



SPRING NEWSLETTER 2007

We have been silverware collecting since the last Newsletter. Julian collected a press award for the schools work, and Martin the "Science into Practice" award at the Grower of the Year Awards which are now run by Horticulture Week. It is significant that both these awards are for knowledge transfer, which is the business rationale for STC.

The debate about Research Funding continues, and pressures of the new DEFRA policy are beginning to make our agricultural colleagues squeal. The sell-off of the ADAS farmland attached to their DEFRA owned sites, is another potential loss of facilities. The drawn out process of HDC reorganisation, further fuelled by the latest announcements, and the gobbling up of monies from HDC for financing SOLA registration, is also punishing UK growers compared with our EU competitors.

There is a potential schism developing between the new DEFRA policy, based around its environmental aspirations (where they are using UK examples to support their International negotiating clout), and growers still wishing research to offer commercial improvements for single crops or businesses. If you want to verify my thinking, compare the DEFRA strategy documents with the HDC crop sector priority documents.

The House of Commons Science and Technology Committee has just published their investigation of Research Council Institutes which discusses the University versus Institute research provider issues. It is also fairly outspoken about short term contracts from Defra. It is a good read for the anoraks amongst us, but it has very serious implications.

The result of all this is that the only real research and technology that is supported by public funding, and which matches grower's priorities are LINK and HDC or producer organisations and large marketing groups. The latter two are not usually shared with industry, so do little to overcome the so-called "market failure thought process", which supports HDC. LINK is also somewhat shackled by the DEFRA outlook on life.

What does this mean for STC? Let me refresh everyone's mind. STC only exists because the industry wished it to continue to provide a service. Through STC Foundation, which owns all the shares in STC, the Directors (Trustees) of Stockbridge Technology Centre Foundation basically control and own the STC business and site on behalf of the Industry. The Trustees also agree the direction which the business takes. We are still basically financially secured by the original loans and guarantees which underpin the bank loans and mortgage. Thus the industry owns, and has at its disposal the facilities at Stockbridge. There are a few such facilities left only PGRO, EMRA and HDRA come to mind, all the rest are owned by Universities or DEFRA. The ADAS facilities are endangered, as has been explained above.

We need to compete in open tendering for research monies, which are mainly from HDC. There are a great number of competitors for these monies, namely at least 35 universities, including Warwick, Reading, Harper Adams, Nottingham and other agricultural universities. The effect of this competition is that money is being spread very thinly, and on a very unpredictable basis.

Undertaking research with your money is of no point, unless the knowledge gained is transferred to benefit your businesses. I think the industry needs to consider very carefully who does it's work, and whether they are actually under a 100% obligation to transfer this to yourselves in the industry.

As CEO of STC, and with help of the Directors of STC Foundation, we make the business plans. These plans are more and more related to diversification type regional projects related to the DEFRA strategies, regulation explanation (farm walks /training courses for reluctant farmers and growers), and re-connection of schools and the public sector with where food, especially fruit and vegetables, comes from.

We currently maintain a plant clinic service, which might be the only one left if the “Agency” discussions between the Pesticide Safety Directorate, Plant Health and Central Science Laboratories are successful and they specifically service government like FSA and devolve commercial work. We are also maintaining a science led capability, but we have no confident funding stream to invest in new staff and drive the service forward. Our facilities are under-utilised, yet they are the only ones controlled by the industry and not subject to totally unrelated decision making priorities.

In the early 1900’s, when the great revolution in science and technology for our industry began, growers set up their own research/development stations, such as the John Innes institute, Cheshunt and East Malling Research Stations. These were run by growers for growers. Are we back to this? The Government who stepped in to push the food production strategies after the Second World War, now thinks food supply is global, and only wants to push its new concepts, related to environment and carbon.

So to STC. Should we be strengthening the grower linkage by widening the investment opportunity from yourselves? Should growers work within the industry to say that STC should be a preferred contractor so that a more regular source or income is maintained? This is not as heretic as it sounds. Both Warwick HRI, and East Malling Research Association, are at moment preferred contractors for some £9 million of DEFRA funds, relating to the privatisation deal.

