## Coffee Production Aussie Style Dan Kuhn International Agro Consulting, Hawaii

Mareeba has the most diverse collection of coffee harvesters in the world:

"Down Under" is popularly known for Deserts, Crocodiles and Digger hats, among other things. Coffee growing has been around a while globally, and a different approach than "normal" is followed in Australia. Australia has high labor costs and mechanical harvesting has been pioneered. Almost everybody is using machines for coffee harvesting.

Early harvesting trials were done almost simultaneous in the Hawaiian Islands (Kauai) and Lakeland, north of Mareeba. Like Hawaii, high labor costs in Australia dictate the need for mechanical harvesting. It is a bit "murky" on who did what first between Hawaii and



Nat Jaques shows his "Australians first coffee harvester". Designed by him and his brother, built by NQEA shipyard.

Australia. Both areas were influenced by the Brazilian Jacto K3 coffee harvester that was patterned after berry harvesters and developed for 6 years.

In Australia Nat and Dick Jaques were the first farmers to look at mechanical harvesting. They brought in a PECO (Blueberry Harvester) from New Zealand in the early 1980's. This machine did not pick coffee that well and they designed their own coffee harvester from the "ground up". This machine was built in 1986 by NQEA shipyard, the only one ever built and still harvesting today. The machine is spick and span and ready to harvest anytime. In 1984, Ben Colbran was the first with a dedicated coffee

harvester (FMC) which was partially designed by Roy Scudder in Brazil. Roy was also involved in the Kauai design.

In Hawaii the former Mc Bride Sugar plantation, now known as Kauai Coffee, pioneered mechanical coffee picking and built the famous "Big Bertha" harvester. This machine is now converted to a "stump pruner". After "Big Bertha" Kauai imported "Austoft" machines from Australia and "Korvan's" from Lyndon Washington. "Korvan" machines were influenced by the Brazilian "Jacto" design as well and were refined and proven on Kauai and Molokai and finally exported to Australia and Brazil.

Early on the Australian Government funded research into growing of coffee and mechanical harvesting. Information and site visit allowed an exchange of ideas between Hawaii and Australia. The work in Australia was done in conjunction with the "Toft" factory. These machines became "Austoft" and now being built in Brazil as "Brastoft" under "Case". Mareeba, the coffee growing capital of Australia has by far the most diverse collection of coffee harvesters anywhere in the world and new ones are being improved and developed. Quite a few of the current coffee farmers migrated form Africa to Australia and settled on the Atherton Tablelands primarily due to the climate and continued to grow coffee "Aussie Style".

Nearby Mareeba, another machine developed by a farmer is harvesting away. This "Skybury" machine was developed by Ian McLaughlin of Skybury Coffee. It has been harvesting for some years and is "cruising" down the coffee rows harvesting away.

Ian was involved in the early designs of coffee harvesters, "Big Bertha" and "Toft". He ended up designing his own machine as well. His machine has probably the most harvesting hours accumulated. He is currently working on his new improved and refined model that is being built and assembled by different manufacturers.



The Skybury machine, the one with probably the most harvesting hours...literally under the belts.



lan McLaughlin form Skybury Coffee views harvesting with his very experienced driver.

About 6 miles away from Mareeba is Nick Karan, "farmer extraordinaire" who built his own coffee harvesters from several old aircraft service vehicles. The hydraulics are shop built but the rest is home made. The machine actually harvested coffee and pretty good at that.





Dr. James Drinnan from Primary Industries (right) with Andrew Ford of Mountain Top Coffee, NSW (left) and farmer Nick Karan (center) checking out the home built machine.

This machine was busy harvesting but was down for some "debugging" or minor repairs while we were visiting. In no time the machine was back to harvesting.

Near Mareeba are farmers Noel & Yvette Godfrey, who have an "Austoft" machine. "Austoft" was instrumental in building the Australian coffee harvester. These machines are now produced in Brazil under the "Brastoft" name by Case.

Noel Godfrey with his "Austoft" coffee harvester. Now called "Brastoft" and made in Brazil by Case.



Driving about 100 miles north from Mareeba through dry country gets you to Lakeland. Lakeland is the site of the first harvesting trials with coffee. The farm is now owned among others by Swiss Farms a very impressive and diverse farming operation.

Peter and Franziska Inderbitzin with brother Tom Inderbitzin and wife Trish, operate this farm along with 100 acres of coffee. Lakeland is the area where the early harvesting trials took place and lots of the development work towards mechanical harvesting was done.



Tom Inderbitzin of Swiss Farms, discusses harvesting with the driver on a Korvan machine. The coffee is completely drip irrigated.



At Swiss Farm some incredible uniform coffee harvesting. Almost all ripe cherries with some overripe. No noticeable green or under ripe cherries in the harvesting box.

The Korvan harvester had its field trails in Hawaii with the first machine shipped to Greenwell Farms in Kona. This early machine had a small Volkswagen diesel engine and was never really used and the famous Kona coffee is all hand harvested today. The terrain is very steep and rocky not really conducive for mechanical harvesting.

The other areas Kauai, Molokai and Maui developed mechanical harvesting, primarily utilizing Korvan machines built in Lyndon Washington. Korvan used Hawaii as its trial area and debugged its machines from the first machine sent to Kona, to Kauai, Molokai and Maui. Each new machine had the new farmer features incorporated. After development and field trials machines were sent to Brazil and Australia in Queensland and NSW. The Korvan was modeled after blueberry harvesting machines and the early "Jacto" coffee harvester from Brazil.

What is remarkable for the whole Mareeba area is the ability towards uniform coffee flowering. A "dream come true" for coffee farmers using mechanical harvesting on account of even ripening.



Trees with very uniform fruit set and uniform ripening. The "dream condition" for mechanical harvesting.

The dry climate augmented by irrigation prior to flowering allows control of flowering to a high degree.

This is probably the best area that I have seen, where very uniform flowering / fruit ripening on the trees is making mechanical harvesting a relative easy chore.

Mareeba is the most unique **mechanical coffee harvesting capital of the world**. Per capita or per acre of coffee growing there is the most diverse collection of coffee harvesting machines anywhere in the world. What a treasure of experience and expertise. It was a real pleasure meeting these individuals and farmers who are real pioneering individuals....independent and determined.



Nat Jaques and his "incredible flying machine". Besides coffee, flying is his other passion. If he could his harvester would be flying as well. Signs directing toward the Department of Primary Industries in Mareeba. In Australia, this department conducted most of the coffee research. It also developed the mechanical harvesting concept and published numerous writings on coffee growing and harvesting.



Most coffee farmers in the current depressed world coffee market are looking for better prices to be able to continue in the coffee business. Mechanization is one way to keep the production costs down and possibly remain competitive. Pricing, selling and marketing of coffee are worldwide concern, not reserved for the local Australian coffee farmers.

Let's hope the Mareeba area along with other coffee growing areas will prosper with coffee growing well into the future.

Dan Kuhn is a coffee consultant working in coffee cultivation processing and mechanization. His coffee background is from Hawaii. He worked over 10 years operating 6 Korvan Harvesters on 500 acres of Molokai Coffee.