



Bulletin

with technical updates from The Organic Advisory Service

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THE ORGANIC RESEARCH CENTRE

is an international research, advisory and educational organisation based in the UK.

The business of The Organic Research Centre is to develop and support sustainable land-use, agriculture and food systems, primarily within local economies, which build on organic principles to ensure the health and wellbeing of soil, plant, animal, man and the environment.

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“Organocrats” deliver another false dawn

After several false dawns, the new EU Regulation governing the production and sale of organic products has arrived – well nearly. The implementing articles governing the criteria for inspection, certification, audits, record - keeping, etc. have not yet been written. They are promised for this autumn.

As befits something that has been launched when it is incomplete (half – baked) this new dawn was not greeted here by a stirring chorus but by a rather muted mumble.

In the UK, unlike in countries such as Sweden, the relevant authorities have not directly communicated across the range of the organic sector but have limited themselves to certification bodies and a curious mix of self-appointed, so-called stakeholders (e.g. NFU, British Poultry Council, feed manufacturers) under the delusion that this is the path to the organic grassroots.

Without the implementing rules to hand, it is hard to tell definitively just how better or worse the new regulation is. The overall structure is probably better, but that is not saying much. It seems just as good, just as bad, just as patchy, just as coherent, just as incoherent as the old one, but in different ways and in different places.

In truth, regulations are meant to be a whole order better than this. An EU Regulation is supposed to be a clear, concise document - one size fits all and all conditions from the Baltic to the Mediterranean. It is an obviously impossible dream for an agriculture that is based on diversity, local ecosystems, traditions and culture.

The delusion that it is all possible is the driver for the creeping dodgy loopholes, the grey areas, differing interpretations, disingenuity and plain dishonesty which is undermining the very integrity of the organic marketplace.

What is needed is a clear Framework Directive built on the agreed organic principles within which different member states transparently apply their own ecologically, culturally and structurally adapted standards and certification. Transparent and principled adaptation is the key with no country or marketplace being forced to accept a fake concept of equivalence.

Lawrence Woodward

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Wheat evolving well in Hungary

The field success of our wheat Composite Cross Populations (CCPs) has led to them being taken up and grown in several European countries. Sarah Clarke, a member of the Organic Research Centre's crops team, visited Hungary to see first hand how the CCPs are performing and developing there.

The CCPs bred in the UK are now being tested in five European countries – Denmark, Germany, Switzerland, Turkey and Hungary. This is mostly due to the contacts made through an EU-funded COST action (COST 860) known as SUSVAR ('Sustainable low-input cereal production: required varietal characteristics and crop diversity'). COST is 'an inter-governmental framework for European Co-operation in the field of Science and Technical research' and allows the co-ordination of nationally funded research at a European level.

As part of SUSVAR, funding can be gained for Short Term Scientific Missions (STSM) which allow scientists involved to visit other SUSVAR partners to share knowledge and expertise. I was lucky enough to be able to go to Hungary in May on a STSM to visit Dr. Géza Kovacs at the Agricultural Research Institute of the Hungarian Academy of Sciences, Mártonvásár. He has been developing Hungarian wheat CCPs which we have tested in the UK (*Bulletin 86 – Improving wheat with plenty of parents*), and is also trialling our UK CCPs in Hungary.

At 123,569 hectares, organic farms make up 2.9 % of the total agricultural land in Hungary (Source: SOEL - FiBL Survey 2007). Of this, approximately 25,000 hectares is

under cereal production, most of which is grown for export to countries such as Germany and the UK.

The work at Mártonvásár includes both organic and non-organic breeding programmes and experiments. The UK CCPs have been included in organic and 'low input' (60 kg Nitrogen fertilizer, no fungicides) trials and compared with local varieties and Hungarian CCPs.

The UK CCPs performed well alongside the Hungarian varieties and CCPs. This has not always been the case; in the first season that the UK CCPs were introduced to Hungary, a very hard winter meant that many plants did not survive. However, plants with appropriate genotypes did survive, and were replanted the following season - they are now thriving and even out performed some local varieties.

Now in the third year, UK CCPs in the organic and low input systems look very different. The CCPs in the organic system are far more heterogeneous than those in the low input system, showing that even a small amount of nitrogen can make a large difference to the adaptation of CCPs.

Our UK CCPs will continue to be grown and monitored in Hungary and across Europe. This visit provided a valuable demonstration of how CCPs are able to cope with, and adapt to, dramatic changes in environmental conditions (in the case of the Hungarian winters), as well as adapt to different management practices, such as the addition of a small amount of fertilizer.

Passing the taste test

Baking guru Andrew Whitley (right) with some rather special bread in his kitchen in Cumbria.

Wheat population seed (from the ongoing Wheat Breeding trial, see Bulletin 87: Populations Performing 2005/06 trial update) has passed an initial first test for baking, despite the high level of genetic variation among all of the seeds in the population samples. We already know that the populations do well in the field - outperforming the average of their parents and providing yield stability across environments - but we also now know that they can make a good loaf of bread.

In an initial test, Andrew Wilkinson of Gilchesters Organics milled samples of both the Quality and Yield-Quality Population which were then baked by Andrew Whitley of Bread Matters Ltd. The resulting bread had good loaf volume and crumb structure, but most importantly tasted delicious.

We hope to gain further funding to put the population flour through its paces by comparing not only loaf quality, but also the nutritional content in bread made from populations grown around the country at both organic and non-organic sites, and by using different milling and baking methods.





How green are grocers?

Hugh Fearnley-Whittingstall has declared war on supermarkets, likening their attempts to sell local produce to “crack dealers selling fudge because it was good for PR”.

