ALCOHOL PRODUCTION

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This paper on alcohol production was prepared on behalf of the companies sponsoring the International Center for Alcohol Policies; it is Ron Simpson’s input into the WHO Global Strategy process on areas where industry members can contribute to the reduction of harmful drinking.

THE ECONOMIC AND SOCIAL IMPACT OF ALCOHOL PRODUCTION

Commercial alcohol production can and does have substantial positive economic and social impact. Both in developed and developing countries, it provides employment opportunities and stable incomes to many people and a significant source of public revenue to governments (1, 2).

Since most alcohol beverages require some type of fermentation, agricultural products are an important component of alcohol production. This requirement often offers opportunities to source agricultural products locally, thus benefiting rural communities, including women, who are engaged in farming activities. One of the most important raw materials for alcohol beverage production is, of course, water and here too production companies are able to work with local communities to maintain safe and reliable sources of drinking water. Packaging, transportation, and other services bring additional benefits to local communities, both in terms of raw materials, infrastructure, and employment opportunities.

As well as their economic benefits, all these activities also contribute positively to social development and provide resources for public health investments (2). This is consistent with the social determinants of health approach, developed and promoted by WHO, as alcohol production helps to alleviate poverty and improve the local physical environment. In addition, local production of branded products is likely to reduce the production of noncommercial alcohol, thus increasing local revenue and reducing the public health risks associated with contaminated drinks. Several large producers have developed models to measure the broad social and economic impact of their investments on infrastructure and services, demonstrating the scale of positive contribution, especially in developing countries. These outcomes of commercial alcohol production may be especially important in difficult economic times.

QUALITY CONTROL AND SAFETY PROGRAMS

Quality control and safety programs are a significant part of any production process. A company’s “license to operate” is granted and may be supervised by government and is based on compliance with government regulations. The license will generally cover all aspects of the quality and safety programs. Brand manuals define hundreds of quality and safety checks.

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1 Dr. Simpson has 25 years of experience in the food and beverage industry. Prior to retirement, he was Vice President of Corporate Scientific Affairs at Joseph E. Seagram and Sons (ICAP Board Member), responsible for developing and implementing strategies to gain a better understanding of the role of alcohol consumption in health and social issues. He received his doctorate in Nutrition at the University of California at Davis.

2 This paper was submitted as a contribution to the WHO public hearing on ways of reducing harmful use of alcohol.
These programs are responsible for testing and evaluating everything from the raw materials to the finished beverage and packaging to confirm that they meet the government and company standards. Each step in the production process is checked; safety and quality are very important to all branded products and their consumers.

While such safety and quality checks are standard practice among big producers, they may be limited among small legitimate producers and often absent in the unregulated informal market. This leaves illicit products—from counterfeits to homebrews—vulnerable to possible contamination or adulteration. From a production point of view, most health-related issues arise from poor-quality alcohol, produced in an unsafe environment. All major producers of beer, wine, and spirits have developed strict quality and safety controls and are willing to share their expertise with governments.

LOWE ALCOHOL PRODUCTS
Industry members have been willing to meet the new consumer demand for low and mid-strength alcohol beverages (3). Although specific definitions may vary by market or country, “regular-strength” alcohol content is generally as follows: 4.6 to 6.0 % of alcohol by volume (ABV) for lager beers, 12 to 15.0% ABV for wines, 37.5 to 40.0% for spirits, and at least 15% and above for liqueurs. Drinks with lower alcohol content are produced in each of the major beverage alcohol categories—beer, spirits, and wine (3). However, legal product standards (defining, among other things, alcohol content of different spirits and beer types and forbidding intervention into the wine fermentation process) may limit a broad trend of lowering alcohol content.

Non-alcohol brews and reduced-alcohol beers have been available in some markets for decades and have gained acceptance. These products range from zero alcohol to approximately 3.2% ABV. Some effort has also been made by wine producers to make lower alcohol and non-alcohol wines.

Spirit-based beverages with lower alcohol content have been developed in an attempt to provide a broader choice for spirit drinkers. For example, a producer of a leading vodka brand (which, as a typical vodka, has 40% ABV) recently launched a brand extension with 21% ABV. Although this new beverage belongs to the same brand, it is no longer called “vodka” for regulatory reasons but a “spirits drink.”

The existence of such products points to an interest on the part of industry members to provide an expanded range of goods that reflect consumer lifestyle choices, health consciousness, and price sensitivity, as well as taste (3).

WHAT IS BEING DONE
Collaboration among the beverage alcohol industry, government, the local community, and others is well documented. Several recent examples include: providing specific industry data on product production and trade flows to WHO, implementing sustainable development practices, and working to reduce counterfeiting.

