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TIPS FOR SUSTAINABLE MICRO-BREWING

MEALS IN METROPOLIS

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IN THE LAST DECADE AUSTRALIA HAS SEEN MANY MICROBREWRIES/ BREW PUBS EMERGE WITH A ECO-FRIENDLY STATE OF MIND. MICROBREWRIES ARE TYPICALLY SMALL INDUSTRIAL OPERATIONS THAT CRAFT UNIQUE BEER BUT CONSUME A LOT OF POWER AND WATER AND OFTEN HAVE SIGNIFICANT LEVELS OF EMISSIONS I RECENTLY CONDUCTED A CASE STUDY ON THE MOUNTAIN GOAT BREWERY WHO ARE PRODUCERS OF AUSTRALIA'S 1ST COMMERCIALY RECOGNISED ORGANIC BEER AND ARE BASED IN MELBOURNE. THE COMPANY PRIDE THEMSELVES ON THEIR SUSTAINABLE APPROACH TO PRODUCING HIGH QUALITY BOUTIQUE ALES. MOST OTHER MICROBREWRIES IN AUSTRALIA HAVE THE SAME MIND SET WHEN IT COMES TO THE POTENTIALLY HARMFUL ENVIRONMENTAL IMPACT AND HAVE ADOPTED SOME MEASURES TO ENSURE THEIR ECO FOOTPRINT IS UNDETECTABLE.. AUSTRALIA HAS RECENTLY EXPERIENCED THE LAUNCH OF FOSTER'S NEW CARBON NEUTRAL BEER- CASCADE GREEN. IT SEEMS AS THOUGH IT'S NOT ONLY THE MICROBREWRIES THAT ARE CONSCIOUSLY MOVING TOWARDS A GREENER FUTURE WITH BEER YOU CAN FEEL EVEN BETTER ABOUT DRINKING. OFFSETTING CAN BE REWARDING LONG TERM FOR BOTH THE ENVIRONMENT AND THE COMPANY. CAM HINES IS CO-FOUNDER OF MOUNTAIN GOAT BREWERY AND PRESIDENT OF THE MICRO-BREWERS ASSOCIATION OF VICTORIA AND KNOWS ABOUT ENVIRONMENTAL IMPACTS OF BREWING - "SO THEY ARE JUST CARBON OFF-SETTING, WE ARE SORT OF SAYING, WELL WHY NOT INVEST EARLIER ON AND PUT IN SOLAR PANELS AND REDUCE BEFORE YOU USE RATHER THAN OFF-SETTING?"

IT WAS WITH THIS NOTION THAT I EXPLORED THE NUMEROUS MEASURES THAT OTHER MICROBREWRIES IN AUSTRALIA AND AROUND THE WORLD HAVE TAKEN TO REDUCE THEIR IMPACT AND HAVE IMPLEMENTED SOME OF MY OWN PROCESSES THAT ARE NOT YET APPARENT. THERE ARE A LOT OF EXCEPTIONAL IDEAS OUT THERE, MANY INVOLVING A LOT OF MONEY. HOWEVER THERE ARE CRAZY AMOUNTS OF THINGS THAT CAN BE DONE AROUND THE BREWERY THAT CAN REDUCE THE CARBON FOOTPRINT. I HAVE COMPILED 30 TIPS WHICH COULD BE UNDERTAKEN TO ENSURE THE NEXT BREW IS A GOOD BREW.

1. BUY GREEN POWER FROM GREEN ENERGY AUSTRALIA
2. AN AUTOMATED BOTTLING LINE WILL NOT ONLY SAVE TIME AND LABOUR, BUT REDUCE THE AMOUNT OF WASTE PRODUCED BY OVER OR UNDER POURING BEERS INTO BOTTLES. LESS WASTED BEER MEANS HAPPIER BEER LOVERS.
3. COMPUTER CONTROLLED FERMENTERS ENSURE THAT INGREDIENTS ARE HEATED TO THE CORRECT TEMPERATURE. NO POWER IS WASTED AS SYSTEM WILL SHUT ITSELF DOWN WHEN PROCESS IS COMPLETE.
4. THE FERMENTERS THEMSELVES USE A SIGNIFICANT AMOUNT OF POWER TO BOIL THE MURT (EARLY STAGE OF BEER). THERE ARE A NUMBER OF OPTIONS WHEN CONSIDERING WHICH ONE TO USE. THE MAVERICK FERMENTERS ARE FOUND IN THE U.S. AND CLAIM TO USE LESS POWER TO REACH OPTIMAL FERMENTING TEMPERATURE DUE TO HIGH QUALITY MATERIALS AND INSULATION. THE OTHER FEASIBLE OPTION IS TO BUY WITHIN AUSTRALIA. THIS MEANS THE BUSINESS STAYS WITHIN THE COUNTRY AND MAINTENANCE IS ACCESSIBLE.