Who should I liaise with to establish the industries wishes? The crop associations? The HTA and or the NFU? The HDC Council? The HDC crop sector panels?

Please tell us what you think, and how you wish us to handle your research facility, even if it is to say that you do not see a need for the facility anymore. We would rather plan our future, than wither on the vine under the impression we are needed for technology input into your businesses.

Graham Ward OBE

Public Relations Activities

We have continued to build our conference and training facilities. Recently STC hosted high profile events such as the PSD “away day” and a Public Procurement conference for our local MP Mr John Grogan. The main attraction at this event was a lunch of local food, ranging from Pontefract Liquorice Pork Pies to hand made Chocolates from Hull.

STC hosted an educational “away day” for PSD staff. We organised three events based around plant/disease identification, beneficials for pest control in outdoor crops, and the Defra sustainable farming agenda, based on our Countryside Stewardship and ELS schemes. They were divided into three competing teams and were presented with cups at end of day. From the feedback we have received, they seemed to have enjoyed themselves. From an industry point of view, we were able to show the regulators how their regulations were affecting horticulture.

We are due to host the IOH Northern Branch Young Horticulturist of the year regional final soon. The President of IOH will be attending, and Graham is presenting the regional award.

The Great Yorkshire Show. We have now had our planning meeting with the NFU to discuss the plants they want for the Yorkshire Show exhibit. This exhibit has been a show reserve champion for two

years. We hope that with a major effort this year, we will be able to get the champion award. Micky is growing lots of edibles in pots and modules so that they will remain fresh and attractive over the five day show period. STC also helps with the stand erection and manning. This is once again another support activity for horticulture, and a good PR opportunity for STC.

STC puts 'Science into Practice'

At the prestigious Haymarket Grower of the Year awards in London last month, STC clinched the 'Science into Practice' category, sponsored by Bakkavor, for our HDC-funded pathology work which has finally resolved the enigma of RMD (root malformation disorder) in Red Beet.

The winning team (left to right) include Debbie Liddell, Cathryn Lambourne, Martin McPherson & Iwona Burdon



It was Graham & Russ Smith of South Carr Farm, Westwoodside, Doncaster who first drew STC's attention to the problem of 'crinkly beet' via the Plant Clinic back in 1998. It was clearly devastating many crops causing extensive rejection by the processors due to the high level of root distortion. Graham Smith took on the Chair of the Red Beet Technology Group and this proved to be pivotal to the investigation as he enthusiastically pulled the industry together through what was financially a very difficult time for red beet growers.

After first raising the hypothesis that downy mildew might be responsible for RMD, we set about proving it in a complex series of field trials, artificial inoculation studies and, ultimately, molecular diagnostics in conjunction with Dr Neil Boonham and colleagues at the Central Science Laboratory in York.

I am now delighted to report that we have finally demonstrated that RMD is caused by the downy mildew fungus *Peronospora farinosa* f.sp. *betae*, as we suspected. This pathogen has been prevalent in beet crops, including sugar beet, for many years but why it has suddenly caused such a severe symptom on the roots of red beet remains a mystery; though various suggestions to account for the shift have been proposed. Importantly, from a commercial perspective, working alongside HDC, we have been able to ensure new fungicides with activity against d. mildew are available and this puts control of the problem firmly back in the industries hands.

It is an extremely satisfying conclusion to what has, at times, been a very frustrating journey and I would like to take this opportunity to thank everyone who has been involved in this project in one way or another, the

award is recognition of everyone's efforts to finally crack 'crinkly beet' and deliver a commercial solution to the problem.

Dr Martin McPherson

Schools activities

With the Year of Food and Farming only six months away we are piloting two new projects in early July. The first is called the BIG Harvest with a single half day visit to STC. Primary aged children will have a tour around the glasshouses and also the fields and will finish by harvesting a bag of fresh produce to take home. We hope this will be a more cost effective option for schools where the four visit programme is too expensive due to the coach costs. The second pilot is with Askham Bryan College, and will involve pupils coming to us in the morning, looking at horticultural production and then spending a couple of hours in the afternoon at Askham Bryan looking at their Beef unit, robotic dairy unit and make some cheese. A second school will do it in reverse order.

