

Are we providing enough trained mill leaders?

by Alexander Waugh, Director, nabim

At the GRAPAS 2017 conference, one of the seminars given was by the Director of nabim, Alexander Waugh, on the very topical subject facing the flour milling industry, are we providing adequate and sufficient training to the future mill leaders?

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Milling and Grain have put Mr Waugh's astute and perceptive talk into this edition and believe it to give some insightful thoughts as to how to continue to create a sustainable managerial workforce within milling globally.

Mr Waugh is the Director General of the UK flour miller's association, NABIM, and Secretary of the Rice Association. He has a long involvement in the grain world, having worked in the farming sector before joining nabim in 1987. He is a council member of the Campden and Chorleywood Food Research Association and is a former Vice-President of Euromaisers, which represent EU maize millers, and has also been a board member of HGCA Ltd., (now AHDB Cereals and Oilseeds), an organisation that brings together UK farmers, grain traders and processors to promote the wellbeing of the grain sector.

You have a snapshot of the UK, which is what I know best. We can see that flour milling is really at the heart of our food culture in the UK. An awful lot of the foods that people in our country eat every day have flour at their core. For example, we purchase; 150 million slices of bread, five million biscuits, 4.5 million portions of cakes, buns etc., and two million pizzas, all of which are made from British flour and bought every day. The UK is a country of about 60 million people, and we're using about 11,000 tonnes of flour every day, every year. So it's quite a big deal!

It's also importance as a source of nutrients, it as big of a source of fibre as vegetables and fruit combined, it is easily the biggest source of non-dairy calcium, it has many minerals, vitamins and proteins and is also low in fat and low in sugar. So you can see that an awful lot of things come from flour, not just energy to keep us going. Yet, we have a lot of people saying that flour, especially white flour, is the devils food and we shouldn't be eating it. We know that actually the picture is not like that, and it's much more subtle and much more valuable that people realise. So really, it's bang on trend! But perhaps we have a job to do to market ourselves a bit better.

So UK flour milling, we heard just now about the significance of capacity utilisation, mills in the UK are generally running at between 156-160 hours per week, so there is not much down

time. Production throughout the year varies a little bit, so capacity tends to be structured to fill the peak time, which is in the autumn. Nevertheless, it's a pretty tight ship and the mills are generally both close to people and wheat. So a bit unusually in the UK we tend to take wheat directly to the flour mill, 66 percent of our wheat will have completely from a farm without having gone through a central store, and the rest will either be imported or come through a central store – it is a little bit of different model perhaps to flour milling around the world. The average production is at 80,000 tonnes per year and wheat usage is at roughly 5.5 million tonnes per year.

So nabim, which is where I come from, is the trade association for flour milling, we're representing about 99 percent of production in the UK. We also have a group of associate members which are the businesses which are allied to flour milling, so whether that's a grain supply or packaging manufacturers, machinery manufacturers, or plant breeders. There is a very good connection between the flour milling business upstream to our grain suppliers and plant breeding as well as downstream to baking. Our association is active in a lot of activities, regulatory affairs, relations throughout the supply chain, consumer promotion work, health and safety and also raining, and here we are to the subject in hand.

So I'm going to tell you a little bit about the training programmes that we manage and how they fit with what's going on elsewhere. So the core of the training programme that nabim runs is a distance-learning programme and it is the foundation of what we do and it is used around the world, there is around 30-40 countries globally that use the training programme and it's a contemporary version of courses that were originally set up in the 1920s, a long time ago. We keep modernising the original programme and are now using a modular format, to fit in with companies' want and how businesses are run. So we have seven modules covering specific areas of the mill operation. And they provide together an overview of the milling industry and the processes, and they're recommended to help millers within a business. But they're also a value to allied sectors that want to understand a little bit more about what happens in a flourmill. So for example, a grain supplier might have an interest on wheat in a screen room, so that is dealing with how we assess wheat and what happens once it comes into the process, and they perhaps need to understand a little bit better than they sometimes do. Somebody who's interested in the

siloside of things might be interested in our product handling storage and distribution system module, it's just depends on what you're interested in. So this is intended for flour millers but it has a broader value.

