB AREA



LAB



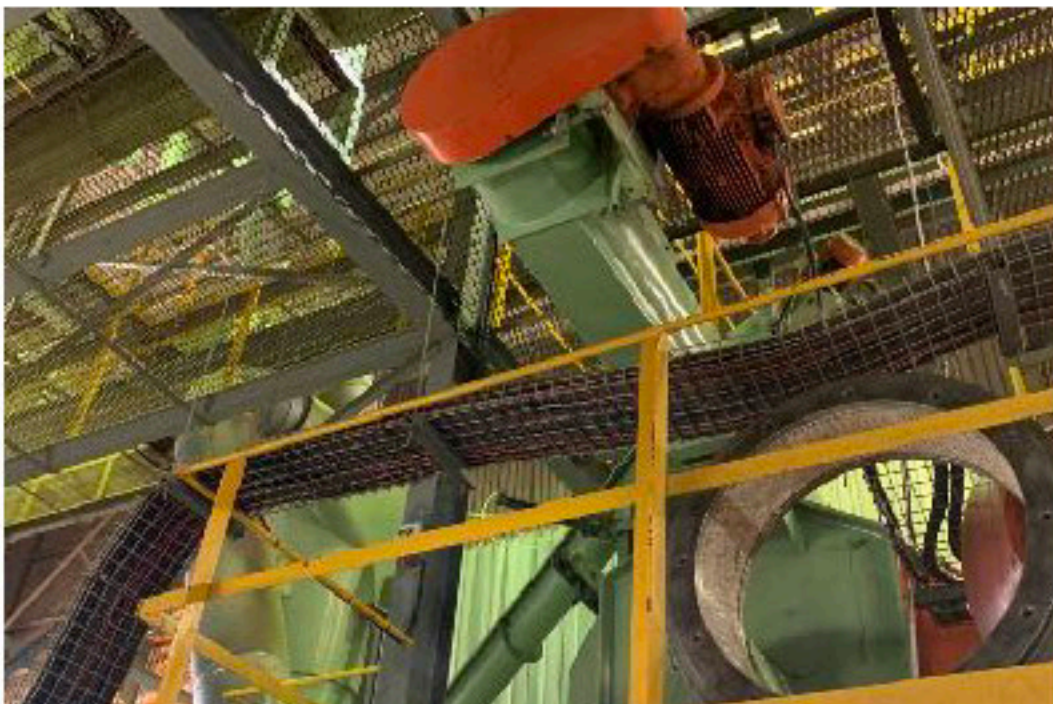
BALING AREA

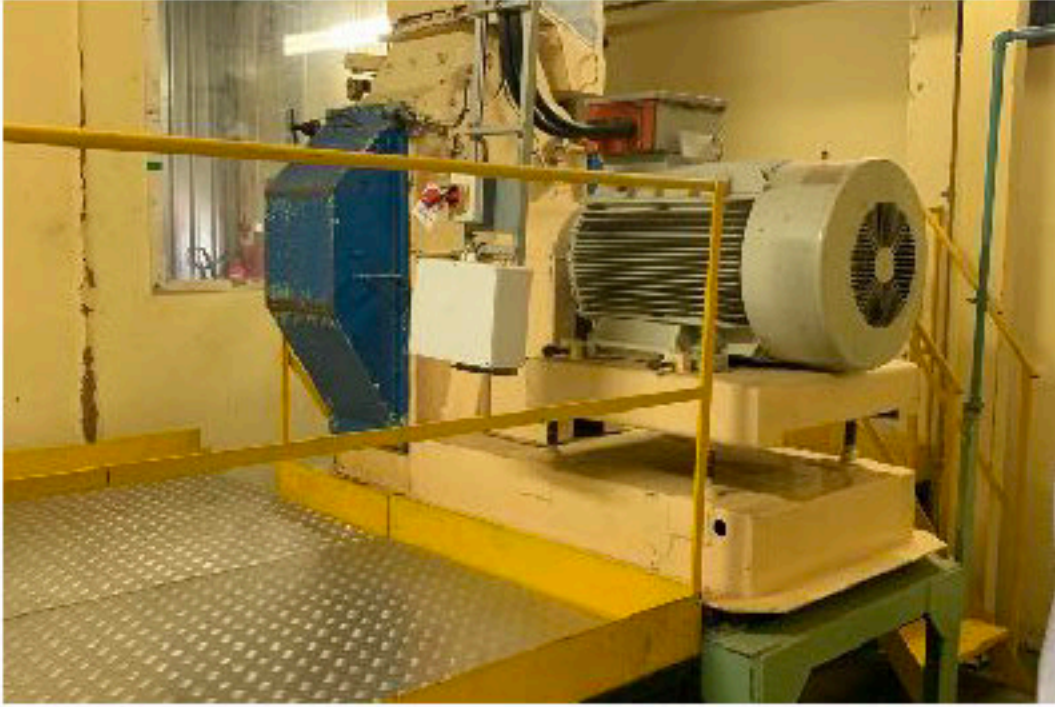
SAB/ABI also does all the pelletizing for South African hops. All varieties are pelletized, almost none of the hops stay in bales. We were kept at a distance from the pellet area because of repairs being done to the pellet equipment. I am reporting on what I could see during the short time I was there. Pellet mill and equipment was installed in the late 80's. Food and worker safety is a top priority in the pelleting area. Areas have plenty of safety and food safety signs and all workers that I could see had PPE. There were designated break and food areas. No food or drinks except water were allowed in the pellet areas. There was adequate cold storage of bales before pelletizing. Bale breaker was elevated above the floor and all conveyance was covered from what I could see. There was a heavy metal separator and magnets in place. There had two ring dies and from what I could see one was a 6mm die and the other was slightly bigger. I was not able to see the exact size. All pellets, from what I was told by the pellet operator, did not get above 50C when coming out of the die and air cooled when exiting. The pellets are vacuum packed in nitrogen flushed foil bags. We did have a discussion on their packaging procedures. A few boxes we had received in the past were very hard and difficult to break up. We met with the pellet manager and discussed this issue. For the time being they are still going to vacuum pack their boxes but not vacuum them to the point of making them solid bricks. We did talk to them about moving to a softer pack but that may take some time. Each lot is marked on each box of hops along with AA%, moisture. All records are kept in the main lab at

