

CENTRAL DISTRICTS TWIGS

News from Our Branch

2010/2

WINTER 2010

STUNNING "EARTH GEMS"

I recently harvested my "Earth Gems", a South American yam called Ulluco (*Ullucas tuberosus*) and marketed in New Zealand as "Earth Gems". The tubers taste a bit like beetroot, and the small, fleshy, edible foliage looks and tastes like New Zealand spinach. In Peru the leaves are used in salads. Their name Ulluco means "jewels of the earth" in South America, on account of the colour of the waxy-skinned, potato-like tubers. They can be magenta, red, yellow, or yellow or orange spotted with red. Ulluco has a spreading growth habit rather like that of kumera. Cultivation is similar to that for potatoes and yams. Tubers are planted out in November for harvesting in June.

The colours of the tubers are incredibly bright and make it very exciting at harvesting time. Unfortunately most of my tubers were like medium sized marbles, and there were many that were very small. It may be that small tubers could stay in the ground and grow like some Maori potatoes (eg Ureneka), which some people find a nuisance.

A Wanganui botanist (Colin Ogle) looked up the plant and found that it was not in the Family Solanaceae (the potato/tomato/capsicum etc family) as he had expected, but in the family Basellaceae. Colin knows that family for just one species in New Zealand, the terrible weed *Anredera cordifolia*, or Madeira vine. So we will have to be careful that we are not introducing a new weed.

There has also been a study looking at the biological control of Madeira vine, that has found an insect that feeds on the leaves. Therefore if in the future Landcare decide to try and bring this insect into New Zealand, then plantings of Ulluco may also be at risk.



References:

http://thegrower.co.nz/magazine_pdf/2005_2006/2005July.pdf

<http://www.bioone.org/doi/abs/10.4001/1021-3589-15.2.300?journalcode=afen>



Anredera cordifolia, or Madeira vine

NOTE: 26th June - Pruning Demonstration

Refer to the field day information on page 7.

Autumn Foliage

At this time of year it is very uplifting to have one or more trees or plants specifically for their show of Autumn foliage. It is also a wonderful indicator for the change of season and may help us to maintain our own rhythm in harmony with the seasons. Which trees will work best for you and provide the best intensity of colour will depend precisely on where you are in the country. The autumn colour of the trees around Queenstown for instance, is absolutely stunning however there are some excellent trees for us in the Central Districts. Upon my own property in Wanganui I have been delighted by the beauty of this year's foliage. One of my first trees to change colour is the Asimina Triloba (an American deciduous tree that produces a banana-like fruit in summer, and the leaves turn yellow in Autumn, a good ornamental specimen. Next is my Sugar Maple (*Acer saccharum*). My tree also turns yellow, although if you plant multiple trees you can get a wonderful array of colour (yellow to orange). I bought my tree after attending the Nelson Tree Crops conference where we saw stunning foliage colours and I was so impressed by this that I wanted to replicate the effect at home. (Actually I did buy several trees, but one has performed considerably better than the others). This



Asimina Triloba

year I thought my weeping Nyssa (*Nyssa Sylvatica*) with its intense orange foliage has shown the best colour. I planted two trees by my pond, and as I drive off to work in the morning I can see them, and it is uplifting.



Acer Saccharum

This year I put bird netting over my Persimmon tree and one morning I watched 4 blackbirds dance around the netting trying to find a way in. The beautiful orange fruit are still hanging on the branches, gradually ripening, and as they do, providing a stunning and enticing show. The Persimmon leaves also turn an orange colour, but I find the orange of the fruit more appealing. The fruit on my Chinese quince (*Pseudocydonia sinensis*) is still maturing. The fruit becomes very large and is waxy, yellow and aromatic and the leaves will then turn a beautiful orange. But that is some weeks away. As we each become familiar with our trees we look forward to and enjoy the changes that take place, as the seasons change.

Please let us know if you have a tree with particularly nice Autumn foliage, and send us a picture if you can. ■

May the winter be kind to you.



SNAPPED:

Pumpkin Festival at Kaponga's Hollard Gardens

Mark's warty pumpkin took out a top prize at the inaugural Not the Biggest Pumpkin Festival for the Ugliest Pumpkin.

