

# ZeaNews

Z e a f r u i t C o m p a n y L i m i t e d

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## Change but no Change

If there is one thing in this world that you can't avoid its change and Zeafruit is no exception

### Introducing Innofresh Ltd.

Over recent months the directors of Zeafruit have been quietly working behind the scenes restructuring the company to facilitate future growth and diversification. To do this we have established a new management company called Innofresh Ltd.

Innofresh Ltd will quite simply run the affairs of Zeafruit and also run the affairs of a new associated company called Fresh Edge Ltd. Fresh Edge is a company that is focused on new fresh cut value added convenience products which you will hear a little more about in the months to come.

From the outside you will see no real change other than the introduction of the Innofresh logo and e-mail addresses on some communications (Zeafruit e-mail addresses will remain active). All of our Zeafruit people, their positions, contact numbers and physical office addresses will remain the same. All trading relationships with Zeafruit, whether as a grower supplier, service provider or customer will remain unchanged.

We see this subtle change as a very positive move forward and the collective strength of our new associated companies will bring stability and benefits to staff, growers and service providers alike.

### Terry Peachey



better than an apple...  
**fruitees!**

New from Fresh Edge and available at all participating New World and PaknSave Stores. Coming soon.

5+ a DAY  
Fresh fruit & vegetables

Official shade  
KIWI  
netball

crisp apple pieces  
"fresh fruit made easy"

# The Technical Side

Keith Pyle

## Managing and Evaluating the Spring flush

The spring flush of new growth heralds the start of a new cycle for the tree and a new cycle of best practices that need to spring into action, especially:-

- \* a strategy based on leaf analysis of how you are going to feed the new growth.
- \* the first fertilizer application containing nitrogen (the amount determined from leaf analysis) should have been applied at the end of September and you should also have applied your base dressings of lime, phosphorus, magnesium and potassium which are determined by soil tests and knowledge of cropping history.
- \* Pest and disease management strategies

We should be managing the different operations according to **crop phenology (growth stages)**, not by the calendar.

No.	Stage	What / when	Critical ops
1	Rest, flower induction and initiation	Winter dormancy (end of previous crop fruit maturity stage) June for flower initiation	Winter Urea sprays (1%) to enhance flowering. GA at this stage can reduce flowering- registered on harvested satsumas.
2	Budbreak	July/August	Apply base fertilizer- lime, P etc
3	Pre-blossom	before the new blossom is open- September/October	Ensure 50 to 70% of nitrogen (N) applied now (except late regreening prone varieties- 25%), fungicide protection of new flush. Consider flower thinning
4	Blossom or full bloom:	when most blossom is open and there is a good area of new leaf- October	Foliar spraying from 50% full leaf expansion. Include Urea (0.5-1%) if low in nitrogen or soil temps still low.
5	Petal fall:	when petal fall is in progress- November	Further fungicide protection (especially scab susceptible varieties in severe scab areas)
6	100 per cent petal fall:	when all the petals of the main crop have fallen- left with the tiny fruitlets - late Nov/ early Dec.	Start monitoring for Kellys Citrus thrip (KCT) and apply fungicides based on varietal needs. Also additional foliar sprays.
7	Fruitset, fruit-drop and cell division.	From 100% petal fall to 10 weeks after- critical fruit size determined now. Good temps help growth and brix (Dec/ Jan)	Foliar sprays of Calcium and maybe potassium in some areas. Time for chem. thinning. Apply side dressing of N and weekly monitor for KCT. Check for scale crawlers as well. Complete hand thinning where required
8	Cell expansion	After cell division – adequate moisture needed to fill cells (Feb/March) otherwise size can be adversely affected	Apply GA according to variety for skin quality (prevents creasing). GA in late Feb to delay harvest in Satsumas
9	Fruit maturing	From April– dependent on variety- excess rain can adversely affect brix	Check waste control strategy!

The different stages the crop goes through are shown in Table 1 with approximate calendar timings of some best practices which will vary depending on area, season and variety (consult Zeafruit variety best practice sheets for more detail).

**Factors determining quality of spring flush**

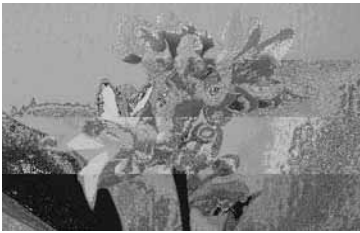




The appearance of the spring flush (flush takes place on mature one year old wood) will be an important **quality indicator** of whether best practices have been followed in the past because what you see is the product of:-

- Previous crop – a heavy crop hung late will adversely affect the next crop
- Nutrition- very important especially during a very heavy crop – nutrient balance and nitrogen levels particularly important
- Water deficits and weather conditions during critical stages

Pruning practices- see below

All of these affect starch, nitrogen and hormone levels which interact to determine flush quality. If you are in an alternate bearing rhythm (see Zeanews July 2006 for corrective management strategies) the chances are you will be seeing either a white blossom with little leaf (an “on crop” blossom) or a green flush with little blossom before an off crop. Ideally you will be seeing a balanced mix of blossom types interspersed with new leaf.

