

Newsletter 04

Roundup & Roundup-Ready crops Silver Bullet or Trojan Horse?



Part 1: Roundup or glyphosate; the all-purpose, low toxicity, short-lived herbicide; safe for soil, stock and family; the most useful time, energy and money-saver ever invented for wide-spectrum weed control and spraying-out pasture. But is it all it's claimed to be? Is it as harmless as they say, and do the toxic effects really disappear once it's done its job? Sprayed onto Roundup-Ready (RR) genetically modified (GM) crops like corn, canola, soy, sugar beet, cotton and now lucerne overseas, has it given the promised efficiencies, yield increases, reduced pesticide inputs? And are these crops safe for stock or humans to consume? It's been around for decades now and currently 86-95% of the above crops are genetically modified (or 'Roundup-ready') in the USA. This article in two parts presents some scary statistics emerging from the increasing global use of this herbicide and GM, RR crops.

Firstly there's no denying that glyphosate has revolutionised weed control and farming efficiency, saving cultivation, energy, time and cost to get that crop in, harvested and the land regrassed. But at what cost to soil, stock and human health? We all reside at the top of a food chain that starts at the soil level.

Actually, Roundup is a seriously toxic chemical, systemically mobile in plants and excreted from roots with toxic effects on beneficial microbes active in the root zone. The surfactant used in Roundup to increase uptake is more acutely toxic than glyphosate alone and their combination is more toxic still. Roundup is carcinogenic to laboratory animals, being classified by the American Environmental Protection Agency (EPA) as a Class III toxic substance, with as little as 30 grams (one teaspoon) able to kill an adult human. Glyphosate contamination has been linked to human hormonal disorders, lymphoma (cancer of lymphatic system), DNA damage, endocrine disease (hormonal disruption), skin cancer, kidney damage and liver damage. Glyphosate is labelled "extremely persistent" by the EPA, with a half-life of over 100 days measured in field tests (ie, lasts 200 days). The numerous 'inert' ingredients found in many glyphosate formulations are also toxic to humans. It is a worse toxin than DDT according to Dr Don Huber who researched it for many years while working for Monsanto.

Continued on page 2 >

Inside this issue:

- Pg 1 Roundup ready crops
- Pg 3 Fertilise or not?
- Pg 3 New products
- Pg 4 Organic vs Conventional
- Pg 5 Vietnam: Right a wrong
- Pg 6 Pesticides on our food



**SAVE
50%
ON YOUR
NITROGEN BILL**

**Add EF Humates
@ 5% and reduce your
Nitrogen applications**

Roundup & Roundup-ready crops contined...

Glyphosate is found in streams and ground water following agricultural, urban, and forestry applications, polluting drinking water supplies. RR crops release glyphosate and toxic metabolites from the roots into the soil, affecting beneficial soil microbes and chelating (removing or locking-up) nutrient cations vital for plants and animals. In a Spanish survey, 57 of 140 groundwater samples were detectable. This means that glyphosate does not break down rapidly as claimed, and ends up in water supplies.

Research published in August 2010 showed that Roundup causes malformation in frog and chicken embryos at doses much lower than those used in agricultural spraying. The malformations were affecting the skull, face, midline, and developing brain and spinal cord. This study was prompted by reports of high rates of human birth defects in areas of Argentina dedicated to growing RR GM soybean. These birth defects were similar to those found in the animal study above.

In the EU the maximum residue limit (MRL) allowed for glyphosate in food and feed products is 20 mg/kg. Soybeans have been found to contain glyphosate residues at levels up to 17mg/kg, while the malformations found in frog and chicken embryos above were injected with only 2.03 mg/kg glyphosate – ten times lower than the MRL. Roundup (glyphosate) therefore does not have insignificant toxicity. It can seriously affect human development. In studies of people (mostly farmers) exposed to glyphosate herbicides, exposure was associated with increased risk of miscarriages, premature birth, and non-Hodgkin's lymphoma.

It is important to note that GM RR soy and other crops are tolerant rather than resistant to glyphosate: that is, they absorb the herbicide and survive. As a result, GM RR crops are a reservoir of high levels of glyphosate, which is ingested by the animals or humans eating the crop.

So here's a double whammy. Firstly you risk your health being exposed to residues or drinking contaminated water or eating GM ingredients; secondly you consume glyphosate and its metabolites directly when you consume any RR GM food crop (or processed by-product) or any animal product from stock that are fed GM feed crops.