WANTED

SOMEONE WITH A GOOD KNOWLEDGE OF FUNGI (MUSHROOMS ETC)

TO TAKE US ON AN EXPEDITION TO LOOK, IDENTIFY AND COLLECT SPECIMENS.

LET US KNOW IF YOU KNOW OF SOMEONE WE CAN TALK WITH TO ORGANISE THIS.

(see contacts on back page)

Grafted apple trees of

Monty's Surprise & selected Trial Varieties

available this winter at \$10 each
as a fundraiser for our research.

Anyone interested should
contact Mark on 06 3477734
or email appleman@xtra.co.nz
(collection from
Wanganui is preferred)

WANTED:

Sources of **Russet Apple wood** for grafting.
Golden Russet; Merton Russet,
Egremont Russet and other varieties.

Please contact Murray Jones 06 3425787, treelife@farmside.co.nz



PERSIMMON

A persimmon is the edible fruit of a number of species of trees in the genus *Diospyros* in the ebony wood family (Ebenaceae) The word *Diospyros* means “the fruit of the gods” in ancient Greek and is a perennial. The word Persimmon is derived from *puchamin* in the Algonquian language (an American Indian language of the eastern United States) meaning “a dry fruit”

Persimmons are generally light yellow - orange to dark red - orange in colour and depending on the species vary in size from 1.5cm to 9cm diamtere and may be spherical, acorn or pumpkin shaped. Commercially there are generally two types of persimmon fruit: astringent and non astringent. Astrigent persimmons contain veru high levels of soluble tannins and are unpalatable if eaten before ripening. The non astringent persimmon is squat like a tomato and is commonly sold as fuyu. The fuyu is the main variety exported from New Zealand.

Persimmons are a relatively new commercial crop for New Zealand. In 1986 an estimated 5,000 trays were exported which amounts to 20 tonnes. The export industry currently consists of around 40 growers who pack their fruit through 16 packhouses and 7 exporters. Export plantings are spread throughout northern New Zealand, main area being Gisborne

followed by Northland, South Auckland and the Bay of Plenty. At last estimate over 80% of production was thought to be exported. Exports in the 2008 season totalled 333,677 trays or 1330 tonnes, with the top export markets being Thailand, Australia and Malaysia.

New Zealand sweet Persimmons are according to the Persimmon Industry Council, “delicious to eat, delightful to look at and should be eaten when they are firm like an apple, and an even orange / red colour”. In the home, Persimmons are unlike many fruit, as they keep longer if they are at room temperature, in the range of 15C to 25C. Persimmons kept in a fridge will go soft more quickly than if left at room temperature. High in vitamin C, Persimmons have been recommended for a wide range of reasons from hypertension to headaches.

References: Wikipedia
Persimmon Industry Council website



NEW METHODS OF APPLE AND PEAR PRODUCTION

Excerpts from article in FoodFruit, Garden magazine, April 2007, p243-245

STRESS HAS GOT A BAD NAME these days, but I often find that a bit of pressure can prove productive. The same, it seems, is true for apple trees, as a new commercial growing technique, recently introduced to this country from the Netherlands, is proving. Orchards planted using the new system can yield more than twice the weight of quality fruit per hectare compared with conventional methods. According to fruit specialist Will Sibley, who has been instrumental in introducing the technique to the UK, the work leading to this breakthrough was perfected by the Dutch. 'The trees are on a dwarfing rootstock, so they can be planted quite close together,' he says. 'They begin cropping in their first year, and by the third year they can produce around 90–110 apples per tree.' In the Netherlands the first orchards planted in this way are now around 10 years old and have been giving consistent crops, depending on the cultivars grown, of 60–80 tonnes per hectare, compared with around 30–40 tonnes produced by conventional orchards. A particularly high-yielding cultivar such as apple 'Braeburn' can yield as much as 100 tonnes per hectare.