There are **5 types of spring flush**:-

<p>Multi-flowering leafless shoots</p> 	<p>Single flowering leafless shoots (leaves are from previous season)</p> 
<p>Multi flowering leafy shoots</p> 	<p>Single flowering leafy shoots</p> 
<p>Vegetative shoots – no flowers</p> 	<p><b>Notes</b>                  Trees going into an on year will produce a predominance of type 1 and 2 shoots. Those going into an off year will produce a predominance of type 5 shoots. The ideal would be to have a mixture of type 3 and 4 shoots referred to as indeterminate flowering shoots because they produce a good balance of vegetative and flowering wood. They are a good indicator of good and consistent yields, produce better fruit size and arise from strong branches with good water /nutrient supply.</p>

A reminder of the **objectives of pruning** which improves quality of spring flush and resultant fruit quality and size:

- Create optimum light for fruit development, focusing on congested areas
- Enhance and maintain access for mechanical, picking and thinning operations
- Early thinning of crop if an on crop expected- crop regulation- heavier prune before on crop
- Create good air circulation and also spray penetration
- Remove dead and broken branches
- Remove cross over branches
- Remove or shorten watershoots in crown and centre of tree
- Remove weak, spent branches
- Shorten long flushes (especially in lemons)

Follow up with shoot rubbing in critical areas to control regrowth

## Nutrition

The expanding spring flush has a high demand for zinc (Zn), manganese (Mn), iron (Fe), and of course magnesium (Mg). Apply foliar sprays as determined by leaf analysis during leaf expansion with a non-ionic wetting agent. At least one spray at two-thirds leaf expansion is advised; however, an early spray on early leaf growth (pre-flowering) can assist to boost levels, as can petal fall sprays. Drip irrigators can fertigate all of these elements. Best results for micro-nutrient fertigation is when the irrigation water is slightly acidified (pH 6.5). See photos of micro-nutrient deficiency symptoms available from your Zeafruit grower liaison.

Cell division occurs for about six to eight weeks after flowering. The bulk of calcium uptake occurs during this period and foliar sprays are critical to improve skin quality especially in Satsumas, Navels, Valencias and Tangelos. Calcium is the only immobile major element ie the plant does not store reserves so it must be continuously supplied by root absorption from the soil with supplements through the leaf. If soil conditions eg drought, cold, poor drainage and soil compaction is happening the active root tips where Calcium is absorbed will be limited. A moderate level of potassium and phosphorous (P) is required. Phosphorus is especially important for cell division and foliar applications of potassium nitrate at this stage is said to enhance fruit size and quality (2 kg per 100 litres) especially in lemons which require higher levels of potassium than other varieties. An excess of potassium is undesirable in Satsumas as it can increase acid.

## Pests and Disease Management

Thrips sprays should be applied at 100% petal fall to at risk lemon blocks where historical high KCT levels have been found. They can be combined with an effective fungicide for scab. If there is a history of severe scab use a combination of a systemic (Flint or Nustar) and a protective such as Dithane or Phaltan. If you apply too late after the calyx closes around the fruit the sprays are not as effective especially against KCT. If you apply too early when there are still a lot of petals attached, the pesticide will fall off with the petals leaving the fruitlets unprotected.

### **IMPORTANT NOTE!**

**There have been problems with residues being reported from use of Nustar on fruit in Japan which has a very low tolerance for this compound. Until further notice do not use Nustar after the end of November if exporting to Japan- ie reserve it for the petal fall scab spray application only.**



*“Orchard Out-House Pet of the Month. Crafted with love by David Stokes, Richard Special Grower at Muriwai Gisborne”*



All is ticking along well in the Charlie's world of Juice, Smoothy's and of course fruit. We hope it's ticking along well for you too.

We've been flossing things up around here with the addition of our new Charlie's website. Have you had a look yet? You can sign up for our monthly newsletter and win stuff and just generally have a chuckle.

[www.charlies.co.nz](http://www.charlies.co.nz)

Welcome back to Marc Ellis who has rejoined the Charlie's board. And speaking of Marc, over the last few months, along with good friend Kirsten Matthews, has been writing a book. We think it looks pretty fancy,

Want to see a good movie/doco? The team here highly recommends you go and see **An Inconvenient Truth**. This is Al Gore's documentary on Global Warm-

ing, and the effects that this is having on our environment. It makes for rather enlightening viewing and offers heaps of simple ways to help reduce carbon dioxide emissions into the atmosphere. We are putting the challenge out there to all you

**Zeanews** readers to take the time to go and see this movie. For more info visit <http://www.climatecrisis.net/>



So till next month, bottoms up, here's looking up your kilt and all that stuff.

