

## **The advancement of the craft beer industry and its value chain through guidelines and technical support**

Over the past decade, the Collège Communautaire du Nouveau-Brunswick (CCNB) has stepped up its efforts to support and promote innovation and technology integration initiatives in New Brunswick's industrial and manufacturing sectors. These activities enable the institution to play a more direct role in the province's economic development.

The objectives for the project “The advancement of the craft beer industry and its value chain through guidelines and technical support” is to provide beer analysis to a range of craft breweries in New Brunswick, Prince Edward Island, Nova Scotia, Ontario and Québec, to provide insights on process and fermentation optimization and complete beer profiles. Work will also be done directly with ingredient providers, namely hop growers and maltsters, to favor more integration of local ingredients in regionally produced beer.

The craft brewing sector has been booming over the past 5 years. The sector has seen an increase of over 100%. Craft breweries can stimulate both urban and rural economies and have become a good employer requiring experienced labor. The rapid expansion creates a need for guidelines and support for the craft brewers as well as cohesion and control parameters for the whole value chain, i.e. from the primary ingredient providers to the brewers. It provides great opportunities for all these accompanying services to plan for the increased demand and relies increased economic benefits in the Atlantic Provinces.

The major expected outcomes for this project will aim to improve analytical information on beer and give insights on fermentation and brewing parameter optimization to brewers and create guidelines for brewers as they relate to information gathered during the analysis. The project will also encompass a comprehensive analysis on regional hops, thus increasing the understanding of regional variation and how they compare to commercially grown hops. The project also has a malt component, where locally grown barley will be malted at the lab and tested for quality. The malting parameters will be communicated to maltsters in order to help reduce the risk of using new malt varieties and to scale up the malting of these new barley sources. With the generation of the reports for each of the sectors involved (strictly confidential) our research team will be able to create general guidelines on many of the parameters analyzed including the uses of spent grain and yeasts.

Beer analysis parameters:

- a. IBU
- b. pH
- c. Color
- d. Diacetyl\*
- e. Free amino Nitrogen (FAN)\*
- f. Sugar profile
- g. Ethanol content
- h. Entrapped air (bottles only)
- i. Dissolved carbon dioxide (bottles only)
- j. Beer micro testing (anaerobic lactobacillus and potential pathogens)

(\*on one selected brand per brewery)