5. OPEN SKY-LIGHTING AND WINDOWS ALLOW MORE NATURAL LIGHT INTO THE BREWERY WHICH ARE TYPICALLY LARGE PLACES. THE NEW BELGIUM BREWING COMPANY IN COLORADO HAVE TAKEN IT A STEP FURTHER AND HAVE INSTALLED LIGHT-PIPE TECHNOLOGY. SUNLIGHT ENTERS THE TUBING AND IS BOUNCED AROUND AN INNER REFLECTIVE SURFACE THEN DISPERSED EVENLY THROUGHOUT THE INSIDE OF THE BREWERY.
6. EARTH COVERING ON ROOF INCREASES THE BUILDINGS INSULATION WHICH KEEPS IT WARMER IN THE COLDER MONTHS. CO² EMISSIONS ARE A BY-PRODUCT OF THE BREWING PROCESS. THE OTTER BREWERY IN DEVON, ENGLAND HAVE PLANTED SEDUM ON THEIR ROOF. SEDUM IS A CO² GUZZLING SUCCULENT THAT SURVIVES WITH MINIMAL AMOUNT OF WATER AND IS EASILY MAINTAINED.
7. SOLAR PANELS ARE A NECESSITY FOR ON-SITE POWER GENERATION. WITH SUCH LARGE ROOF SPACE IT WOULD BE SILLY NOT TO. THE POWER BILL WOULD BE SIGNIFICANTLY REDUCED IF THE FERMENTERS WERE TO BE RUN OF SOLAR ENERGY ALONE. THE BREWERY ITSELF COULD CUT THE BILL UP TO 80% DUE TO SOLAR HARVESTING.
8. AMMONIA IS A COMPOUND WITH THE FORMULA NH₃. IT IS NORMALLY ENCOUNTERED AS A GAS WITH A CHARACTERISTIC PUNGENT ODOUR. IT ACTS AS A HEAT VAPOURIZER RIDDING THE AIR OF ALL WATER CREATING A NATURAL CHILLING PROCESS. THERE IS NO CFC EMISSION AND SIGNIFICANTLY LESS AMOUNTS OF POWER IS USED TO REFRIGERATE BEVERAGES.
9. LOCAL AND ORGANIC BARLEY MEANS HAPPY AND HEALTHY BODY AND CREATING ADVOCATES WITHIN THE COMMUNITY AND LOCAL REGION. BARLEY IS CURRENTLY AT A HIGH PRICE DUE TO DROUGHT CONDITIONS SO BREWERIES HAVE BEEN SOURCING ELSEWHERE SO THE QUALITY OF BEER IS NOT JEOPARDIZED. WHEN AVAILABLE IT SHOULD BE BOUGHT LOCALLY. THIS ALSO MEANS LESS FOOD MILES INVOLVED. EVERY INGREDIENT IN AN ORGANIC BEER MUST BE CERTIFIED AS ORGANIC. SUPPLIERS WILL HAVE DETAILS WHERE TO GET THIS.
10. HIGH PRESSURE HOSES ARE A NECESSITY IN BREWERIES. CLEANING ALL EQUIPMENT SO THAT IT IS STERILE IS OF UTMOST IMPORTANCE IN THE BREWING PROCESS. THE INVESTMENT OF A HIGH QUALITY, HIGH PRESSURE HOSE WILL MEAN THAT A STERILE ENVIRONMENT WILL BE ACHIEVABLE WITH THE LEAST AMOUNT OF WATER NEEDED.
11. WASTE WATER FROM THE BREWING OR CLEANING PROCESSES SHOULD BE CAUGHT AND TREATED ON SITE BEFORE LETTING IT GO INTO THE SEWERS. THE TWO BROTHERS BREWING COMPANY OF ILLINOIS, US ENSURE THAT ALL LIQUID WASTE IS TREATED AND NUTRALISED BEFORE BEING USED IN ANOTHER PROCESS LATER DOWN THE TRACK. THE MOUNTAIN GOAT MAKE SURE IT IS AT LEAST CARBON AND UV NEUTRAL.
12. CARDBOARD IS THE MAIN MATERIAL FOR PACKAGING SLABS OR 6 PACKS. THE CARDBOARD SHOULD BE 100% RECYCLABLE AND RECYCLED AT ALL COST.
13. JUST LIKE THE CARDBOARD, THE BOTTLES NEED TO BE RECYCLED TOO. BOTTLES ARE A LOT CHEAPER TO IMPORT FROM ASIA, BUT KEEPING IT IN THE FAMILY AND BUYING OFF AUSTRALIAN MANUFACTURERS KEEP THE BUSINESS CLOSE MEANING LESS TRANSPORT AND GREATER NETWORKING.
14. LEAVING THE CAR AT HOME AND RIDING THE BIKE TO WORK/DRINKING HOLE IS REWARDED IN MANY WAYS. A NUMBER OF AUSTRALIAN BREWERIES HAVE A POLICY WHERE THE STAFF ARE REWARDED WITH A XMAS BONUS FOR RIDING THEIR BIKE, WALKING OR CATCHING PUBLIC TRANSPORT TO WORK.
15. BIO DIESEL TRUCKING COMPANY WORKING IN CONJUNCTION WITH MICROBREWERS ASSOCIATION OF VICTORIA. MUCH CHEAPER THAN EXISTING METHODS AND LESS EMISSIONS.