THE TREE TYPE - Success depends upon sourcing the correct type of tree, called a 'leg' tree, or knipboom (literally 'cut tree' in Dutch), grown on a dwarfing, M9 rootstock, with the graft union at least 20cm up the trunk. It is cut back to 70cm above ground the year after grafting, then grown on to produce a young tree about 2m tall with a central leader and several radiating branches at about waist height. Familiar to commercial growers, trees trained in this way are rarely found in garden centres, where aesthetics win over productivity, but they are becoming more widely available through a number of mail-order suppliers in a widening range of cultivars.

CHOOSING APPLES - Will recommends planting several cultivars together to ensure good pollination and fruit set. He suggests a culinary selection (early season 'Grenadier', a good pollinator, or later-cropping 'Bramley's Seedling') and some dessert apples, such as a hardy derivative of high-yielding, late-

ripening 'Braeburn', early 'Laxton's Fortune' and tasty, disease-resistant newer cultivars such as 'Red Falstaff', 'Pinova' and 'Meridian'. Fruit machines Promising higher yields from smaller plots, a new growing technique could revolutionise the way we grow apples. Simon Garbutt gets his teeth into the details.

Will Sibley (right) points out the graft on a 'leg' tree: at 20cm it is higher than a traditional one. Shallowly planted, on an M9 dwarfing rootstock, this type of tree is essential for the new system to succeed, as all these factors help to curb vegetative growth in favour of fruit.



WILL'S SUGGESTED APPLE CULTIVARS

'Braeburn' A highly popular 'supermarket' apple. Hardy derivatives such as 'Hillwell' and 'Braeburn Helena' are suitable for most of the UK. Dessert; self-fertile; store fruit for use in Jan-Mar

'Bramley's Seedling' Culinary; self-sterile; Nov-Mar

'Charles Ross' Handsome, traditional, dual-purpose (culinary/dessert) fruit; partially self-fertile; Sep-Dec

'Discovery' One of the best early-maturing dessert apples; self-sterile; Aug-Sep

'Egremont Russet' The best-known and most popular of the russet apples. Distinctive, rich, nutty flavour. Dessert; partially self-fertile; Oct-Dec

'Ellison's Orange' Intensely aromatic cultivar, similar to 'Cox's Orange Pippin', for which it makes a good alternative in northern Britain. Dessert;

partially self-fertile; Sep-Oct

'Grenadier' The best-known early-season cooking apple. Culinary; partially self-fertile; Aug-Sep

'Meridian' Dessert; self-sterile; Oct-Mar

'Pinova' Disease-resistant, late dessert apple. Good flavour; self-sterile; Nov-Jan

'Red Falstaff' A crisp, juicy, heavy cropping, colourful, dessert apple; partially self-fertile; Oct-Dec

'Laxton's Fortune' Red-flushed, early season dessert apple; partially self-fertile; Sep-Oct

'Winston' Dessert; self-fertile; Dec-Apr

For those who prefer historic dessert cultivars that rarely appear in the supermarket he recommends trying 'Egremont Russet', 'Ellison's Orange' (a good alternative to 'Cox's Orange Pippin' for northern Britain), early-cropping 'Discovery' and late-season 'Winston'. Dual-purpose 'Charles Ross' is another good pollinator. The technique works with tip-bearing and spur-bearing cultivars, and should also overcome any tendency to biennial bearing. Local knowledge can be helpful in choosing which cultivars to grow. In the coldest parts of the country, or on more exposed sites, certain popular cultivars will survive but may not crop well. Even in mild districts, early blossom can be damaged by frost, so try to avoid 'frost pockets' where cold air collects, and choose a fairly open site that is sunny but reasonably sheltered. Remember it is vital to start by getting the correctly grafted and trained type of 'leg' tree from a specialist fruit nursery. These will be dispatched as bare-root stock when dormant in early spring, having been kept in cold storage, and will usually be more expensive than traditionally-trained apples.