We are putting extra plots in the field for a BIG Harvest in late September which we hope will promote the Year of Food and Farming and raise the profile of STC. We are contacting horticultural companies in the York area to see if they are prepared to sponsor the coach costs for their local schools. The response has been very positive so far.

Yorkshire Forward Cook Bus

We were delighted to hear two weeks ago that the Cook Bus is returning to STC in early July. When the Cook Bus was last at STC in May 2005, the children and teachers had a great time. It's a brilliant resource and compliments our growing projects.

During the week 112 children will have the opportunity to make salads, savoury muffins and smoothies. We will be contacting local schools so that the experience can be shared by as many schools as possible. We will also run a training event for teachers which we will use to promote the Year of Food and Farming.

Defra LINK Disinfection project

Julian Davies has been asked to coordinate the series of trials which is testing the new steam disinfection equipment build as part of a LINK project. Trials will be undertaken over the next two seasons to assess its potential for field crops. The crops will include onions, whole lettuce, baby leaf, strawberries and carrots with trials sited on commercial farms in Inverness, Lincolnshire, Sussex and Derbyshire.

Julian Davies

The Farm

At STC we run the farm as a commercial enterprise so that we are able to empathise with problems relating to the farming industry. This gives us a great deal of credibility amongst those farmers and growers who visit the site to attend various LEAF and FWAG events which are hosted here.

On the farm our spring crops have already been drilled. We have 20 acres of Quattro Spring Beans which will go for the export market if we manage to control *Bruchid* Beetle effectively. The export market will not accept beans with holes. Our 25 acre of Cocktail Spring Barley is being grown for the malting market, so careful management of N fertiliser is crucial, as an N content of <1.6 in the grain is required.

Our Einstein Winter Wheat crop is very forward like the majority of other farms. Lush growth has meant disease entering the crop early, and we have a high level of *Septoria*. This means that for the first time for years we are having to apply a fungicide at T0.

Like the Wheat crop, our early cauliflowers grown for seed are nearing maturity, almost a month earlier than last year. This means that we have already purchased the maggots needed to hatch into flies for pollination purposes.

I recently gained my BASIS Soil and Water Management Certificate, allowing me to advise farmers on this complicated area. This is a relatively new qualification which has been devised to address many issues that are very topical at present. The main content of the Soil and Water Management Certificate is: soil and air protection; cultivation techniques and systems; erosion risks; soil water, drainage and irrigation; plant nutrient and fertiliser planning; the use of bulky organic materials to enhance crop growth and their effects on diffuse pollution.

Micky Langdale

Cut Flower Trials

With consumers becoming more aware of the concept of air miles, there is the opportunity for some growers to expand their business based on the production and distribution of 'local' produce. One potential area for expansion is in cut flowers, where 90% of the plants sold in the UK are imported. However, with the price of imported produce being so low, it is difficult competing directly against this material at the present time. A more profitable area may be producing niche or novel cut flowers that are not readily available from florists or shops, and can therefore attract a higher premium.

To ascertain which flowers would make ideal candidates for this marketplace, STC has received funding from Selby Leader Plus for a trial to investigate the potential of this area. We will be assessing a range of cut flowers, both annuals and perennials, during 2007. To ensure the cut flowers are of a sufficiently high standard for retailing, we will be testing their vase life in our newly refurbished shelf life room. In addition, we will be ascertaining consumer preference by distributing flowers to local retailers, who will provide feedback on which are the most popular flowers. At the end of the trial we hope to have identified at least 10 lines that can be grown successfully in this region and are attractive to a wide range of consumers.

Mark Huey

The Plant Clinic

The diagnostic Plant Clinic is getting busier by the day as growers around the UK swing into action for the 2007 season. As always we are receiving some challenging samples which require a number of diagnostic tests to determine the primary cause of the problem. However, we hope that we are continuing to offer a good, value for money service to our clients including advice on chemical and cultural control. Enquires to the plant clinic can be made using the following address: plantclinic@stc-nyorks.co.uk.