The Independent, May 2007

A new mantra is sweeping the City of London, says Organic Research Centre director Lawrence Woodward - “Green is the new black”. Incredibly, key investors and opinion formers are ready to swallow such ideas that “Tesco is helping to set the pace in the fight against climate change”.

This change of attitude seems to be so advanced that Tesco boss Sir Terry Leahy, whilst denying that he is an “eco-warrior”, vowed to make the supermarket “a centre of expertise in how to run a green business”.

Tesco, he claims, is striving “to make green choice more affordable”. He has made similar statements before, arguing for “more” realism in organic standards; a view he shares with Sainsbury’s chief executive, Justin King, who has said organic standards should not be “too far from daily reality”.

Changing the structure

All of which seems praiseworthy. But the fact is you cannot create a genuinely “green business” unless you make fundamental changes to how it is structured. No amount of earnest PR or green labels will change that.

The organic food sector is a notable case study. At the Organic Research Centre – Elm Farm we have witnessed the undermining of organic standards. The drive is for producers to follow a quasi-industrial path to meet the supermarkets’ requirement that their “organic offer” resembles as much as possible their environmentally unsustainable conventional one.

The story of supermarkets and the organic sector is complex. The essential factor is that in three key areas - type and range of product, quality specifications, continuity and availability - organic production is required to meet the same criteria as conventional production systems and in a price range close to the conventional norm.

Living ecological systems

However, meeting these criteria in living ecological systems, as opposed to an agro-chemically based system, is extremely difficult, if not impossible, to do consistently. The supermarkets refuse to recognise this and there has not been a serious attempt to develop an alternative and organically sustainable supply chain and product range. Instead three things have happened.

First, production has been concentrated into fewer and fewer companies who have established relationships with

the supermarkets, often supplying both organic and conventional product. This has tended to be to the detriment of dedicated, organic only operations and producer co-operatives.

Second, there has been a misuse of regulatory derogations, exploitation of loopholes and grey areas in standards and lax certification at national and international levels.

Finally, there have been imports from both within and outside Europe produced using methods not compliant with UK standards. This has been possible because of the less than robust regulatory system and a measure of duplicity by some certification organisations.

In a recent Department for Environment, Food and Rural Affairs funded study we found clear evidence of foods imported to the UK as “organic” that do not meet UK, and in some cases EU, standards. For example – pork from Holland where sows were confined and outdoor access limited and beef from Argentina where the large and routine use of vaccines/wormers was not compliant with UK standards.

Consumer expectations

All of these products have been brought to this country carrying the logo of a UK certification body and sold by supermarkets. None are produced in a way that consumers would expect from an organic system. Unfortunately, this is also the case with some UK sourced products. With a few exceptions the poultry products sold in most supermarkets are produced in ways that fall short of consumer expectations.

So, are the supermarkets deliberately misleading their customers, or do they not know what is going on? They have been told repeatedly, by me and by others. The examples given above were presented at a stakeholder meeting a year ago where supermarket representatives were present. There has been no response.

Several years ago we conducted a study for a leading supermarket of its organic vegetable imports, where we found similar examples to those above but as far as we can tell no action has been taken.

The shortcomings of the “organic” poultry sector have received media attention, but to no avail. Messrs Leahy, King and Co. have not yet grasped that genuine sustainability requires fundamental changes to the way we produce, process, distribute, sell and consume.

The key task is not simply to make “green choice more affordable”; it is to make it genuine.

(This is a modified version of an article that first appeared in the Financial Times)



A licence to pollute and profit

Kevin Smith of Carbon Trade Watch – a project of the Transnational Institute

With the second phase of the EU Emissions Trading Scheme (ETS) due to start in 2008, at some point soon Brussels will have to admit that it isn't working. Carbon emissions aren't going down, industries aren't switching to clean energy technology and, so far, the scheme's guiding principles seem to have been 'polluter profits' rather than 'polluter pays'. The lack of discernible results to date lead to the conclusion that the ETS has been designed on the basis of its ideological compatibility with the free-market rather than for any effectiveness in achieving urgently needed cuts in carbon emissions.

On paper, the 'cap and trade' scheme is seductively simple. The amount of permissible carbon pollution is divided up between industrial locations (called 'installations' in the scheme) across Europe – this is the 'cap' part. If any installation goes over its limit, it must purchase the equivalent amount of permits on the market, and conversely, if an installation is under its limit, it can sell its shortfall on the market – this is the 'trade' part. The idea is that the market will create the most 'cost effective' reductions possible. The 'cap' is supposed to get tighter in successive rounds of the scheme so that the market price of carbon rises, and creates an incentive for industries to make low-carbon modifications at source rather than having to buy costly permits.

Intensive industry lobby

The first phase has been a disaster. One of the main problems of the scheme is that every stage of its design and implementation has been subjected to intensive industry lobbying. The economist John Kay wrote in the Financial Times that "when a market is created through political action rather than emerging spontaneously from the needs of buyers and sellers, business will seek to influence market design for commercial advantage".

Under sustained corporate lobbying, almost all EU governments made huge over-allocations of permits to industry in the first phase. In 2005, the first year of trading, the relevant industries across Europe emitted 66 million tonnes less than the cap that had been allocated. This meant that the cap was effectively meaningless as it had not forced any net reductions. A preliminary analysis of the 2006 data shows that 93 per cent of the 10,000 installations covered by the ETS emitted less than their allotted quota, in all 30 million tonnes less than the total EU-wide allocation.