This is a dangerous development from its use to just kill weeds not consumed by humans or livestock. Most processed foods in supermarkets contain soy, canola, or corn ingredients in one form or another (eg soybean or canola oil, high fructose corn syrup etc), and imported ingredients cannot be guaranteed free of genetic modification. This is because NZ food labels neither indicate their source nor GM status so it's a form of Russian Roulette when you buy any processed food in NZ. Even some gluten-free baked foods contain soy or canola oil so you can't guarantee freedom from GM ingredients when consuming commercially baked bread, biscuits, cookies and pastries. This is very important because GM foods have been shown to be toxic to laboratory animals fed on them. Remember laboratory animals are used to predict what will happen in humans.

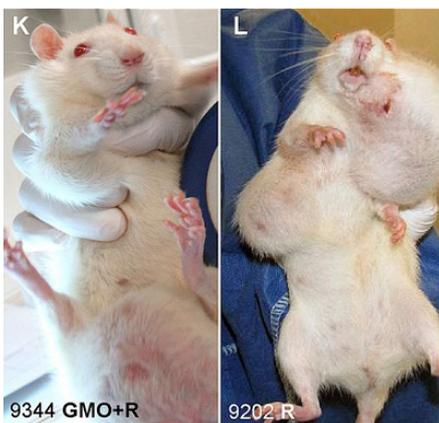
Surveys of pesticides in human blood and urine in rural areas of the USA show a much higher pesticide burden in farm workers and their families than in urban populations; especially children, with some chemicals being detected at levels well above that considered safe for children and potentially able to adversely affect

development. The spread of GM RR crops has led to massive increases in the amount of glyphosate sprayed in soy-producing areas. In Brazil, nearly 90,000 tons of glyphosate-based pesticides in 71 different commercial formulations were sold in 2009. In Argentina, over half the cultivated land is given over to GM soy, which is sprayed with 200 million litres of glyphosate herbicide each year, much of it from the air.

In New Zealand we (officially) don't have GM crops (yet). But glyphosate is widely used on farms for spraying out pasture, and for weed control in horticulture, amenity horticulture and home gardens. It's not the harmless herbicide it's made out to be, and you and your children and future generations will be the losers with its widespread use and availability. Forty years on, Vietnamese families are still affected by the extensive deforestation carried out by American forces with agent orange (2,4-D and 2,4,5-T, supplied by Ivon Watkins Dow, New Plymouth), and vast areas are still closed to agriculture due to severe soil contamination.

Currently, Monsanto and other pro-GM interests are strongly promoting the introduction of GM crops into NZ in talks with Government, researchers and industry around the country. If we value the health of our children and grandchildren, let alone NZ's clean green image, this development must be vigorously opposed at all levels, as once introduced, GM crops are here for good and impossible to contain or remove. Australian experience with GM crops has already proved a horror story for farmers and communities trying to remain GM free. I don't vote for the Greens but check out the Green Party website for the Australian experience with GM crops.

Part 2 of this Roundup story will be completed in our next newsletter. Stay tuned.



Breaking news!

French study just published. Rats continuously fed GM corn plus trace amounts of Roundup (Glyphosate) herbicide for 4-7 months developed horrifying tumors as shown, widespread organ damage (especially liver and kidney) and premature death. This indicates the potential human health risks we take by allowing GM crops into NZ.

To fertilise or not to fertilise?

This is a crucial question facing farmers at the beginning of the current milking season with increasing environmental costs (effluent upgrades), nitrogen budgeting, no money in the bank and a reduced milk pay-out.

Many will be thinking: delay fertiliser inputs until the situation is clearer, say autumn time. We do appreciate your position and sympathise, but consider the facts. Soil is your biggest asset, no question. Farm productivity depends on how much pasture, crops, milk or meat your soil will produce each year. Soil productivity is the engine driving your business and soil health is business health. Stock health, pasture and crop health, yields and farming profit depend on how productive your soil is. If your soil is going backward so will your production, business and profits. It's a no-brainer.

The second question: should I just go for the cheapest fertiliser option to keep things ticking along? Well, there is a saying 'you get what you pay for'. The current fertiliser model promoted by science and industry for 80 years has left a legacy of depleted soil carbon upon which soil productivity depends, plus loads of farming problems to contend with. We apply increasing amounts of N fertiliser today just to maintain previous production levels; we are spending huge amounts on supplements, effluent management, vet bills, weed & pest control, animal parasites and metabolic disease. Our soils and pastures cannot support the increasing cow numbers per ha because soil structure/health pasture quality is compromised. It's a no-brainer that looking after your soil's health is the best investment you can make on the farm and the last you should economise on since most farming problems start in the soil.

