

Vegetable News

June 2011

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The windy, dry, cold weather in May is currently dominating the vegetable scene, holding crops back and causing significant damage. A few crops have failed and others have weak pre-emergence herbicide seals.

Pests

Carrot Fly

Traps in Belfast and Newtownards picked up first generation carrot flies in the last week of May. Most crops were not vulnerable in this period because they were still protected by Force treated seed, or crop covers or were too undeveloped to attract the fly. (see below for predictions)

Cabbage root fly

This pest of all brassicas is likely to cause increased damage this year after the second dry spring in a row. The greater area under oil seed rape will favour the cabbage root fly. Most brassica modules have been treated with chlorpyrifos prior to planting, but there are reports of damage to untreated plants. Early turnip crops have mainly been grown from fipronil treated seed.

The greatest risk from both carrot fly and cabbage root fly is from the

second generation. Currently there are no predictions available from the Warwick web site, because the weather station in N.Ireland on which these predictions were based was not active during a critical period. CAFRE will be in contact with predictions for the second generation of the above pests.

Flea beetle

Some brassica crops are showing the numerous small holes typical of this pest. The beetle makes holes of less than 1mm in diameter, but as the leaf grows the size of hole expands. Salad brassicas such as rocket have to be protected from flea beetle in the early summer, usually by mesh or fleece. Sturdier crops such as broccoli and turnip do not normally require protection, but if damage is severe they can be sprayed with deltamethrin e.g. Decis or alpha cypermethrin e.g. Contest.

Carrot/willow aphid

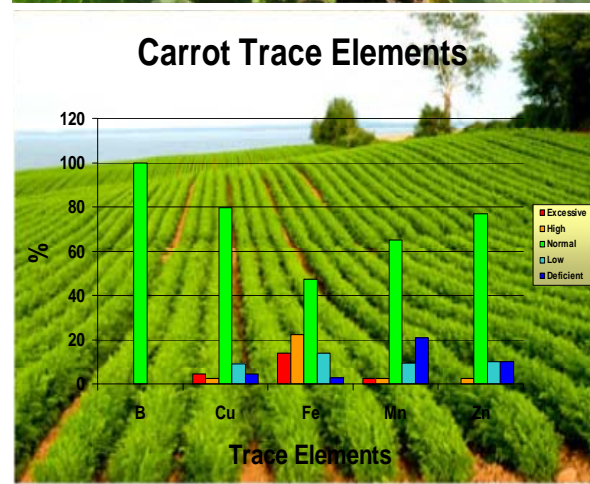
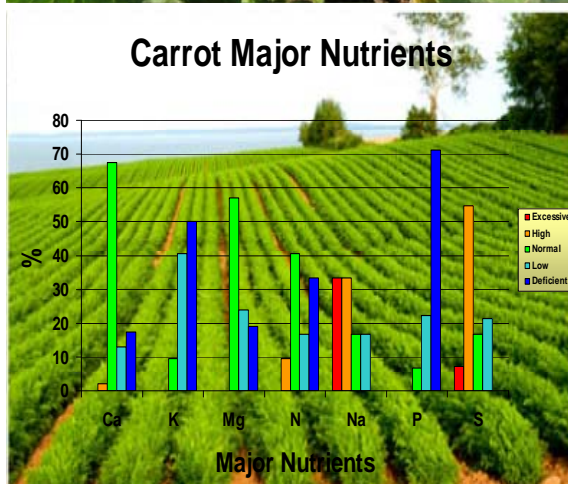
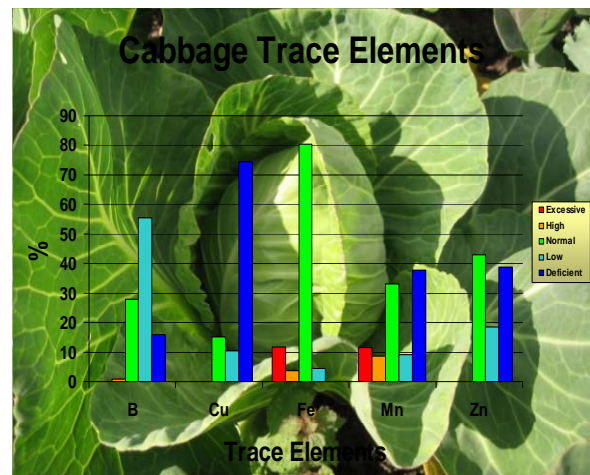
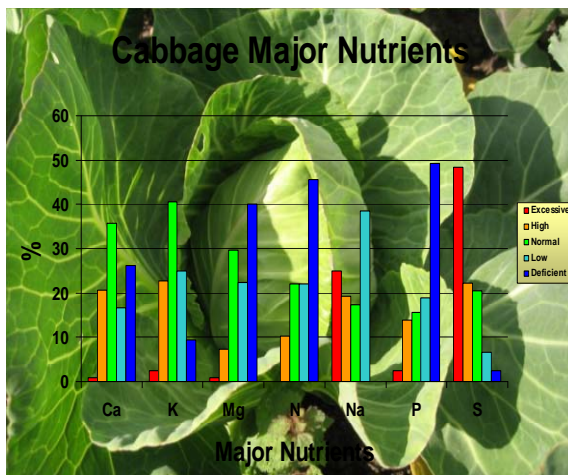
These aphids will be migrating onto crops over the next few weeks.