16. KEGGING BEER IS A GREAT WAY TO GET LARGE AMOUNTS OF YOUR PRODUCT OUT ON THE SCENE WITH MINIMAL WASTE. CARTONS AND 6 PACKS WILL HOPEFULLY GET RECYCLED BUT THE KEG ALWAYS COMES BACK TO THE BREWERY TO GET REFILLED AND SENT OUT AGAIN.
17. CARBON AND UV FILTERING IS AN EXPENSIVE PROCESS EACH MONTH YET IT IS NECESSARY TO DO TO ENSURE THE WATER COLLECTED FROM THE ROOF IS TO DRINKING QUALITY. THE HEALTH DEPARTMENT WILL CONDUCT REGULAR CHECKS ON WATER WHICH COST UP TO \$500 PER MONTH.
18. RECYCLE BINS! KNOW WHAT IS RECYCLABLE AND PUT IT IN THE RIGHT RECEPTACLE. PRETTY SIMPLE STUFF.
19. DRINKING SESSIONS REQUIRE SOME SORT OF FOOD TO MAKE SURE THINGS DON'T GET OUT OF HAND TOO FAST. WHY NOT OFFER THE CUSTOMERS SOME CERTIFIED ORGANIC TAPAS OR BAR SNACKS? LOCALLY GROWN AND EVEN MORE LOCALLY COOKED.
20. GLYCOL COOLING SYSTEMS AREN'T ANYTHING NEW IN THE BEVERAGE COOLING INDUSTRY BUT ARE SAID TO BE ONE OF THE MORE EFFICIENT METHODS OF CHILLING BEER FROM THE KEG TO THE PINT GLASS.
21. COMMUNITY INVOLVEMENT IS AN IMPORTANT FACTOR IN THE SURVIVAL OF MANY MICROBREWRIES. GETTING PEOPLE TOGETHER TO SHARE A GREAT ALE AND CREATE HEALTHY SOCIAL INTERACTION WHILST RAISING AWARENESS SHOULD BE THE GOAL.
22. THE MOUNTAIN GOAT BREWERY PRODUCES AROUND 400,000 LITRES OF BEER PER YEAR. BY INSTALLING A 11,000 LITRE TANK THEY WERE ABLE TO SAVE APPROXIMATELY 200,000 LITRES OF MAINS WATER IN THE FIRST 18 MONTHS IT WAS THERE WHICH IS A SIGNIFICANT AMOUNT OF WATER.
23. THE BEER! MICROBREWRIES DON'T USE MANY PRESERVATIVES AND ALWAYS TAKE THE NATURAL APPROACH AND ACHIEVE SOME REALLY AWESOME RESULTS. BY GOING INTO THE BREWERY AND HAVING A PINT YOU HAVE ALREADY CUT DOWN THE TRAVEL TIME AND HELPED OUT THE LITTLE GUYS IN SOMEWHAT FEISTY INDUSTRY.
24. RECYCLED AND RECLAIMED FURNITURE IS A NON FUSS WAY TO DECK OUT THE INTERIOR AND BUILD INTERNAL STRUCTURES SUCH AS THE PLACE WHERE YOU GET YOUR PINT...THE BAR.
25. HAND DRYERS DRY YOUR HANDS AND ELIMINATE THE PAPER WASTE THAT MESSES UP THE BATHROOM. IT IS PROVEN TO BE MORE SANITARY TO AIR DRY YOUR HANDS ANYWAY!
26. ROOF INSULATION CAN BE ACHIEVABLE WITH EARTH COVERING, BUT IF YOUR ROOF IS NOT SUITED TO THAT SIMPLY INSULATING THE ROOF WILL REDUCE THE NEED TO HEAT THE SPACE IN COLD MONTHS AND KEEP COOL AIR IN DURING WARMER MONTHS.
27. REFER TO TIP 22.
28. ANAEROBIC DIGESTERS ARE EXPENSIVE TO BUY BUT ONCE IN USE THEY WILL PAY FOR THEMSELVES. OBVIOUSLY THE SIZE OF THEM WILL DICTATE TO HOW MUCH POWER THEY WILL PRODUCE. THE BY PRODUCT OF THE FERMENTATION STAGE CAN BE ADDED TO THE DIGESTER WHICH IN TURN CAN BE USED AS FERTILIZER ON THE GARDEN/HYDROPONICS. BY PRODUCTS INCLUDE THE COOKED BARLEY, CO² AND METHANE.
29. HYDROPONIC HOP PRODUCTION IS A RARE THING AT THE MOMENT BUT IT IS SAID TO BE ACHIEVABLE. GROWING HOPS ON PREMISE ELIMINATES THE NEED FOR LARGE AMOUNTS OF SOURCING FROM SUPPLIERS. RED HILL BREWERY ON THE MORNINGTON PENINSULA IS THE ONLY MICROBREWERY GROWING THEIR OWN IN VICTORIA.
30. AN ON SITE BOTTLING BILL.