### Growers Payment Schedule

Period Ending	
31 Oct	16 Nov
15 Nov	1 Dec
30 Nov	18 Dec
15 Dec	3 Jan
31 Dec	16 Jan
15 Jan	1 Feb
31 Jan	16 Feb
15 Feb	1 March
28 Feb	16 March

## Northland Report

Spring is in the air and so are the fresh sou-westers. Warmer than average temperatures and a low rainfall have pushed soil temperatures into the 18 to 20 degrees range with most orchards now irrigating.

**Encores** are the main citrus being picked at this time of year in our area and all orchards in the north are on. Fruit is moving steadily through the market at good grower returns.

The quality has been variable mainly due to en-core rind spot.

**Lemons** are also the other crop being harvested with a pick prior to pruning to remove fruit that have sized and coloured since winter.

**Navels** have finished now apart from the smalls being cleaned up by the hawkers. Those growers with good sized, clean fruit were rewarded with some good returns.

**Richard Specials** are finished now. The season was a slow one to start with high acid levels causing consternation to growers. Fruit quality was very variable even from block to block.

**Satsumas** are coming into full flower and a good flower/leaf ratio is showing up on most orchards. The Spring flush of leaf is nearing 50% so start applying those foliar feeds if required.

**Pest and disease monitoring** will commence when 100% petal drop has occurred. Carolyn is checking in on the orchards in the programme so the monitoring will be underway as soon as this has occurred. Kelly's citrus thrips beware. Three new growers have seen the benefit of using this service from Zeafruit. It's not too late to get your property registered for this valuable tool to increase crop quality. The more tag 1 fruit you as a grower can produce the higher the net returns.

**The Field day** held at Y-Worry Orchard was well attended and focused on evaluating and handling the Spring flush. ANA was discussed at length and pruning techniques on Satsumas, Richards Specials and Encores were demonstrated and discussed. Those who missed on getting the handout or who couldn't attend, Carolyn has extra copies available. A big thank you to Keith and Juan for taking time out from their busy schedules to share their knowledge with us.

Let's hope the fine weather continues for the rest of the flowering period and the bees play their part.

Cheers,  
**Carolyn Price**  
Northern Area  
Manager



## Gisborne Report

### Grower Documentation

We are really getting on top of **Spray Diaries** from Growers, thank you to everyone for ensuring they send in their up to date diaries, as required. This documentation is a very important part of our ongoing Food Safety Program. If you need blank forms or have any queries please give Pete or Mo a call.

### What is happening on the Sunny East Coast or should we say "Snowy" East Coast

**Encore Mandarins** have begun with a hiss and roar for 2006 and we estimate the regions total crop has at least doubled since last season. We have harvesting strategies in place balanced with a good marketing program.

All Encore Growers are encouraged to contact the office for any assistance that they may require for this bumper of a season.

Our **Navel** season is in full swing, but unlike the Encore crop, total regional Navel volume is down this year. We all know what happens when demand exceeds supply, so lets all work together to get the best results for this season. We also have some exciting process programs in place as well. So, give us a call.



**Grapefruit** there is an increase in demand.

If you have fruit please contact our Gisborne Office.

**Meyer Lemon** season is all but over, more likely to be finished by the time this goes to print. Zeafruit extends our appreciation and thanks all Growers who have supported us this season. We look forward to another successful season in 2007. Our **Yen Ben** season has picked up lately so any Growers who need assistance of any nature, please give us a call.

What colour are your **Limes!!!!!!!** Are they Green or Green / Yellow or just Yellow, please let us know as we would be more than happy to have a supply of Limes, whatever the colour.

Our **Tangelo** season is well underway and we have very good marketing programs in place with a just as good processing option. Lets all keep in touch as we progress through this season.

### In the Field

By the time this newsletter goes to print you should have all received our flyer regarding **Flower Pruning**.

Although, the window to have this completed was short please contact us if you need assistance or require an assessment of your trees to be completed if you were unable to attend to this matter.

Best Regards

Pete, Mo, Sharon & Juan

## BOP Report

Another year almost gone, it doesn't seem that long ago it was Xmas.

Plenty of citrus available at the moment being Lemons, Tangelos, Navels, Grapefruit and Encores.

Lemons, relatively light summer crop this year so demand should be good. Export to Aussie about to start. Tangelos, moving into market place at a steady rate.

Navels and Encores are drawing to a close. Grapefruit, there are plenty available due to process options being very limited this year.

A big thankyou to all growers who have supplied Zeafruit, your efforts are very much appreciated.

Thanks, Smithy



Special Xmas edition in December to follow including extracts from Rod Oram's presentation at the Conference and field day photos from Gisborne.

Cheers  
Editor