

# NEWSLETTER



OCTOBER 2016



## SPRING TIME

Thank-you to our hosts, Clive Marsh and Heather North, and our guest speaker, John McKendry, for sharing with us their invaluable knowledge and thoughts at our **Orchard Management Field Day** held last month.

For those of you who were unable to attend the recent field day, or like myself a tad slow at note taking, Clive and Heather have kindly provided the following article on **Walnut Blight Management**. I am sure you will find this extremely informative given our wet start to spring!

## REMINDER

**2016/17 NZWIG Membership Fees are now DUE**

Annual Membership Fee	\$100
Second Person per Orchard (wishing to be a personal member)	\$20

We prefer to receive payment of membership fees via online banking. NZWIG's Bank Account Details with Westpac are as follows:

**03-0767-0439959-00**

Please ensure you provide your 'surname' as a reference.

Any queries, please contact Anna Brenmuhl ☎: [treasurer@walnuts.org.nz](mailto:treasurer@walnuts.org.nz)

## WALNUT BLIGHT MANAGEMENT

*Field Day follow-up Article by Clive Marsh & Heather North – Lightfoot Walnuts*

Now is the time of year for growers to start our spray programmes to manage walnut blight: it is important to start at budburst for each variety otherwise blight can get away on us.

NZWIG studied blight management from 2001 to 2007 in collaboration with Lincoln University, HortResearch, horticulture experts and walnut growers from Tasmania. The key findings were that unsprayed trees (of susceptible varieties like Meyric) could lose over 50% of their crop to blight, compared to only 10% loss with best practice spraying – unless the season is abnormally dry. Early October to mid-December is the critical period. You need to be ahead of the game with your spraying – if you wait until symptoms are seen or even until rain has happened then spraying can't recover the losses that will have occurred. The research project found that Mankocide was the most effective spray type. The active ingredients in Mankocide are Copper Hydroxide and Mancozeb (which belongs to the dithiocarbamate class of compounds). Any spray programmes relying on sprays that do not include copper were found to be totally ineffective. Spray

programmes that relied on copper alone (no dithiocarbamate) – including all that are permitted for certified organics – had some effectiveness but were inferior to Mankocide. Spraying should start at bud-burst and can stop by Christmas. Trees should be sprayed to the point of run-off.

So to 2016: in the past two years we had fairly dry blight seasons (early October to mid-December period) when blight has not been a major issue and growers who did not spray will not have lost very much and those that did may think they wasted money. However, we should remind ourselves of the big picture and be prepared for spraying as there is no reason to suspect this season will be so 'kind'.

For our orchard, we developed a spray program based on the findings from the NZWIG research project. The only difference is that we have substituted a mix of Blue Shield (a Copper Hydroxide product) and Dithane Rainshield (a mancozeb product) rather than using Mankocide. Our mix has the same active ingredients but it is half the cost to use the two components compared to Mankocide. So our spray

### ***Walnut Blight Management continued...***

mix is 200g Blue Shield + 67g Dithane Rainshield per 100 litres of water (this is equivalent to 333g Mankocide per 100 litres).

We apply the first spray when about 50% of the terminal buds are open (can just see juvenile leaves protruding). The date when this happens is different for different cultivars – typically 21 September for Serr and Dublin's Glory, 28 September for Meyric and 6 October for Rex. During the budburst period we then spray every 7 to 10 days depending on the weather. In the

past three seasons we have put on three budburst sprays for the Meyric and two for the Rex.

For our in-season sprays, from about the start of November (once the trees are in full leaf), we try to work to the weather. If we see rain coming, we'll try to spray before it arrives, and after rain we'll shorten the return time. We also react to temperature – if it is cold then blight development is slow and our between-spray-interval can be longer than if it is warm. The worst conditions for blight are warm rain which we can sometimes get from low pressure systems off the East coast of

the North Island. In the last three years our in-season sprays have been two for Rex and three for Meyric. However in a warm humid year we would spray more often, with a shorter interval it is warm and wet, and longer if it is dry and cold.

At bud burst we run our air blast sprayer with just a few nozzles open, and for later sprays we open more nozzles to achieve full coverage of the leaves and developing walnuts.

*For growers wanting more advice on blight management, John McKendry 022 094 2618 offers a commercial advisory service.*

## CERTIFIED ORGANIC OR CONVENTIONAL WALNUTS

*Article by John McKendry*

*John McKendry is an agronomist and the owner of AgNutri Consulting based in Canterbury. John has over 20 years experience in the horticulture industry, including more than 10 years in the horticulture service industry advising growers and assisting them with selecting and applying inputs.*

This article is written with the intention of stimulating discussion around the pros and cons of conventional vs organic production systems for walnuts. The following thoughts and opinions are based on my almost 30 years of experience working in the horticultural industry. I have outlined what I believe are four key areas to consider when contemplating which production system will provide the best fit with your business plan. These key areas follow in what I believe to be order of priority or importance.