It's based originally around a series of text books but actually we recognise that people have different learning styles so now that's supported with video materials which break down different machines and show how they work, there is also tutor support, so effectively students can follow lessons and send in their comments to a tutor and get feedback. Part of our system is that within each company where your students are participating there should be a company mentor, so there is a link behind what the company wants and what the student is doing, and we think that is really important, that that personal support is critical. Of course we recognise the top students whether they're from the UK or elsewhere. So we have students who are winning the silver medals, which are for the students who do best over the seven modules. The bronze medal, the second best and I think it is really important that people recognise these achievements. There is a gold medal available but that is an optional thing for



the winner of the silver medal to write a dissertation that's really going to take the field further forward and not everyone has the time or inclination to do that. We did in fact award a gold medal this year to a miller from Northern Ireland, I remember once a gold medal winner came from Vietnam and he was able to come to a presentation in London and was really quite astounded to find that the gold metal was... gold!

I think it is really important that as a sector we recognise good work by our peers in the industry.

That's the basic milling training that is done within companies, so that we can make it fit with the demands of everyday work because when you're running your mill 160 hours a week, every week of the year there is not much downtime, there is not much opportunity for students to play about with the process, on the contrary, every hour counts, so we have to make things work for them. So basic training that gets you so far, but we think that more is required if you are going to develop better leadership and more in-depth skills. Within our system we have something called the advanced milling diploma, which is something a little bit more intensive than the distance-learning programme. We're working with our colleagues at Campden BRI who are technical experts on cereals and cereals processing and the Bühler Training Centre, who are experts in the process of flour milling.

The idea isn't just to develop their technical skills although that is part of it but also to get them to think a little bit more broadly about the milling process and what it's all about. This was developed at the turn of this century so early 2000s, specifically in response to our member company's wish that we should be developing milling leaders for the future and it's therefore tailored to their requirements.

This can all be summarised in the nabim aim:

"Our aim is, to equip a new generation of flour millers with the practical competence and understanding... to enable and inspire them... to lead the development of a milling industry fit for the 21st century – profitable, sustainable, adaptable."

There are three units, a technical unit, which is all about understanding what and the wheat process – that's work in collaboration with Campden, it's a residential week, it's pretty intensive, when the guys come back from that they're worn out, they've really been put through the ringer. That's good, they feel better for it, they feel quite challenged – these are millers, not research scientists, these guys are practical, hands on types, so it's quite challenging for them. But by the end of the programme we hope they'll be competent in wheat selection, specific end uses, they'll know about laboratory mill adjustment, they'll be able to select the flour analysis they need relevant for the finished products and they'll have practical experience in test baking,

that's a lot to fit into a week, so you can see why they might be a bit tired.

In summary, "On completion of the Unit: given the requirements of the finished product, the candidate will be able to decide on the ideal wheat and process to be used in its production."

So they have two or three months off to recover, then they're off to Switzerland to the Bühler centre where they will develop their practical skills a bit in Unit two: Production/Operations. Here they'll also be able to explain flow sheet design, the relationship between different pieces of equipment and the processes, including things like; surface allocation, air to cloth ratio, the principles of particle size distribution, pneumatics and aspiration and mill performance, and effectively how to balance the mill, which is a critical thing for a head miller to know about.

The objective for this unit is described as, "On completion of the Unit: the candidate will be able to present alternative strategies for adapting the milling process in response to particular wheat quality characteristics in order to produce a consistent flour to meet customer specification."

There is a lot to learn in a week as this shows, so it is so important that the people doing this kind of work are supported back in the business. One of the things that we are keen should not happen, is that somebody should go away for six months to a milling school for example, and effectively that's it, they come back a miller, I don't think that works for a company, they have to learn within the culture of their company.

Then the final element of this diploma is the completion of a research project in an area of technical or operational importance to the candidates milling business, where they become competent in a range of research skills. This is called Unit three: Projects.

The objective for this module is described as, "On completion of the Unit: the candidate will be able to conduct meaningful in-house studies that improve the performance of their business."

The interesting thing about this is that you think "oh okay this is all about a technical project", but what we found is, both the candidates and their employers from the four programmes we've run so far say "okay yeah, it works in that way, but actually more important is that the candidates have to get out and talk to other people in their businesses, they have to get out there and run a project so that they're developing interpersonal skills within their business. They're actually developing a better understanding of what their business does."

