

Water crisis and conservation in the Brewing Industry

J. Nevan Wright (Auckland University of Technology, New Zealand)

Water and crisis are words often found in the same sentence. The crisis can be too much or not enough water. Too much water includes floods, erosion, and the submersion of island nations. Not enough includes prolonged droughts leading to bush fires, crop failures, lack of drinking water and depletion of fresh water fish stocks. This paper examines how two leading international brewers have managed their supply chains to conserve water through re-use, re-cycling and waste disposal. One brewer found that due to extensive irrigation of crops in South Africa 155 litres of water was used to produce just one litre of beer and in the Czech Republic the ratio was 45:1. This major brewer is now working with farmers to reduce water usage by education in conservation and with technical assistance including use of drought resistant crop strains. In Georgia USA, following a three year drought, authorities required a 10% reduction in water usage.

From an audit of the footprint of water usage per bottle a Budweiser brewery instituted changes to cleaning, cooling and steam production which resulted in zero net use of water for these processes. Overall the amount of water used, within the brewery, was reduced by 36% (from 4.9 litres to 3.1 litres per litre of beer). This brewery produces over 8 million barrels of beer a year and is thus a major user of water. Carlsberg, the multi-national Danish brewer who produce world-wide 11,800 million litres of beer world-wide, have set a best in class standard of 2.6 litres of water per litre. Setting a standard is one thing showing how to make it happen is what matters. This paper presents results of on-going research, and actions taken, within the brewing industry for the reduction of water wastage.

KEY WORDS: Water conservation, climate change, brewing industry.