### **(1) Market**

The purpose of any business is to be profitable. The nature of walnut production suggests that this should be a long term strategy. The first component of profitability would be knowing your cost of production – if there is a premium return from certified organic produce, is this enough to offset any increase in cost of production? A consistent market with steady growth potential is also an important requirement. Will the product be marketed locally or overseas? Currently there is strong growth in demand for organic produce in Europe and major cities in the USA. This is very much population driven – does New Zealand have a big enough population to sustain growth in demand for organic product, if you choose to supply the local market? Past trends suggest that in New Zealand our production can increase to meet

demand quite quickly, with a consequent rapid erosion of return. If exporting, one potential pitfall is, can your supply meet demand and keep up with market growth? Another is that large overseas markets will sometimes use production standards as a type of trade barrier. An example of this is the attempt to exclude the use of tanalised posts in viticulture. This move would have kept New Zealand organic wine out of the USA market unless we removed timber posts and replaced them with steel posts, as they use in the States. As a small producer in a small country a long way from market, we do not have much lobbying power. On the positive side good branding with a great story to tell is still “King” of marketing strategies for food products, organic certification could be a very positive part of this and there is no doubt that differentiating your product in a positive way will secure good long term sales and growth. I believe that

### ***Certified Organic or Conventional Walnuts continued...***

two of the greatest strengths you have are, control of your own marketing and your own processing operation. The latter giving you the opportunity to “value add” where appropriate or “tailor” your product for a specific target market.

## **(2) Suitability**

The consideration here is land suitability. I suggest that the very first thing to be done is a soil Multi Residue Test. If residue of agrichemical is found above a specific level, your organic certifier may require you to have extra transition time (with retesting) or in very rare cases deem the property unsuitable for organic production. This test is able to be combined with a nutrient soil test, I recommend fairly comprehensive testing here. It is much easier to correct known deficiencies prior to organic certification - and a lot cheaper. It is wise to take this opportunity to balance and optimise soil nutrients, if it fits your financial budgeting.

Finally ensure that you are able to adequately manage any growing problems on your property adequately. If you are in an area subject to frost loses or pest and disease pressure, you need to carefully consider if you are able to continue to mitigate these in a certified organic system. The bottom line I guess is that if all else fails you can easily go back to conventional production in an emergency.

## **(3) Products**

Internationally there are a huge number

of organic certified products for use in organic systems, and certification standards are becoming much more unified across the globe. Unfortunately for New Zealand though, being such a small market, even for conventional products, registration and certification is very limited. There are however a few key products we can use to “get by” for producing walnuts organically in New Zealand. Nitrogen has always been the biggest limitation for organics, but we do now have some options in New Zealand for certified nitrogen inputs. A comparison of costs suggests that basic solid fertiliser products are approximately 1.5x the cost of conventional when organically certified. More specialized solids – 2x the cost, and foliar and bio-stimulants are available at an overall similar cost. I can see that composting could be a key component in organic systems, to be sustainable and to help manage input costs. It would however require a substantial amount of time and some extra machinery.

## **(4) Productivity**

The big question I see, relating to the actual growing of walnuts in New Zealand – Conventional vs Organic is:

*“If organic certified product attracts a premium return after any increased production costs – will this also offset the anticipated potential loss of yield?”*

Parts of New Zealand, in my experience, are some of the more challenging environments in the world to grow horticultural crops – they are unique. One aspect of organic production that may prove difficult, is the ability to “steer” the trees through production robbing scenarios like frost,

hot dry summers and our “hot day – cold wind - temperature rollercoaster” examples. In recent years we have had pretty good growing conditions with little pressure from frost, pest or disease. This may not always be the case. The other potential production robber could be enforcement of the organic certifier’s “Reducing Input” policy. You will get permission to use “restricted” inputs for one or two seasons, but after this you will be expected to reduce or eliminate your reliance on the input. A serious potential problem for items like boron or nitrogen, blight sprays etc. At this early stage I think we have only started to explore ways to improve productivity in the conventional system. You could therefore, say there is maybe not much to lose by going to organic production, conversely there may be a lot to gain by staying conventional. I still believe that either way you get out what you put in. Do not dismiss the other options available, for example a “certified zero residue” product. This would give you “the best of both worlds” if you can use in-house marketing to its best advantage.

I expect this article stimulates some healthy discussion and research. I also hope my collection of thoughts gives you some better understanding of a few of the practical issues around this choice between different production systems. I look forward to working alongside your industry whichever choice you make. I am sure you will have some questions and I am more than happy to answer them.



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