In the plant pathology department we are feeling rather pleased with ourselves following a very successful study in 2006 which finally determined the cause of root malformation in red beet. We are also very proud of our Grower of the Year award (see article by Martin McPherson). It's a great feeling for all the team (including colleagues at CSL) to have had the opportunity to work with such an enthusiastic sector of the industry (a special note of thanks to Graham and Russ Smith) and to have been involved in a highly successful piece of work which has had a huge impact for growers.

But, we cannot 'rest on our laurels' and must move onto other pressing problems. We have already started work on two, new HDC-funded studies this year. The first is an investigation into the level of seed-borne disease present on bedding plant seed. We are collaborating with Tim O'Neill at ADAS and are about to undertake the 2nd round of testing.

We are also collaborating with CSL on a study into the on-going problem of downy mildew on impatiens and pansy. The initial part of the work was carried out by CSL last year. As always we are keen to hear from any readers who may be experiencing problems on these crops. Please contact either Martin McPherson or myself at the normal STC number.

We are about to embark on Year 2 of the HDC-funded study (PC241) into the non-chemical control of root-mat in hydroponic tomatoes (in collaboration with CSL and ADAS). We will be repeating the slow sand and rockwool filtration work here at STC, with further small scale trials being carried out at CSL and also at a commercial tomato nursery in southern England.

We will undertake the 3rd and final year of the investigation into the control of white rust in Chrysanthemum in collaboration with CSL (HDC PC 231). The work this year will involve a large scale fungicide efficacy trial here at STC which follows on from pot studies carried out at CSL and the crop safety work carried out at STC in 2006.

We also already have a busy schedule of commercial trials to carry out for regular clients which will keep us pretty busy this year. As always, there are some old favourite host/pathogen combinations with a few new ones for us to get our teeth into. It always seems ironic that we pray for suitable weather conditions to exacerbate plant disease, whilst the rest of the population spend huge amounts of time, money and energy trying to combat them.

Cathryn Lambourne

Events and Projects

The Public Procurement conference, held at STC for our local MP John Grogan was directed at elected councillors to inform them about the local/regional food agenda, and their Central Government commitment to improve food quality and reduce food miles for school and hospital purchasing. There were 35 councillors, representing some 14 councils from Yorkshire and Humberside. The new HDC sponsored DVDs on public procurement were also launched at this occasion. This event followed another successful day that we held on public procurement for a group of procurers from the North East last October. Following the success of this we have been given funding by the HDC to hold a further 8 days.

This is very important for us as these events represent a large part of what we are striving to achieve in getting the message of local produce and seasonality across to procurers around the region. We already have two days booked in May. The first will be an audience of procurers from different backgrounds in the Yorkshire region led by Mel Towler of The Regional Food Group, and the second, an audience from Leeds led by Rebecca Roberts of FEAST. The group from Leeds will help the new Yorkshire Growers Coop (PSPS) to reinforce the added value of the fruit and vegetables being supplied to Leeds schools. We will feature the new HDC sponsored DVD on public procurement at these events.

We will open the farm to the public for the LEAF Open Farm Sunday on June 10th, and again on September 23rd for British Food Fortnight. Our message of the environment and sustainable farming will be foremost, whilst trying to encourage the public into the countryside and to use public footpaths. At both these events this year, we are hoping to have a mini-farmer's market to increase the range of local produce available to visitors. We will also be producing vegetable and bedding plant transplants for June 10th, and home-grown vegetables for the September event.

Chris Tomson from the RSPB visited us earlier in the year. He was delighted with our measures to encourage birds and he is returning to do a full site survey in April. This way we will then be able to monitor changes in farmland bird populations with some accuracy. We are also using a sheltered field near our offices to encourage insects and birds. We are sowing crops such as sunflowers to attract birds, and we will have insect boxes sited within other shrubs and herbs to encourage insects. This area will be designed with school visits and public open days in mind.