Check for the period when wild hosts such as cow parsley finish flowering, then monitor and spray carrot crops.

Tissue analysis, the experience of NRM

NRM laboratories, Bracknell, is one of the companies which carries out soil tests. They advise use of both soil and plant tissue analysis in an integrated nutrient management programme. If tissue analysis is conducted early in crop life then corrective fertiliser applications can be made that same season before the problems become yield limiting.

The charts below summarise the results of NRM tissue analyses over the past ten years. Deficiency is more common than excess. In cabbage; phosphate, nitrogen, magnesium and copper are most commonly deficient. In carrot the common problems are with phosphate, potash and nitrogen. Carrots appear less subject to trace element problems than cabbage.



The most common deficiency found in OSR was potash, while peas are most often deficient in magnesium and boron. NRM can analyse

carrot, parsnip, swede, cabbage, cauliflower, lettuce, leek, onion, spinach, bean and pea.

Crop	Portion to sample (200g weight)
cabbage cauliflower	Young mature leaf at centre of whorl before heading
carrot, parsnip, onion, leek, swede	3 rd of 4 th leaf from growing tip at mid growth before root enlargement
Lettuce	Recently matured leaves at mid growth
Pea	Leaves from 3 rd to 5 th node from the top before flowering
broad bean	Fully developed leaves at tip of plant prior to or at first bloom.

200g of clean, dry leaves per sample should be sent in a loosely tied, labelled plastic bag. The code is C086 from NRM Tel 01344 886338, and the price is £36.50 + VAT.

An alternative company offering tissue analysis is Landcrop, Tel 01759305116, which was used by a number of local growers in 2010 and charges £23.50 + VAT.

First results of lime trial

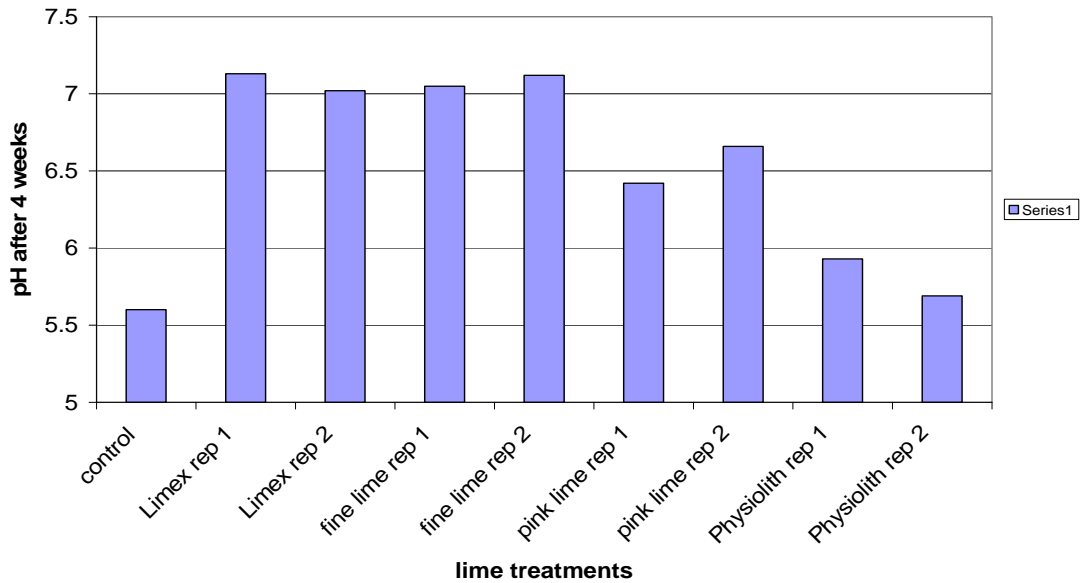
Following last years farm trials on variable lime application and liming products for club root control, several growers have been asking which form of lime is best in their circumstances. To help answer these questions CAFRE is working with growers to conduct a number of on-farm lime trials in 2011. The first of these is on a leek field of Messrs Dunlop and Booth near