So yes, it develops a research, project management competence, but more importantly it helps to round their development as managers and leaders in their business. That's something that we weren't really expecting, but now having run it three or four times, we realise it's actually a core benefit for this kind of programme. It's effectively taking what they've learnt in the first few modules and applying it in a business, we think that that is really important.

How do we develop in the future?

One of the things that we have to think about as businesses, are how our employees and their schooling are changing and what their experience of life is. Because before they come to us, it is changing.

So now we're working on the development of a virtual flourmill. One of the things that we've realised is that the people coming to us now will have spent their formative years playing games or video games and developing stuff at school. We've got to have material that is familiar to them in a way it wouldn't have been familiar to anyone who's 50 and working in a flourmill and probably leading the business right now. We've got to adapt.

The idea of this is that it should be adaptable within businesses; it is in addition to our videos and e-learning resources. The idea is that you have an avatar and you can run around the flourmill. You can open up machines and see what's going on inside, you can assess the process. So that means you can make things go wrong, which you wouldn't be able to do in an operating flourmill.

You can also tailor it to individual businesses; we want to make it fully adaptable. We've got quite a long way to go and I think we can learn from other people. I was interested to see in the feed milling sector that they're doing something similar but not quite the same; it's probably a little bit less ambitious at this stage. But I think there is a lot we can learn from elsewhere.

So there we are, that was the milling version of the Sims!

So the cool thing is, we should have high quality, up to date resources, we should use modern technology. There absolutely has to be senior management commitment to training, if you think you can delegate it, you can't. It has to part of the business, we need to respond to individuals and the way they learn and it is absolutely critical that there is motivation and mentoring of the students, not many people can be left to get on with it on their own, it doesn't work like that.

There are other ways of going about it, there are residential courses, there are many around the world, and they have their place but our stance is that most businesses are not going to send people away for a year to learn how to mill flour, they want to be able to do that in-house. Because not that its just important to learn how to mill flour but because its important to learn how to mill flour within the culture of the business. That's important as far as leadership is concerned. You have to think about why that is important; you have to think about what makes one milling business different from another. So you can go to a school and learn to be a miller in a way or you can stay in the business and learn to be a miller, the ability of learning to be a miller is there.

But thinking about what makes one company different from the other, in the UK we do a survey on flour milling which looks at costs over 50 or 60 years, it's like a benchmarking operation. So one difference between businesses is that the top quartile performer and the bottom quartile performer there's a big difference in cost. The costs for top performer are only 60 percent of those in the bottom quartile. There still in business, so there's something else that matters. So you can set out to be the lowest cost producer and ultimately everyone has to have an eye on that. Different businesses will have different investment time horizons. The investment time horizon depends on the corporate structure. Some will be thinking with a 20-year time horizon other people will say I need to see a return in four years or two years. It probably depends on their company structure but it makes the business different and it makes the way they think different. Different businesses have different approaches to innovation and often these are not really associated with flour milling itself, but with processes that are associated with flour milling. You have to think about what a customer might want and he doesn't actually want different flour but just wants to be able to make a different product, so maybe you add a pre-cleaning process, that's not flour milling. Or maybe you take the flour and extrude it, making a different variation on it.

There is a million different ways of innovating a process aside from flour milling. And then I think that the other main distinction is customer service, the way in which a business goes about serving a customer is quite different and quite individual, very often that can make the difference, a customer choosing one supplier over another in every walk of life.



Now if you look at those things that make milling businesses different, the technical ability to mill isn't actually the biggest thing in many of them, it's part of it, but it's not the biggest thing. That's why it's so important to not treat technical development in milling alone as something that has to be learned, that's not how you develop leaders in milling, it's part of it but it's not just how you do it. So we need to find that combination of that technical process combined with the technical skills that you mean learn on an MBA somewhere else, or that you might learn from a week here and a week there and a week somewhere else.

We think that the programmes need to be flexible to adapt to the different circumstances in different places. The best people to judge what works in that respect are the companies themselves. From our point of view, the way in which we develop mill leaders is to listen to the companies and to listen to businesses outside milling as well, bring that expertise and experience back home

So the question was, "Are we developing enough mill leaders?"

I think the answer is broadly yes, but it's not as straightforward as sending somebody off to a milling school. It's a bit more complex than that and we need to think carefully about making sure that we've got the skills and abilities and the combination coming through in the future.

There are different ways of going about things, but our process is trying to be flexible with different businesses.



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