Production and Trade Data
WHO has a stated objective of collecting the best available data on beverage alcohol production and trade flows in order to improve its ability to monitor drinking internationally. The alcohol producers that sponsor ICAP have agreed to ask trade data collection companies they have utilized in the past to provide WHO with top level data in line with the check list provided. ICAP, on behalf of the industry, has taken on the task of making this information available on its website. Information on 2000–2006 top level production and trade (export/import) and per capita consumption per country will be posted on www.icap.org in 2008. This information has been gathered for the industry by consulting companies CANADEAN, PlatoLogic, and International
Wine and Spirit Record (IWSR). It has been agreed that this data would be made public on a yearly basis. This is a commitment for the next five years.

**Sustainable Development Practices**

Water availability, sustainability, and quality are extremely important issues to all producers of beverage alcohol. Several company-specific examples are listed below.

In September 2008, Molson Coors endorsed the United Nations Water Mandate to address water sustainability in the company’s operations and supply chain. In Canada, Molson has reduced its water use by 12% over the last four years through the creation of an energy team in each brewery to implement conservation programs and water use education for employees. In the United Kingdom, Coors achieved a 14% water use reduction in 2007. In the United States, Molson Coors has established partnerships with Clear Creek Watershed Foundation and Shenandoah Valley Pure Water Forum to support water conservation projects near its breweries (4).

Diageo’s “Water of Life” community-based program supports projects that improve access to drinking water in developing countries, aid environmental conservation, and deliver capacity building training. Diageo believes that this contributes to improved health and education and helps reduce poverty. In Africa, clean and safe drinking water has been delivered to 500,000 people since 2000, with a goal of reaching 1 million by 2008; this commitment will continue until 2015 (5).

In addition to establishing specific targets for water conservation for its breweries worldwide, Heineken has recognized waste treatment as an important part of water safety and sustainability. It has adopted a program for the construction of 16 waste water treatment plants at breweries in Africa where no municipal facilities for cleaning water exist. In 2007, a new waste water plant in Lagos, Nigeria, was commissioned, and four other plants were continued. Four more treatment plants are scheduled to be built in 2008 (6).

**Counterfeiting Prevention**

Although counterfeiting—as well as product contamination and adulteration that often accompany it—is primarily an economic issue for the beverage alcohol industry, they are also areas with strong public health implications. It is well known that counterfeit beverages are not subject to the same quality and safety standards as branded alcohol. Industry members have worked with anti-counterfeiting programs in over twenty developed and developing countries, training government officials to identify counterfeit products, and continue to develop and employ new technology in their efforts to reduce counterfeiting. For example, Diageo’s Brand Authenticator enables rapid analysis of liquid instead of a lengthy and costly lab analysis. This device has been provided free to hundreds of enforcement officers around the world. Since much counterfeiting happens when genuine bottles are refilled with inferior products, Diageo has also developed bottle closures that prevent refill.

**OPPORTUNITIES FOR MULTI-STAKEHOLDER PARTNERSHIPS**

Production is usually a locally-based operation with many technical resources. Most production facilities have experts in engineering, chemistry, quality control, and safety who usually have access to additional technical resources at their corporate laboratories. This expertise is available and could be consulted when local officials are confronted with technical issues and problems related to alcohol that are beyond their capabilities. Companies have demonstrated their willingness to advise and help when asked by governments.

However, long-term contribution cannot be sustained in a vacuum. For example, producers are willing to assist governments in developing quality and safety procedures and training police and quality assurance inspectors, but this process cannot be sustained without a strong and effective enforcement mechanism. Governments have to institute a clear regulatory system holding
producers, big and small, accountable for the quality of their products, with adequate penalties for those who are not compliant with the established procedures and put a contaminated or illicit product on the market.

Some of the following areas should be considered for multi-stakeholder cooperation.

- Maintain reliable and safe sources of drinking water. This is necessary for a factory to continue operation but is also important to the local population.
- Where appropriate, train local farmers to grow crops that can be used as ingredients in the production of products being made at a factory.
- Develop simple, inexpensive, and rapid tests to identify contaminates in beverages. Methanol is the prime example of a toxic contaminant in beverages that is of interest to local health officials. Tests could be developed for other contaminants, such as Freon, battery acid, and other illegal additives.
- Collaborate in the provision of training in quality control to help legitimate small producers make safe products.
- Consider how best to take into account potential public health implications when developing new products.
- Provide resources to help local authorities identify sources of contaminated or counterfeit product before it reaches the local consumers and encourage local officials to randomly test these beverages.
- Where home production is widespread, inform the population about potential risks for contamination and the health consequences of consuming toxic beverages.
- Create an international technical resource pool from producer companies that can be made available to local officials to help address specific technical problems related to the production of alcohol. This resource pool could be coordinated through ICAP.

REFERENCES