Successful corporate lobbying also meant that permits were allocated free of charge to industry in the first phase. But companies have been passing on the 'cost' to consumers anyway. A study by UBS Investment Bank showed that the first round of the ETS has added 1.3 euro cents to each kilowatt hour of electricity sold. This sounds negligible, until you consider that the German minister for the environment estimated that the four biggest power providers in the EU – Eon, RWE, Vattenfall and EnBW – had profited by between €6 billion and €8 billion from over-allocations and passing

on the imaginary cost of the first phase of the ETS onto consumers.

Apologists for the ETS are quick to claim that these early 'design faults' are being ironed out in the second round. For starters, governments are allowed to auction off a percentage of permits to industry rather than simply handing them out for free. Yet in practice, only 10 EU members have chosen to go down this route and, of these, four are auctioning fewer than one per cent of their total allocations. Yet free-allocations to fossil fuel intensive industries continue – in effect, providing a huge subsidy to the heaviest polluters.

Distorted allocations

In the article "Implications of announced Phase 2 National Allocation Plans" from the journal *Climate Policy*, Dr. Karsten Neuhoff (from the Cambridge University Faculty of Economics) and his co-authors conclude that "the level of such subsidies under proposed second phase NAP is so high that the construction of coal power stations is more profitable under the ETS with such distorted allocation decisions than in the absence of the ETS".

Advocates of the scheme also argue that the tighter caps imposed in Phase II will cause the price of carbon to increase and will incentivise industries to start implementing cleaner technologies and practices. Predictions of higher price permits in Phase II are somewhat optimistic in the face of the 'linking directive' which means that companies can also acquire credits by investing in clean development mechanism (CDM) projects—that is, offset projects in the global South through the Kyoto protocol.

This 'linking directive' represents a serious 'leak' in the system that undermines the effectiveness of tightened caps. According to the same *Climate Policy* article, "some market participants anticipate that the European market could be flooded by these [CDM] allowances to such an extent that the EU allowance price would plummet".

It is not only the availability of such cheap credits that undermine the climate credibility of the ETS. The nature of the CDM projects themselves have come under sustained criticism.

The myth of "development"

The CDM is framed in benevolent development rhetoric (the 'D' in the CDM). The projects are supposed to bring developmental benefits to local communities and the market was expected to create incentives for investment in low-carbon energy infrastructure in Southern countries. But almost two thirds of the 1,534 CDM projects in the pipeline as of early 2007 did not involve either the generation of clean energy or carbon dioxide emissions.

The largest share of CDM credits (30 per cent) has been generated by the destruction of HFC-23. This potent



greenhouse gas is created by the manufacture of refrigerant gases. A study in the February 2007 article of Nature showed that the value of these credits at current carbon prices was €4.7 billion. Not only was this twice the value of the refrigerant gases themselves, but it was also estimated that the cost of implementing the necessary technology to capture and destroy the HFC-23 was less than €100 million, so something in the region of €4.6 billion was generated in profit for the owners of the plants and the project brokers.

Big money for big business

This enormous sum of money generated by these Kyoto-style trading schemes has not gone to the companies and communities who are taking action on clean energy and energy reduction projects, but rather to big, industrial polluters who are then at liberty to reinvest the profits into the expansion of their operations. In the 2006/07 financial year, the owners of SRF, an industrial and textiles company based in India, reported a profit of €87 million from the sale of carbon credits derived from the destruction of HFC-23. Ashish Bharat Ram, the managing director, told the Economic Times that "Strong income from carbon trading strengthened us financially, and now we are expanding into areas related to our core strength of chemical and technical textiles business".

Many of the corporate benefactors of CDM money in Southern countries are the target of sustained local resistance from communities who have to endure the often life-threatening impacts of intensive, industrial pollution.

In 2005, about 10,000 people from social movements, community groups and civil society organisations mobilised in Chattisgarh, India, to protest at the environmental public hearing held for the expansion of Jindal Steel and Power Limited (JSPL) sponge-iron plants in the district.

The production of sponge-iron (an impure form of the metal) is notoriously dirty, and the companies involved have been accused of land-grabbing, as well as causing intensive air, soil and water pollution. JSPL runs the largest sponge-iron

plant in the world, which is spread over 320 hectares on what used to be the thriving, agricultural village of Patrapali. This plant alone has four separate CDM projects, generating millions of tonnes of supposed carbon reductions that could be imported into the ETS. The inhabitants of three surrounding villages are resisting a proposed 20 billion rupee expansion that would engulf them. The CDM is not only providing financial assistance to JSPL in making this expansion, but also providing them with green credibility in being at the forefront of the emerging carbon market.

The CDM may even act as a disincentive for Southern governments considering climate-friendly legislation. Had it been mandatory for factories to capture and destroy HFC-23, they would not have qualified for CDM status, as the carbon funding would not have been 'additional'.

As far back as 1991, there were plans proposed for an EU-wide carbon tax, but the lack of political support and the vogue for all things market-related meant that they were stifled. However in February 2007, a study by economist Robert Shapiro, who was undersecretary of commerce for economic affairs in the Clinton administration, stated that carbon taxes are "much less vulnerable to evasion and market manipulation" than cap-and-trade systems. Whereas carbon taxes provide "a more stable and transparent system for consumers and industry alike," cap and trade systems are "much more complex to administer" and "produce much greater volatility in energy and energy-related prices".

Across the world, other economists and political scientists are coming to similar conclusions. The question remains how long so much energy and political will-power will be channelled into a mechanism that does little more than bolster the profits and environmental 'credibility' of the biggest polluters. Even if the global community won't have benefited from any serious net emissions reductions as a result of the EU-ETS, it will hopefully at least have learned a valuable lesson in how not to devise effective climate policy.

