

Technical Session Recap: Autumn Meeting in Montreal

Claude Franche's Q&A session from the malt technical presentation prior to our tour of the Canada Maltings plant in Montreal yielded some valuable insight into the maltster's art. Below is a re-cap and summary of the information Claude presented. District New England would like to thank Claude and Canada Malting for donating his time and expertise.

- Q.** What is the source of the stones I hear going through the mill? Could stones from the field make it through the maltings to my brewery, or is it more likely the maltings' own concrete processing floor that is their source?
- A.** Stones come in from the field along with the barley as it is harvested. Generally, all the stones are removed during the cleaning process but sometimes a few of similar gravity and size to barley kernels can slip through.
- Q.** Can you describe any pest control measures (preventative, maintenance, or event specific) you implement to ensure product quality?
- A.** Pest control is part of ConAgra malt QMS and covers all areas of the plant. This starts with coverage of the outside perimeter and continues inside all buildings. Inspection is done on all products coming into the plant as well on shipments.
- Q.** Can you name the most common weed seeds you have to deal with (buckwheat, rye, wheat, etc)? What techniques do you use to minimize their numbers in the final product?
- A.** Several types of weed seeds come in small amounts with the barley. Several types of barley cleaning equipment are used to remove them from the stream of barley. The method used is based on screen design and sizes, such as embossed rotating cylinders, rotation speed, and aspiration.
- Q.** Analyzed levels of beta glucans seems to vary with the seasons. Can you describe why malt received at the brewery in spring and summer tends to be higher in β -glucans than malt received during the rest of the year?
- A.** Normally it is pretty even but could be slightly higher when the new crop malt is being introduced onto the blend as barley can still show some degree of dormancy. As the barley matures it modifies more thoroughly. The maltster is adjusting the process to the barley performance.

- Q.** Of all the parameters reported on the malt analysis sheet provided to the brewer, which is the most difficult for you to adjust for during the malting process? While all parameters are important, why does this one require the most attention from the maltster?
- A.** The one parameter that a maltster is looking for is consistent brewery performance, which is achieved with a good overall, even modification.
Speaking of individual parameters:
- a. Friability and FAN...Uniformity of milling and fermentation
 - b. Color and glucan content...to match product spec. and filtration
 - c. Enzymes...for efficient, predictable conversion
- Q.** In a visual inspection of base malt, what do you feel a brewer should be looking for to ensure the malt is of adequate quality?
- A.** Kernel condition (broken kernels, infections, weathering, husk condition)
Foreign material
Kernel size (distribution assortment)
Glassiness (can be referenced by friability)
- Q.** As a maltster, do you have any guidelines for what conditions, transfer pressures, or amount of time that you would like to see your malt blown into a brewer's silos?
- A.** Equal to (or more important than) the pressure, the conveying system design is of utmost importance. Smooth elbows, short piping or lines from truck to silo, type of material used, and good overall maintenance are all factors that will contribute to minimizing damage to friable malt kernels. Pressure should range from 4 to 7 psi, the longer the distance the higher the required pressure.
- Q.** Are there any new barley varieties that you see becoming a part of your mix in the near future?
- A.** Metcalf, Stratus, and Copeland.

Q. How many types of barley varieties are combined for the typical 2-row or 6-row base malt? What is the composition of your typical 2-row base malt at this time? Why do you use more than 1 type, and why does it change?

A. # of types varies on the requirements of the malt specification and can vary from 3 to 6. We vary the mix seeking to establish good balance of characteristics and uniformity of shipment analysis. New varieties are mainly brought on for general improvement, and to replace old varieties which eventually lose their original characteristics. New varieties are usually bred to produce superior brewing capabilities, disease resistance, better per-acre yield, etc.