

# Aggie Brew

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## Welcome

This is the very first issue of the newsletter aimed at keeping alumni and other friends up-to-date with all the brewing activities at UC Davis. I hope you find much to interest you.

## Refurbishment

After many years of status quo, work has commenced on upgrading the brewing laboratory (affectionately remembered by alumni everywhere as 150E).

The old cold rooms have been removed, freeing up space to make up for that which will now accommodate the autoclave and glasswashing facilities. The benches, walls and floors are being spruced up, so that within a matter of weeks we will have a gleaming (or at least attractive!) new environment more in keeping with state-of-the-art teaching and research.

## New Brewery

The last thing to be done in 150E will be to strip out our old 'friend', the little brewery. It has served the department well, and over many years hundreds of brewing students made their first mashes on it. But it is timely indeed to have a brand new facility, one which mimics as closely as possible the 'kit' found in a commercial operation.

Presently we are considering two tenders for a 1.5-barrel brewery. And it will be installed in a brand new room, located within the large pilot area in Cruess Hall. It will have high visibility and function as a key component of the teaching and research functions. Additionally it will be available for contract work.

The new brewery is part of a broader exercise in upgrading the entire pilot facilities of the Food Science & Technology Department. Amongst other upgraded areas will be a new cheese-making facility/dairy.

We are fortunate and delighted to have the involvement of Gary Eckman of Anheuser-Busch in this project. Indeed Anheuser-Busch is being extremely supportive of

the developments and have made a sizeable financial contribution.

**We would, however, welcome additional support, whether in terms of dollars or facilities.**

## Laboratory Equipment

We are delighted to acknowledge the generosity of Anheuser-Busch, Coors and Novo Nordisk in the provision of items of laboratory equipment that became surplus to requirements in their own organizations.

This second-hand apparatus is valuable to us, alongside the new equipment that will steadily be brought into the laboratory. The first such item is a mashing bath, acquired from Gusmer, the North American agents for Canongate.

## People and Projects

I am pleased to welcome Fiona Hutchinson from New Zealand as first recruit since I came to California. Fiona has been working with me over the Summer on two mini-projects. In the first she is looking at the benefits of combinations of a new batch of enzymes (generously donated by Novo Nordisk) in the solubilization of  $\beta$ -glucan. In the second she is investigating acetyl esterase enzymes in barley and malt. Fiona has come over to UC Davis to pursue a Ph.D.

It's also good to have had a couple of undergraduates working during the Summer. One, Paul Mansfield, has been investigating new techniques for assessing foaming polypeptides. The other, Rich Ellis, is reviewing the role of proteolytic systems in brewing.

Three Masters students have registered their intent to study brewing topics from the Fall, and there will probably be a couple of visiting scientists joining them. We are going to be busy!

Last, but certainly not least, I am thrilled to have the support of Candace Wallin, well known to many for her days at Miller Brewing Company. For some while Candy

has assisted Michael Lewis in the extension program at UCD, but she has been a willing aide in sorting out the laboratory ready for the refurbishment and she will be aide-de-camp in the laboratory class that I will be teaching in the Spring Quarter, 2000.

## **Class of '99**

I arrived in February, in time to teach the 102A Malting & Brewing Science class, delayed until the Spring Quarter. Most of the students won't graduate until 2000, but there is much promising material there. Already one student, Clayton Jokerst, has spent a valuable summer as an intern at Anheuser-Busch's Fairfield Brewery.

## **Recent Publications**

In the past few months the following papers have been produced and are either published or are in press. They are:

Bamforth, C.W. (1999) Bringing matters to a head: the status of research on beer foam. Proc. Eur. Brew. Conv. Foam Symp., Amsterdam, 10-23

Bamforth, C.W. (1999) The science and understanding of the flavor stability of beer: a critical assessment. Brauwelt Int. 17, 98-110

Bamforth, C.W. (1999) Enzymic and non-enzymic oxidation in the brewhouse; a theoretical consideration. Journal of the Institute of Brewing, 105, 237-242

Bamforth, C.W. (1999) Beer Haze. Journal of the American Society of Brewing Chemists, 57, 81-90

Bamforth, C.W. (1999) A critical evaluation of malt analysis from the brewer's perspective. Technical Quarterly of the Master Brewers Association of the Americas, in press

*More are in the pipeline: watch this space!*

## **Web Page**

Have you called into the Web page yet? It's at <http://www-foodsci.ucdavis.edu/bamforth/index.html>

## **Brewers & Vintners Check**

We were delighted to receive a check for \$1,000 out of the proceeds from the 1999 Brewers and Vintners Conference in Shell Beach California. The money will be used to support the education of our students.

## **Visitors to Davis**

In May we were delighted to welcome Don Burnell and Angelo Cayo and their colleagues from Anheuser-Busch. They gave fascinating presentations on careers in a top brewing company and took the opportunity to interview candidates from the undergraduate program and also from University Extension.

Also in May, we were pleased to see Tim O'Rourke here. Tim, responsible for co-ordinating training activities for the Institute of Brewing, kindly gave a lecture on the production of traditional ales.

## **Anheuser-Busch Endowment**

Many people have been asking me about the nature of the endowment that established my Professorship here in Davis. The principle of operation of endowments of this type is that a significant sum of money is donated to the University, who in turn invest it wisely. Interest generated from this sum is then available to spend on relevant activities which further the goals of education and research in malting and brewing sciences. It is implicit in all endowments that academic freedom is retained. We are enormously grateful to Anheuser-Busch for their generosity.

## **Extension**

Michael Lewis, who heads up the extension programs at UCD, was delighted (as were we all) that, for the second year in succession, one of his Master Brewer students gained the J.S. Ford Award for the top candidate in the Institute of Brewing AME Examinations. Well done, Nathaniel Davis. With a name like that he couldn't fail.

## **On the Radio**

Friday August 27<sup>th</sup> saw Science Friday, the popular science program on National Public Radio, run a piece on beer. If you go to <http://www.npr.org/programs/scifri/> and enter the Archives under September you'll be able to find out who was on the show and enjoy every moment of it! I did!

## **Keep in Touch**

Please keep in touch, whether you are an alumnus or somebody keen to take advantage of the teaching and research programs at UCD. I can be reached at

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