Sun shines on our cereals events 2007

Some 70 farmers and other players in the organic arable sector made their way to The Organic Research Centre – Elm Farm's cereals open days held at Wakelyns Agroforestry, Suffolk and Sheepdrove Organic Farm, Berkshire at the end of June.

The talks on marketing, research and local food systems were pertinent and stimulating. At Wakelyns visitors were even lucky enough to try some of the first bread made from the wheat composite cross populations. Participants at both events managed to dodge the heavy showers to see our wheat and oats trials in the field.





Biomass energy – are we on the wrong track?

Professor Dr. Hartmut Vogtmann

As the world goes crazy about biomass for energy production and bio-fuels to keep our energy gobbling and gas-guzzling world moving, the question has to be asked - are we not fooling ourselves?

Already we can feel the demand on land required for biomass and bio-fuel production. Not only the pressure on cropping land is obvious, but also pressure on tropical forests and nature conservation areas. Food prices are rising, very much to the like of farmers and very much to the dislike of consumers. It is high time for farmers to get better prices for their commodities, for far too long the prices have been outrageously low.

We are now witnessing the vulnerability of our highly external energy dependant food production, storage, processing and marketing system. For some time now advocates for local and regional food chains have pointed the finger to this weak spot. The globalised food trade not only damages the climate, it also deprives local producers of the opportunity to add value to their own production – a truly vicious circle.

And now we add biomass and bio-fuel to the mix. Farmers are told their future no longer lies in food but in energy production – and the present subsidy system in various countries in combination with rising crude-oil prices admits that they are right.

Very short sighted

But what will be the price we all pay in the long run? Is it not so very short sighted, if we destroy tropical forests and drain wetlands and moors to plant oil palms instead? The CO₂-balance is negative, because we release up to 30 tonnes of CO₂/t palm-oil to save approximately three tonnes of CO₂ when we burn palm-oil instead of gasoline in our cars.

The problem is that it sounds good to burn bio-fuel. Not so good the loss of biodiversity directly linked to the loss of indigenous forests. Should not all EU-Environment Ministers put a halt to this nonsense in view of their decision in 2001 in Goteburg to stop loss of biodiversity by 2010?

The new solution proposed for our thirsty motor car world is BTL- Biomass To Liquid. I can already visualize a world-trade in biomass on a globalized market; transported from around the world to plants able to transfer biomass to liquid fuel. A strong indicator for this are the locations for the first of those plants to be built in Germany: all of them are either sited along the coast or at inland harbours on big rivers.

And there is a danger that farmers once again will fall in to the trap – making big investments in biomass production. Then one day the computer of the BTL-plant manager tells them that biomass is much cheaper shipped from other places in the world than from regional or even European production. And at that point all interest in Europe sourced raw material will end.

A working model - biogas

However, biogas does seem to fit with farming. For a start you can sell heat and electricity at the same time. First studies in Germany have shown that biogas production requires skilled persons to run the biological process properly and that the higher the utilization of already available organic matter, e.g. manure, slurry or organic household waste, the better the economics. If you produce biomass (such as maize) for the sole purpose of feeding your biogas production, it might however not be profitable.

For such dedicated cropping, research projects show that at best you will be able to produce an equivalent of 10,000 litres diesel per ha maize, according to Dr. Urs Niggli from the Swiss Research Institute for Organic Agriculture. That is 1 litre of diesel per m². However, today's solar panels already produce 90 – 120 litres of diesel equivalent per m². That means it is a factor of 100 times better than maize production.

In view of the potential increase in the efficiency of solar panels in the next few years everyone who favours biomass production has to make up for a 100 to 800 fold advantage from solar panels. So, a clear yes to biogas if you can use already available biomass, but a clear no if you have to produce large scale monoculture crops.

The most ridiculous development lies in burning grains, especially wheat. Bizarrely, the political framework under which we live at present not only allows this, but makes it profitable. And in the middle of all of this, GM crops are apparently going to be the world's energy-saver.

Just think for a moment what Urs Niggli said, that in plant energy production we are 100 – 800 fold behind solar energy production, let alone in comparison to wind, water or even geothermic energy. And then consider an agricultural system designed to eliminate all "unwanted" biomass through herbicide use, short straw and therefore low root development grains, one takes the "little" grain biomass (even if it is delivering yields of 10 t/ha) and burns it.

Modifying agriculture

If one really wants to produce a lot of biomass, a totally modified agricultural system is necessary. With a properly designed energy production system it might be possible to combine both energy production and stop the loss of biodiversity. I can visualize fields with wide mixtures of different plant varieties, flowers in the fields with butterflies, birds and humans, who would enjoy flowering fields again - fields that benefit nature and humans alike.

Step forward organic agriculture. Organic farming offers already some of the benefits for nature and society, also in economic terms and there is a lot of room for improvement. If agriculture itself currently produces 15% of the climatically "bad" gases (e.g. CO₂, CH₄ and N₂O) this must be reduced through energy efficient and environmentally



sound production methods. With regard to increasing carbon-reserves in the soil and therefore the function as a carbon-sink, organic farming is the only method which is capable of achieving this. However the full scope of this effect is not yet known, as stated in 2005 by the well recognized British researcher on climate change, Peter Smith.

In 1977 the first scientific IFOAM conference in Sissach, Switzerland, had the title "Towards a sustainable agriculture". Let us now (30 years on) take this approach seriously. If the organic farming community wants a key role in a world of diminishing non-renewable resources and climate change, it must reconsider and change some of the developments that have taken place in recent years.

An end to cheap food

It's official – biofuels are taking over as the main growth driver for agricultural demand. So says the world's leading investment bank Goldman Sachs.