WHERE AND HOW TO PLANT - Apples are not too fussy about soil type; extremes of acidity and alkalinity are unsuitable, and dry, sandy conditions are best avoided, but any other reasonably good soil will do. Prepare the planting site well. No fertiliser is needed at this stage, but dig in organic matter such as garden compost or spent mushroom compost to help retain moisture and improve structure. Because M9 rootstocks are so dwarfing, and the trees will be planted shallowly, they need support throughout

their lives, so each will remain fixed to a permanent stake. Put a stout post at each end of the row (and at 3m intervals in the row, if required), which should ideally run north-south so maximum sunlight can reach both sides of the trees. Stretch strong wires between the posts at 1m, 1.5m and 2m heights. Space rows 3m apart, if more than one is required. Plant the bare-root trees between February and April. They will have been kept in cold storage since November to initiate bud growth. Soak the roots overnight in a bucket of water. Space the required number of 2m high stakes about 80cm-1m apart and plant a tree next to each. Plant shallowly, spreading the roots out across the soil and pulling loose earth over them, as if earthing up potatoes. Firm well. The graft union should be at least 20cm above the soil. Tie the trees in, taking the leader straight up the stake and tie the lowest branch on each side horizontally to the bottom wire. Water well. For good crops these shallow-rooted trees will need watering throughout the growing season. Commercial growers use irrigation systems that deliver liquid feed, but on a garden scale both water and feed can be given from a can. The rows must be kept weed-free by shallow hoeing, or apply a thick mulch layer to moist soil in summer.

TRAINING AND PRUNING - In their first year the trees should not need pruning. Allow them to set up to four fruit each (but no more than one fruit per branch), as this helps ensure that they do not make too much extension growth. In the second year each tree can be allowed to produce up to 40 apples (pick off any excess young fruits in early summer). From the third year onwards they

Pruning technique



1 Prune in winter Restrict the number of branches to eight or nine. Remove those thicker than half the diameter of the trunk (above), and any sharply upward-growing limbs and shoots, close to their bases



2 Thin the crown hard Above the 1.5m wire all sideshoots not ending in a flower bud should be cut out, leaving only short spurs with fat fruit buds



3 Leave the leader intact Removing branches near the crown ensures that maximum light reaches the lower branches. Will Sibley has let the shoot indicated remain because it ends in a fruit bud

NZTCA Website: <http://www.trecrops.org.nz>

**Central Tree Crops Research Trust website:
<http://www.trecropsresearch.org>**

New Zealand Tree Crops Association

CENTRAL DISTRICTS

TWIGS



OFFICERS 2009 - 2010

- Chairman and Treasurer:** Mark Christensen, 19 Downes Avenue, Wanganui
Phone 06 347 7734 Fax 06 349 0879 Email: appleman@xtra.co.nz
- Secretary:** Murray Woodhouse, 23 Bombay St, Aramoho, Wanganui
Ph 06 343 7266 Email: murrayw@proaxiom.co.nz
- Newsletter Editor:** Hinemoa Ransom-Boyd, 3 Pickwick Rd, RD 1, Wanganui
Phone/Fax 06 348 4547 Email: edhine@xtra.co.nz
- Committee Members:** Diana Loader, Rangitatau East Road, Kai Iwi, Wanganui
Ph 06 342 9770 Email: nuts-may@ihug.co.nz
- Hew McKellar, PO Box 1, Hunterville Ph 06 327 7876 Email: hew.suse@airstream.net.nz
- Peter Winter, 833 Richmond Rd, RD 3, New Plymouth, Ph 06 752 0167 Email: pwinter@xnet.co.nz
- Kim Ballantyne, 991 Parewanui Road, RD1 Bulls . Ph 06 3221310 Email: k.e.ballantyne@gmail.com
- Ian Harding, 13 Davey Road RD 2 WOODVILLE, 06 376 5707, ikharding@inspire.net.nz
- Research Officer:** Murray Jones, Papaiti Road, Wanganui, Ph 06 3425787 Email: sureunion@xtra.co.nz
- Hazelnut Group Coordinator:** Bill Pomroy, Scotts Rd, RD 4, Palmerston North
Ph 06 325 8943, Cell 025 540 854 Email: w.pomroy@massey.ac.nz

*If undelivered, please return to:
Editor: Hinemoa Ransom-Boyd
3 Pickwick Rd, RD 1, Wanganui*

**NEXT FIELD DAY
26th June 2010**

NZTCA Website: <http://www.trecrops.org.nz>

**Central Tree Crops Research Trust website:
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