We are looking into the high profile subject of carbon footprints. It links with our push on local produce, and our message on sustainable farming and diffuse pollution. We want to investigate the possibility of a carbon footprint for individual fields to provide information for us to relate to farms. Daniel Bean from the Environment Agency is visiting us next month to advise on our farm and how we can generate meaningful information for farmers and growers.

During this last week of March, we have had 40 children aged 8-9 years, visiting us for a Natural England funded event. Julian selected a school from a relatively deprived, urban area and we undertook a series of activities for them. The aims of the day were – fresh fruit and vegetables, wildlife and the environment and public access into the countryside. All the children consumed huge amounts of fruit. It was rather sobering to hear, however, that very few of them have any fruit available at home. This reinforces the need for open days to attract their parents and carers. They were delighted to walk in the countryside. The sun was shining and as well as there being many ladybirds around, the water voles that we have been nurturing were also out and about. They all returned to school with a map of public footpaths around here, so hopefully we may see one or two of them walking around our borders.

Julie Langdale

Communications

You will know that Horticultural Week has taken on the Grower by the fact that if you were a Grower reader you now get Horticulture Week. The Lockwood Press which publishes the Fresh Produce Journal, which is the magazine for wholesalers, fresh produce buyers and marketing men, has recently started a new weekly magazine called Commercial Grower. It is strong on edibles, but does cover ornamentals. The magazine is very business orientated because of its connections with European and global trading in fruit and vegetables. Have a look at the website if you haven't seen it. <http://www.commercialgrower.co.uk> As an industry, we are very well served with Weeklies: Horticulture Week, Commercial Grower and the HDC Emails. The monthlies include Glasshouse, Veg and Fruit Growers, NFU British Farmer and Grower, as well as the HDC News. Then there is IOH and RHS together with the NFU and HTA newsletters. There are various others articles and magazines published by the trade so you should all be very well informed !!!

Graham Ward OBE

Weather for Autumn 2006

	September	October	November
Mean max. temp. 0°C	21.1	15.9	11.5
Mean min. temp. 0°C	12.6	10.4	5.1
Mean 10cm soil temp. 0°C	16.3	12.4	6.3
Mean 20cm soil temp. 0°C	16.3	12.4	6.8
Mean 50cm soil temp. 0°C	17.0	14.2	9.2
Total rainfall mm	63.8	66.9	46.8
Mean sunshine hours	4.5	2.6	3.3
No. days air below 0°C	0	0	1
No. days ground below 0°C	0	0	8
Radiation MJ/m ²	313.42	163.40	116.73

Weather for Winter 2006/2007

	December	January	February
Mean max. temp. 0°C	8.8	9.8	9.2
Mean min. temp. 0°C	3.9	3.6	2.0
Mean 10cm soil temp. 0°C.	5.1	4.8	4.2
Mean 20cm soil temp. 0°C	5.5	5.1	4.6
Mean 50cm soil temp. 0°C.	6.9	6.3	5.4
Total rainfall mm	49.3	59.8	73.0
Mean sunshine hours	1.5	1.9	2.8
No. days air below 0°C	7	6	8
No. days ground below 0°C	11	10	12
Radiation MJ/m ²	54.46	76.6	125.89

Comparison of weather for winter months over the past three years

	2004/2005			2005/2006			2006/2007		
	Dec	Jan	Feb	Dec	Jan	Feb	Dec	Jan	Feb
Mean max temp. 0°C.	8.7	8.9	7.4	7.6	6.8	7.2	8.8	9.8	9.2
Mean min. temp. 0°C.	2.1	2.7	1.8	1.1	1.5	1.3	3.9	3.6	2.0
Total rainfall mm	21.1	25.9	39.4	27	14.8	40.7	49.3	59.8	73.0
Mean sunshine hours	1.8	1.4	2.3	1.2	1.1	2.2	1.5	1.9	2.8
No. day air below 0°C	7	5	9	11	8	7	7	6	8
No. days ground below 0°C	13	*	16	20	16	14	11	10	12
Radiation MJ/m ²	60.65	72.45	129.08	63.72	62.40	115.55	54.46	76.6	125.89

Weather data compiled by Nicky Mason

For further information on the newsletter or anything else you would like to ask us, please call on 01757 268275