Goldman reckons that across the world, if government policies are pursued in full, global demand for biofuels could rocket from some 10 billion gallons a year now to over 25 billion gallons in 2010 – just three years away.

The obvious implication is for food (and grain) prices to rise sharply.

The analysts at Goldman forecast that in five years time (2012) corn (maize) will trade at \$5 a bushel compared to the \$3.50 a bushel of today (up 42 per cent).

For wheat the prediction is for the rise to be from the current \$4.50 a bushel to \$6 a bushel (up 33 per cent).

For consumers in the developed world this biofuel-driven price strength will mean an end to many "cheap" foods. It is already worrying governments and policy makers, providing as it does a fresh driver for inflation.

Overall, global food demand is rising rapidly as economies such as China and India thrive and create armies of new affluence with far greater consumption of meat and grains.

In the developing world the impact is set to be even more serious, as more and more hungry mouths end up further and further away from an economically accessible meal.

Interestingly, the predictions for higher grain prices come against a backdrop of rising levels of grain production, as reported by the International Grains Council.

It predicts world grain production to hit 1.666 billion tonnes next year (2007/8), a rise of 6.2 per cent.

Across the markets traditionally soft commodities are hardening. Corn, wheat and even cocoa and coffee prices have all risen strongly in recent months. So far this year, corn and wheat prices have reached their highest levels for a more than a decade.

Despite this body of evidence, EU agriculture commissioner Mariann Fischer Boel has been busy playing down the likely impact of the rising demand for biofuels on both the availability and the price of food.

"There is a heated debate about whether we can deliver on the [EU Commission's] 10% target for biofuels [by 2020], without putting a huge strain on our food markets," she recently told European grain traders in Brussels. "Let me be clear - I do believe that we can."

Organic land area grows in EU

New data from the EU's statistics office –Eurostat – illustrates strong growth in the area of organically farmed land across member states.

The figures show the proportion of total Utilised Agricultural Area (land used for arable production, permanent grassland, permanent crops and horticulture) dedicated to organic production has increased to 4% in the European Union.

However, the rolling changes in the make-up of the European Union over time make clear trend spotting difficult. Looking at new members as well as old the figures suggest that the current membership of 25 countries has 3.9% of agricultural land farmed organically. Tracking just the 15 member states with a baseline in 1998, organically farmed land as a percentage more than doubled from 1.8% to 4.1% by 2005.

Eleven percent of agricultural land in Austria is now farmed organically – a figure still growing. UK figures are closer to the EU average at 3.8% but are falling slightly mostly as a result of hill land re-classification.

The Eurostat data also shows how much EU land area is in conversion - a useful indicator of future changes/trends in the sector. Member countries can roughly be divided into three categories, those that have high, medium and low growth potential, dependant upon the levels of on-going conversion.



Let's stop bleating about the bushes...

Professor Martin Wolfe

Its not just the great mound of delicious, sun-warmed, deep blue, wild Wakelyns Agroforestry cherries that stimulated these thoughts. Recently, in Northern Ireland, I joined the 'Farm Woodland Forum' for annual discussions and demonstrations on all aspects of temperate agroforestry – including new policy developments.

As climate change starts to bite, the advantages of agroforestry become increasingly obvious (at least to me and the other Forum members). There was talk of the ways in which agroforestry on flood plains could help delay flooding and restrict damage when fast flooding does occur. And there's increasing evidence of the ways in which trees in agroforestry systems can help reduce, not only nitrate leaching, but leaching of pesticides in non-organic systems.

Jim McAdam and Gerald Hoppe confirmed how, last year, when Northern Ireland was really sunny, the silvopastoral systems at Loughgall provided welcome shade for sheep and cattle. It was also impressive how an ash-based system, planted in 1989 and now with major trees and shading, nevertheless still provides early and late bite for the farm stock because of the particularly short shade season with ash. Jim also confirmed that, as the ash matured, the pasture composition adjusted to more shade-tolerant species such as *Poa trivialis*, rather than the original perennial ryegrass.

When the chips are down

Much of this particular meeting was directed to willow and willow chip production for local heating schemes. One novel and exciting idea was the push to get a few farmers to come together to sell, not wood chip, but heat. This involves, for example, the farmer group getting together with a local builder developing a small housing estate. The group could try to persuade the builder to install woodchip boilers in individual houses to provide a local woodchip market. But this would be very expensive and inefficient – big boilers produce a much better return. A far better idea is to persuade the builder that the farmer group would take on the purchase, installation and running of a single central boiler unit, which would provide cheap heat for the householders and an assured woodchip market for the farmers.

As these and other kinds of woodchip market grow, there is increasing interest in using sewage sludge and slurry in various ways to apply to the willow to increase biomass yield. The protagonists claim that this can be more effective than reed bed systems in cleaning up such materials. The main argument, however, is that this provides an acceptable way for re-cycling human and farm "wastes", avoiding the usual concerns about applying such materials directly to food crops, or even to fruit and nut trees.

Multifunctionality

Certainly at Wakelyns Agroforestry we're delighted to hear that modern woodchip boiler installations are becoming increasingly common locally. These will complement our

willow alley system perfectly as we move to independent, renewable energy for the whole farm, with some extra available for a lucky neighbour. Importantly, as the arguments about producing plant materials for energy become more heated, I believe the case for achieving this through alley cropping systems becomes even stronger. The key point is that wood produced for energy in alley cropping is multi-functional – the trees or coppice provide many services for the crops or animals in the alleys, while they are being produced and managed. This is very different from a 'plantation' crop, grown with only one function in mind, thermal energy, which then detracts totally from the potential of that land to produce food.