the facility. All packaged hop pellets are kept in cold storage until shipped out. Overall a very clean and well kept facility which one would expect from an ABI run plant.

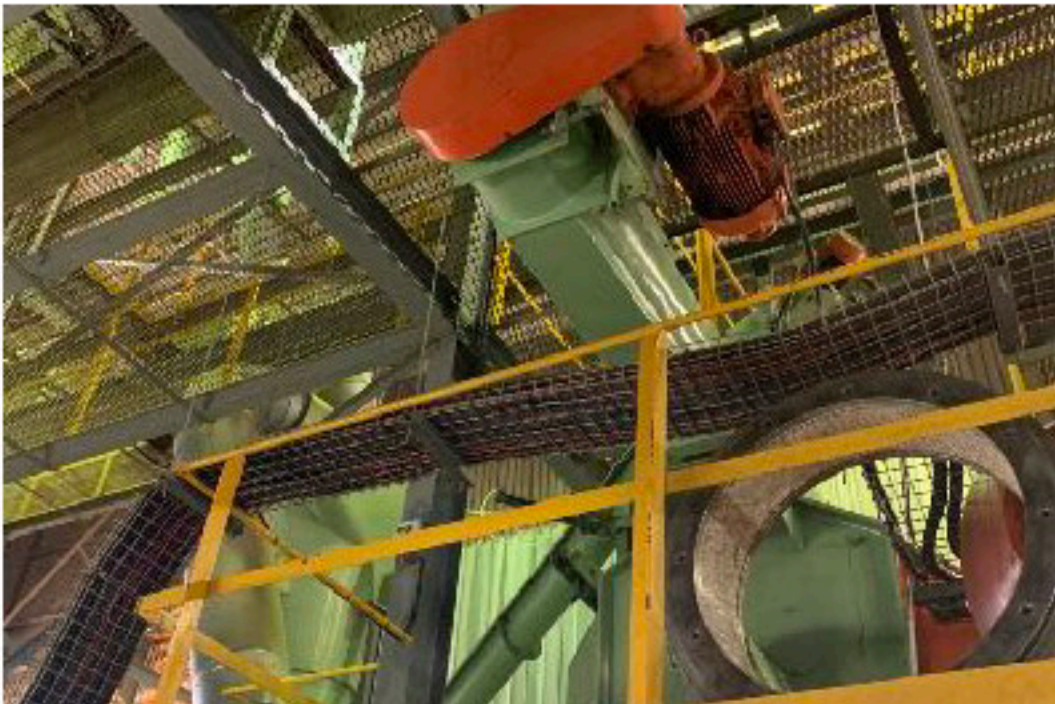


BALE COLD STORAGE





HAMMER MILL-BUTLER



PELLET FACILITY



PELLET PACKAGING



VACUUM PACKERS



PELLET GOLD STORAGE

In conclusion this facility is very clean and has very good food and worker safety protocols in place. The only produce a limited amount during the year and are focused on their domestic customers first (SAB/ABJ breweries in South Africa). Any hops left after they service their domestic customers is sold internationally. The beer in South Africa is very sweet and has a lot of residual sugar. Most of their hopping is done in the kettle and very little is done in dry hop. Because of this the focus on pellet quality has not been an issue. I am currently trying to talk them through this and let them know what the US brewers are looking for in a hop pellet. If you have any questions or comments, you can reach me at Matt@Johnfearless.com