Lisbane, Co Down. The treatments can be seen in the table below. Each product was applied as a strip on a rather steep slope, with the strip divided into upper and lower parts, giving two replicates. The rates were those recommended by the product suppliers, or by the soil testing laboratory, given the acidity of the field. Treatments were applied on April 14th.

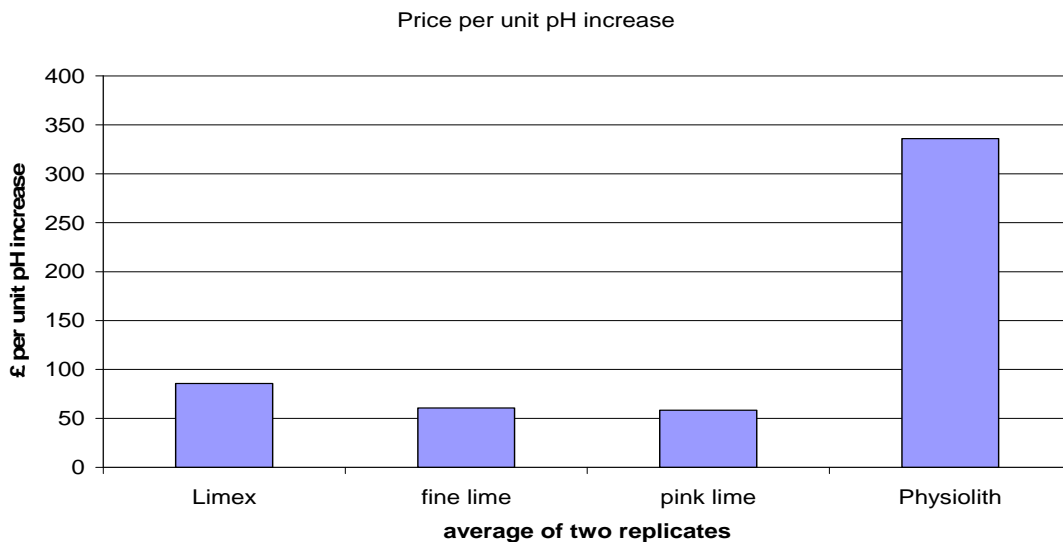
Treatment	Rate per acre	Price per Tonne (delivered, not spread)
Pink lime	3t	£18
Fine lime	3t	£30
Limex	4t	£31.5
Physiolith	250kg	£190
control	-	-

The first samples were taken four weeks later, shortly after the crop was sown. Normally samples would be taken after two weeks, but due to dry conditions there would have been little chance for

any lime to have dissolved in the first two weeks. The chart shows the very marked differences between treatments, with Limex and fine 'whiting' lime being most effective.



The chart below shows response in relation to cost of the product.



Care must be taken in interpreting the results. These are only the preliminary findings from one field.

Product prices may vary, and differing soil type or rates could give different outcomes.

Climate change for vegetable growers

John Wilie of the Meteorological Office gave an interesting talk to DARD staff on May 25th. He showed the temperature data which has convinced him that not only are global temperatures rising, but the rises can only be explained

when greenhouse gas levels are taken into account.

The four main greenhouse gases are water vapour, carbon dioxide, methane and nitrous oxide. Methane is now becoming the most important of these gases.