Agroforestry and policy

So, if agroforestry is so amazing in its potential for producing food, materials, energy, diversity, disease and pest control, habitat, protection for animals, man and plants, and, not least, deep pleasure as our visitors regularly confirm, why isn't everybody doing it? The short answer is policy. Nowhere in the Single Farm Payments scheme or the new Stewardship schemes (ELS, OELS, HLS) (or even in my spellchecker) is the word agroforestry even mentioned. But, there may be changes on the way, albeit slowly.

Firstly the EU does now recognise agroforestry, even if Defra does not. And Greece has become the first country to take advantage of Article 44, establishment of agroforestry systems, within Council Regulation 1698/2005 on rural development. Some awareness of this has emerged in the draft English Rural Development Plan for 2007-2013, but it has been sidelined obscurely into parkland at the expense of support for the targeted creation of new woodland and improved maintenance.

And there's the rub. Development of agroforestry systems is not something that should be competing with parkland or the development of new woodland – it serves a largely different set of purposes. We badly need an appreciation of the point that agroforestry, by promoting positive interaction between agriculture and forestry to the mutual benefit of both, represents a crucially important tool in the development of sustainable resilience against the growing variability of global climate change. Got that? Phew. Now back to those cherries.

-- STOP PRESS --

We've just heard that the German Parliament, the Bundestag, is to send a delegation of opinion formers to the UK to study agroforestry here. We are sure that both our extensive agroforestry trials site at Wakelyns in Suffolk and the "silvo-poultry" system (developed by The Organic Research Centre) at Sheepdrove in Berkshire will be on their itinerary. All we need now is a little more interest from our own Parliament and Government...



Progress on 100% organic feed for UK poultry?

Jesús Cóncepcion and Peter How

The present standards for organic poultry production allow a proportion of the feed to come from non-organic sources (see below). Many UK institutions including consumers and consumer associations are pushing for 100% organic poultry feed to be implemented earlier. The desirability and feasibility of this move still concentrate minds in debate on allowances and derogations for use of conventional ingredients in organic poultry feed. The issues discussed include concerns about animal performance / production capability, feed component availability, and the costs of organic alternatives.

Non-organic components allowed in Soil Association Standards

Prior to August 2005 the allowance for organic poultry feed was 20% non-organic and 20% in-conversion substances. The allowance was not removed in that year as planned on review and was re-set as follows:

- 15% from 25th August 2005 to 31st December 2007
- 10% from 1st January 2008 to 31st December 2009
- 5% from 1st January 2010 to 31st December 2011

Why 100% organic feed?

The protagonists' position may be summarised as follows: Allowing conventional feedstuffs to be used carries the risk of residues and GMO contamination, and represents unwanted intensification of organic systems with potentially damaging effects on consumer confidence in organic animal products. Furthermore, permitting non organic feeds leads to a) a lack of commitment from livestock farmers to source fully organic ingredients even when they are available, and b) a severe lack of confidence from arable producers either to convert to organic or to grow crops to sell.

Is it possible to feed 100% organic?

Previous work at The Organic Research Centre has centred on "the viability of a one hundred per cent organic ration for organic table birds within a silvo-poultry system". The trials observed no overall health, growth, behaviour or welfare problems when comparing 80 and 100% organic rations. This result is supported by the Sundrum et al. (2005) studies on the possibility of formulating diets without the use of non-organic feedstuffs.

However, our studies do highlight a concern about the amino acids in the ration, in particular methionine. There is concern that ingredients used to supply methionine do not have a suitable organic substitute and could cause a possible decrease in animal performance.

Protein remains one of the most difficult components for substitution. A desk study on sustainable and innovative methods for meeting the hen's protein requirements, carried out by DEFRA in 2006, states the urgent need to identify novel sources of methionine for organic poultry feeding.

This was the motivation for an earlier study at Elm Farm, undertaken by Pegg & Pearce, 2004. This looked at the effect of removing synthetic amino acids from the poultry ration on the final live and dressed weight of birds. A decrease in average live and dressed weights of birds was observed once synthetic amino acids were removed from the ration (1.9 kg vs 1.6 kg in the case of dressed birds).

On this point Sundrum et al. (2005) found that strains with high genetic yield capacities seemed to be more sensitive to a suboptimal feed ration than slow growing strains or robust breeds. There are, though, other factors that could affect the bird's amino acid metabolism besides amino acid availability, such as metabolic energy and fibre content, digestibility, and so-called anti-nutritive factors.

Derogations not justified

According to The Organic Research Centre, extension of the derogations simply cannot be justified. First of all, the sector has had ample opportunity to find solutions; secondly, many farmers and feed manufacturers in many countries have found solutions, often through investment in new structures and systems, and have now been badly let down.

Thirdly, current R&D has clearly demonstrated that there is no insurmountable technical obstacle to 100% organic rations in any livestock category – including the issue of amino acids in non-ruminants; and fourthly, it is clear from the experience of those farmers using full organic rations that supply issues are solved when demand starts.

Doing the job properly

At a recent conference organised by The Organic Research Centre and Organic Inform entitled 'Organic Poultry Production – doing the job properly?' producer and retail representatives agreed that consumers would generally assume that a bird labelled as organic will have eaten organic food. Director Lawrence Woodward argues that when the organic label does not reflect consumers' expectations, e.g. with derogations, it puts the whole of consumer trust and confidence at risk.