My recommendation is: continue to monitor soil health with at least a Reams test and pasture analysis this spring to ensure soil and pasture nutrition is balanced and able to provide quality feed for milking cows plus silage making. If you are comparing relative cost per unit of NPK etc from chemical versus biological mixes, consider this.

You are not 'comparing apples with apples' because of the microbial enhancement biological mixes produce. Soil microbes, eg, free-living nitrogen-fixers, phosphate-solubilisers and mycorrhizal fungi feed plants, sequester atmospheric carbon and build soil humus. Biological mixes house, protect and feed beneficial microbes and safely store plant-available nutrients not subject to leaching. This is important for nitrogen-fixing bacteria and the myriad other beneficials in your soil. Conversely, soluble, acid-based fertilisers destroy soil microbes, readily leach and degrade the soil environment. For example, soluble N inputs over time deplete soil carbon/humus levels, leach and acidify soil. Beneficial soil microbes are crucial to soil health and productivity and must be protected.

The benefits of biological mixes far exceed the actual units of NPK applied and are sustainable inputs in the long term. Therefore comparing only relative cost per NPK unit is invalid as it doesn't reflect the true benefits of biological mixes. As the saying goes, 'you get what you pay for'.

Invest in your most valuable asset and reduce the collateral damage poor soil fertility produces.

New Products for growers

EF ACTIVATED CARBON

This is a highly refined form of structural Carbon for growers to apply to their soil. Unlike Humic Acid which may have a life span of 300years in the soil this product lasts in excess of 3000yrs. So it replaces vital carbon being lost at the rate of 1000kg/ha/yr on conventional [chemical] run systems.

The trials I conducted this year [last 8 months] has the following benefits.

Enhanced dry matter production; using a pasture probe to measure DM these trial paddocks have grown between 20-30% faster than the untreated biological paddocks. One amazing thing that I have observed is the red clover has continued to grow all winter and flowered well into the winter months, on a paddock being freshly grazed off [19/09/2012 - 4200 kg DM/ha]; the red clover is flowering in this paddock.

At application rates above 200 ltrs/ha, there appears to be a stabilization of soil-nitrogen levels, this can simply be explained by increasing the carbon levels in the soil, nitrogen is raised due to the stabilization of a Carbon: Nitrogen ratio of 10:1 [which occurs in Nature].

EF CAL-PHOS

Used in conjunction with EF Activated Carbon [liquid], this appears to provide exceptional quantities of plant available Calcium and Phosphorus along with a trace of trace minerals. Once again because of the unique manufacturing process that creates a huge surface area for reactions, a lot less of this material needs to be applied to get the results.

COMBO-12

This amazing biological product contains 12 species of beneficial microbes which offer a range of biological controls -

Bio-Fungicides

Bio-Pesticides

Bio-Nematocides

This is inoculated into all of our customised solid fertilizer mixes, but can also be purchased for adding into both foliar and solid fertilisers.

It comes in an easily mixed wettable powder form.

GRASS GRUB - BIOLOGICAL CONTROL AGENT

We have just secured the rights to a biological grass grub control agent and with addition of two other bio-pesticides we believe this product will replace the use of dangerous pesticides like malathion, diazinon, etc.

So if you are plagued with grass grub give us a call and we can add it to your fertiliser mix when dispatched.



Organic Food vs Conventional Food: What the Stanford Study Missed

The recent report out of Stanford that organic foods may not be much healthier or more nutritious than their conventional counterparts has caused quite a stir.

Upon further investigation of the study, it is apparent that the researchers failed to report some key information.

If you've read some of the recent mainstream news headlines, you might be shocked to see some that say things like, "Organic foods no healthier than conventional foods" or "Organic foods may not be healthier for you."

The problem with these headlines is that they are downright false. The study that the media are quoting actually confirms that organic foods are far healthier for you than conventional foods.

So how is the mainstream media lying about this? By fudging the facts, of course.

For starters, the "study" isn't even a study. It was just a review of other studies. No new laboratory analysis was done whatsoever! The "review" was conducted at Stanford University and published in the Annals of Internal Medicine. You can read the abstract here:

www.annals.org/article.aspx?articleid=1355685

As the study itself concludes:

- Exposure to chemical pesticides was significantly lower in organic foods (roughly 30% less than conventional foods).
- Exposure to "superbugs" in meat (antibiotic-resistant bacteria) was also significantly lower in organic foods (roughly a 33% risk difference).
- The study conclusion says, right out, that "Consumption of organic foods may reduce exposure to pesticide residues and antibiotic-resistant bacteria."