By the end of the century mean global temperature is likely to increase by at least 2°C. The increase may be even greater, since although both N.Ireland and the UK as a whole have reduced greenhouse gas emissions, many countries are not making similar reductions.

Changes to the climate of N.Ireland

By the end of the century we can expect an increase in winter rainfall by 20% and a decrease in summer rain by 20-30%, with associated lower light levels in winter and higher light levels in summer.

More extreme rainfall events are expected, such as floods and droughts. Stronger winds in winter are anticipated.

Impact for growers.

- The growing season in N.Ireland is likely to lengthen, probably by 20-30 days. Growers should benefit from this increase, though there could be difficulties making use of the longer season if soils are wet from the extra winter rain.
- Some crops which are little grown at present will become more viable, such as maize and sunflower. Protected crops such as peppers, aubergines and chillies will be more productive. We should look at growers in the far south of Ireland and southern England for ideas, just as those growers are looking to the south of France.
- Organic matter cycling will speed up, which could lead to lower OM levels in soils.

- Due to floods and droughts soils may be worked in unsuitable conditions, and this, together with lower OM levels, will increase soil erosion.
- Water should be stored in winter for summer use.

Colder winters?

The question was raised of how the last two cold winters fit into the picture of steadily rising temperatures. The speaker felt that random fluctuations are the most likely explanation, pointing out that weather only becomes climate when averaged over 30 years, and two cold winters may be lost in a 30 year average. He did admit the possibility that later freezing of the Hudson's Bay area of Canada in recent winters may be upsetting world air flows so that for a 'transitional period' we could suffer more cold winters.

Last summer the Japanese and American long range forecasts were for an unusually cold winter in northern Europe, and they proved correct. Currently the Japanese are predicting another cold winter ahead for us, but the Americans predict average temperatures.

Weather forecasts

Long range forecasts are steadily becoming more accurate. The cabinet office was quietly given a warning in October of the big freeze that came in November. Some long range predictions have not been shared with the public after the Met Office was mocked in the media over its prediction of a 65% chance of a heat wave in '09. The Met Office web site gives a 30 day forecast, and severe weather predictions for the next five days.

Crop Protection News

Talstar withdrawn

All products containing bifenthrin, i.e. Talstar, Starion Flo and Brigade 80SC have now expired. The story of this artificial pyrethroid illustrates the system for approval of agro-chemicals in the EU. For the decision whether to include bifenthrin on the all-important Annex 1 the 'rapporteur member state' was France. The company responsible for submitting data was FMC Chemical sprl. The French equivalent of CRD considered the data and raised concerns regarding

risk to invertebrates such as earthworms and contamination of groundwater by TFP, a chemical produced as bifenthrin breaks down.

The rejection of bifenthrin was largely due to insufficient data, since certain species of mammal, invertebrate and plant had not been examined, rather than evidence of harm. The requirements for data from exposure trials are expensive to provide and unfortunately restrict the development of safer biological alternatives to many banned actives.

New SOLAs

Crop	Product	Active	SOLA and notes
Lettuce (outdoor), spinach, Brassica baby leaves	Switch	cyprodinil and fludioxonil	1317/11 For control of <i>Botrytis</i> . 7 day HI
Celery, outdoor and protected, till 2 nd true leaf...	Afalon	linuron	1573/11 (temporary until 9.9.11)
Leek, onion	Pyramin DF	chloridazon	1574/11 replacement for previous SOLAs
Cabbage, broccoli, cauliflower, Brussels sprouts, lettuce, parsley	Met 52	<i>Metarhizium anisopliae</i>	1568/11 For control of cabbage root fly and carrot fly
Protected cabbage and parsley	Previcur Energy	Fosetyl aluminium + propamocarb hydrochloride	1552/11

Met 52, the granular bio-insecticide which controls cabbage root fly, is currently too expensive for the distributors, Fargro, to recommend it outside organic and limited protected situations.

Approvals for vegetable crops have expired on some methiocarb slug killers. If you have Draza Wetex, Lupus or Exit Wetex, check they are only used on crops with current approvals.

Note

In the interests of factual reporting in this newsletter, reference to

commercial companies and products is inevitable. No endorsement is intended nor is criticism implied of similar companies and products which are not mentioned.

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Use of e-mail

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