A new publication from The Organic Research Centre

"Doing the job properly – the challenge of farming organic poultry" is now available. It contains the full proceedings of a recent conference on the subject at Abbey Home Farm, Cirencester along with abstracts illustrating our recent work on poultry production and policy. Digest its contents and join the debate on what has become one of the most contentious sectors in UK organic farming. Copies are available to purchase from: organicinform@organicresearchcentre.com or call on 01488 657600.



Icelandic growers in hot water...

Roger Hitchings, head of the Organic Advisory Service (OAS), is recently back from a technical visit to Iceland. There he focused on protected cropping systems - reviewing the existing organic protected cropping sector and also evaluating the potential for large-scale conversion of conventional protected cropping units.

Iceland is not a member of the EU but it is part of the European Free Trade Area and through this is part of the European Economic Area. Through various agreements it is therefore subject to the EU Organic Regulation 2092/91 and all the amending legislation.

Vottunarfostofan Tun is the sole certification body and is listed along with all the other recognised certification bodies. The Soil Association played a major part in the early 1990s in helping to set up standards, certification procedures and appropriate training. UK based OAS colleagues were also active in providing technical input in the past.

Iceland enjoys a richness of natural resources that enable it to operate a relatively low carbon economy compared to most other northern hemisphere countries. Its position astride the mid-Atlantic ridge ensures that there are many sources of geothermally heated water along with dramatic and periodic volcanic eruptions.

All of the island's electricity is generated by geothermal sources or through hydro-electric schemes. All the production units visited were sited close to hot water boreholes or springs from which the water was piped to provide heating on an all year round basis. The plentiful supplies of hot water also allows the houses to be easily cleaned without the use of chemicals and a spray of hot water at up to 95°C very efficiently kills off emerging weeds.

Its position just below the Arctic Circle means very long days in summer and long nights in winter. This means that light levels are good for much of the year – artificial lighting is used in winter for cucumber crops in the organic units.

Much of the country is fairly mountainous with very thin and at times fragile soils – wind blow in the upland regions is a serious problem. In the coastal lowland areas there are some very good soils ranging from friable volcanic loams to

peaty loams that were similar to those found in some parts of the Fens.

Long season glasshouse production is greedy for nutrients and it is beyond the capacity of the very best soils to sustain a tomato crop for 10 months where yields of over 200t/ha can be achieved. Fertility must be externally supplied and this is achieved in a variety of ways, though bulky organic materials tend to be the main method in organic units. In Iceland the prime source of fertility is spent mushroom compost from the only significant mushroom producer on the island. The organic systems that were seen were very well run and their produce was finding a ready market.

One of the main Icelandic marketing organisations has noted the increase in interest and demand for organic produce and is keen to work with conventional producers to increase supply through a programme of conversion of existing glasshouses. It is worth noting that this same marketing organisation is achieving premiums of up to 100% for Icelandic produce over the price of relatively cheap imports from Holland, Spain and elsewhere.

The visits to conventional units identified a key difference in suitability – the two units that were using soil based systems with conventional fertility inputs could be easily converted while those that were using artificial substrates and liquid feeds would be very difficult.

Not all the growers agreed with this analysis and an open meeting produced some lively discussion. The use of pumice chips (of which Iceland has a plentiful and arguably renewable supply) with an organically acceptable liquid feed was promoted as “little different” from the soil based systems of the organic producers.

Interestingly, there is a complete lack of specific references to such cropping systems in the EU Regulation. The ACOS Technical Committee is committed to examining this question in detail with a view to persuading the Commission to include some detail in the Implementing Regulation that will accompany the new Organic Regulation. Views on this matter are welcome – contact Roger Hitchings at roger.h@organicresearchcentre.com

Could there be a connection?

From The Times July 18th 2007 – Full page colour ad from ASDA “winner of Britain’s lowest price supermarket award for 10 years running”.

Under the banner **Tasty – just one of 3061 price cuts today** a picture of an oven roasted bird. And the price? Slashed from £2.78 to £2.00 each for a 1.55kg whole bird.

In the same paper in News section the headline – **Bird flu cull may be too expensive**. It goes on to say that according to the latest computer model mass vaccination or culling of

poultry would not be needed to contain anything but the most serious outbreaks of H5N1 avian flu. And even then it may be too expensive to introduce. It claims the “more limited measures” deployed in Suffolk around the Bernard Matthews turkey factory should be sufficient for most eventualities.

Could it be that the imperative to deliver £2.00 chickens to ASDA shelves is taking precedence over proper animal and (in H5N1’s case human) health policy? Surely not...



Grand opening in West London

Whole Foods – the grocery chain of 200 stores across North America which has built a reputation on selling the “organic” lifestyle - arrived with all guns blazing in the UK in early June.

Its 80,000-square-foot, store on London’s up-market Kensington High Street represents the swankiest of locations, amongst the glitterati of West London. But then American consumers have already dubbed Whole Foods as “Whole Paycheck”.

The company is so confident that the new store - in an Art Deco building with high ceilings, wide aisles and an array of cafés and bars - will wow the crowds that it says it is already looking for other sites in London and across the UK. There are plans to open as many as 40 stores here and in continental Europe.

Whole Foods is a \$5.6 billion a year company whose revenues grew 19 percent last year. That’s a pace that Whole Foods executives reckon they can double in the next four

years. But enduring success is far from assured for a retailer with almost no name recognition amongst UK consumers fighting for a toe hold in the fiercely competitive British grocery sector. We already have five established national supermarket chains - all of which stock organic products. And for elite grocery shopping, Londoners already have the food halls of Selfridges and Harrods or the society purveyors of Fortnum & Mason.

The biggest test for Whole Foods in London will lie in its sourcing and buying policies. How much of the produce on sale will be organic and how local will it be? The company has a partnership with LEAF (Linking Environment and Farming), an organisation that provides certification for produce that has been farmed “responsibly” but definitely not organically.

On the issue of food miles Whole Foods in North America has set a radius of 200 miles, or 320 kilometres, to mean “local.” That measure, when used in London, would include France and Belgium.

Farm animal superbug – a new threat to our food?

Research published by the Soil Association has revealed that a serious human health threat, already present in the Netherlands and other European countries, could spread to the UK.

The ‘superbug’ methicillin-resistant *Staphylococcus aureus* (MRSA) is already a high profile, persistent problem in many UK hospitals. Now a new strain of MRSA has developed amongst intensively farmed pigs, chickens and other livestock on the Continent. Farm-animal MRSA has already transferred to farmers, farm-workers and their families in the Netherlands, causing serious health impacts. 40% of Dutch pigs and 50% of pig farmers have been found to carry farm-animal MRSA.

Not yet in the UK

In the Netherlands, farm-animal MRSA has been found in 20% of pork, 21% of chicken and 3% of beef on sale to the public. It has not yet been found in UK livestock or meat products, but neither the government nor the Food Standards Agency are carrying out any surveys of the most likely carriers, live pigs, chickens and imported meat.

The Dutch Minister for Agriculture, Dr C. P. Veerman thinks surveys across Europe should be carried out as a matter of urgency. ‘It is very unlikely that ‘animal-farming-related MRSA’ only exists in the Netherlands, considering the animal types where MRSA is found and the many animal movements and comparable livestock farming methods in other EU member states. So far, there are no hard facts about this. It is important, for these reasons, that all Member States examine their animals,’ he says.

Dutch scientists and government officials blame this new strain of MRSA in farm animals on the high levels of antibiotics used in intensive livestock farming. The UK government has committed itself to reducing the amount of antibiotics used in UK farming, yet overall levels remain high. Despite an EU-wide ban on growth promoting antibiotics added to animal feed, similar quantities of antibiotics are simply being prescribed by vets for disease prevention.

The Soil Association is now calling on the UK Government to –

- 1/ Urgently instigate a testing programme to establish the MRSA status of UK livestock and meat on sale;
- 2/ Fully implement its claimed commitment to reducing use of veterinary antibiotics – including banning advertising of all antibiotics to farmers;
- 3/ Immediately prohibit the prophylactic and off-label use of all antibiotics on farms that are defined as ‘critically important’ in human medicine by the World Health Organisation; Screen all farm workers and vets coming into the UK from countries where farm-animal MRSA has been found.



Engaging the community at Elm Farm

Farm Sunday 2007

This was a national event on 10th June, organised by LEAF (Linking Environment and Farming) and supported by a number of organisations in the organic sector, including The Organic Research Centre – Elm Farm. The national plan was to get as many people as possible onto about 500 farms around the country, in order to show visitors how food is produced and how farmers manage the countryside for the benefit of all.

At Elm Farm visitors from around West Berkshire collected in our listed barn at 2.00 p.m. and were interested to learn about the 5 species of bat that inhabit the nooks and crannies of the roof timbers.

The group then enjoyed a guided walk on the farm trail. Eight butterfly species were spotted along the field margins; always a good general indication of biodiversity. There were also opportunities at different points on the trail to discuss the background and principles of organic farming, including food quality, animal welfare, management of natural soil fertility and the value of biodiversity throughout the farming system.

Hungerford and District Community Arts Festival

We were pleased to be invited again to contribute to our local Arts Festival at the beginning of July. First on the agenda was a most interesting talk and demonstration by Sue Zundel, who has an organic garden nursery business at Elm Farm (Gardiner's Labyrinth). Sue specialises in growing the old native cottage garden plants that were listed in the first 17th Century book on gardening. She had cuttings, craftwork and other garden produce for sale. Appropriately for the Arts Festival, Sue has also created living willow sculptures in the garden

The wet weather of the previous three weeks threatened to interrupt the farm trail walk. Muddy ground conditions slowed us down but it stayed dry enough overhead for us to enjoy the numbers of wild flowers in field headlands and the conservation areas on the farm. Some intrepid butterflies, damselflies and other insects braved the weather too.

Tea and cakes back at the farm, by virtue of the efforts of Sue and Michelle, were a welcome and fitting conclusion.

UK Organic Fortnight, 1st – 16th September 2007

Organic Fortnight is the time of the year for everyone to celebrate all things organic. This year the main theme is to be **'Wake up to an Organic Breakfast'**.

Brands and retailers across the UK are currently preparing to promote their organic breakfast items, with many companies joining forces to challenge office staff, hotels, cafés and caterers to get involved. The message is for everyone - at work or at home - to try an organic breakfast over the two weeks.

If you're not producing organic breakfast items don't despair, the aim of this theme is to make people think about how and why they should start buying or increasing their organic shopping habits.

For more information - or if you are planning any events or promotions in your farm - visit :

www.soilassociation.org/organicfortnight

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This is the intelligent journal that keeps you up to date with what is new and worth knowing in the organic world, whether farming, growing, research, policy or market. The Bulletin reviews The Organic Research Centre's research topics and includes technical briefings, and views and comments on policy issues and topical debates.

Our work at The Organic Research Centre is vital to the future of organic farming, but we need ongoing support that will enable us to continue our important research, training and policy work and to demonstrate solutions to seek permanence.

As an individual, or as an organisation, you can make a valuable difference by making a donation or becoming a Friend of Elm Farm for just £25 per year. In addition to receiving your FREE Bulletin you will also benefit from notification and invitation to special events and receive policy and technical updates.

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