HOW THE MEDIA LIED

Somehow, the mainstream media took this study and then lied to their readers, claiming organic food is "no different" than conventional food. That is a flat-out lie because it fails to mention all the following:

- GMOs are not allowed in organic foods. So GMO exposure is significantly higher in conventional foods, where GMOs are commonplace.
- Artificial chemical sweeteners are not allowed in organic foods. But conventional foods are often sweetened with toxic chemicals such as aspartame or saccharin.
- The study completely failed to look at the use of genetically-modified bovine growth hormones (rBGH) in conventional milk versus organic milk.
- The environmental impact of conventional food production is devastating to the planet. Chemical pesticides aren't just found in the crops; they also run off into the streams, rivers and oceans.

No mainstream media article that covered this story even bothered to mention this hugely important issue -- it's one of the primary reasons to buy organic!

Also worth mentioning is that the funding source of the study is listed as "None." Does anybody really believe that? All these scientists supposedly volunteered their time and don't get paid to engage in scientific endeavors? It's absurd. The money for the study had to come from somewhere, and the fact that the Annals of Internal Medicine is hiding the source by listing "none" is just further evidence of scientific wrongdoing.

Source Link: www.naturalnews.com/037065_organic_foods_mainstream_media_psyop.html

New team member



Rachel Sorley New Technical Sales Consultant

Meet our latest addition to the Environmental Fertilisers Team. Rachel Sorley has joined the Technical Sales Advisory team at EF with Grant Paton and Greg Tate. She comes with a Bachelor of Science, a Masters in Science and Technology with 1st class honours from Waikato University, 7 years experience with greenhouse gas mitigation in Australia and a passion for biological farming and permaculture as the way to conserve and grow soil carbon and reduce greenhouse gases. She has also worked with several NZ Research Institutes on various related projects. She is married, with two boys, and lives on a farm at Dickey Flat, Waitawheta, successfully applying biological farming techniques, so comes to EF well prepared. We are delighted to have her on board.

Ring our sales team for this seasons new products and specials!

0800 867 6737

Vietnam

We have an obligation to Right a Wrong

Bibs and myself decided to go to Vietnam for a business trip in early August, the objective was to see what products we could source that we could then sell back in New Zealand.

After settling in at The Grand Hotel, Ho Chi Minh City, we then went for a night boat cruise up a river where we were treated like royalty- an array of superbly tasting entrees and a main meal of seafood and fresh herbs [with the occasional B52 chaser].

The next day our tour guide [Moon] and driver [Vu], took us for a trip to the Me Kong Delta, to visit some potential clients and manufacturers, and on our way I noticed large pockets of land fenced off and asking why this so called flat productive looking land was not being used, Moon soon explained it was still contaminated with Agent Orange from the war with America, so after a long day in some extreme heat we ended back at the Grand Hotel for dinner [another delightful meal of fresh herbs and seafood].

The next day we visited the war museum and it was this day that turned my stomach. I wondered why Moon said she would meet us outside after we had visited level 2 of the museum.

The photographs that I witnessed made me physically ill, and it was from this point on I [as a NZer by default] was going to do something about what we as a Nation had done to these people.



I knew we had manufactured Agent Orange and supplied it to the Americans to spray over the Vietnamese people and country side, even though we had signed an international treaty stating we would not supply chemicals for warfare, which our Government still denies to this day.

I made a decision to support these people and do our thing to help right a wrong. I was asked by one of the young Vietnamese business men we are now dealing with; he said "You know you can buy this cheaper from China! Why do you want to buy it from us?" It was at this time I had to tell him the truth about NZ's involvement with the American war. After this explanation he bowed his head and said "you are a very honest man and this will help our people very much" So the deal was done and we are presently bringing a number of products from Vietnam to NZ now.

I also had the fortune to spend a day with a group of organic farmers [120] in Hoi An, where they grow and supply a range of fresh vegetables and herbs to the local town [pop 300 000]

The farmer in the photo is 70yrs old and works from 3 am till 7 pm, 7 days a week. They have no machinery and all cultivation, planting and watering is done by hand. They only make approx. \$US300-400 /month. But their family structure and happiness leaves us westerners to shame. There is no aggression and everyone just gets on with life.

After a day here with my guide Vu, I decided to take the Vietnamese on, on the roads, so for the next few days we drove around on a hired scooter which was a hell of an experience. Have you ever come to a 4 way intersection and there are no traffic lights and somehow 20-40 scooters all get through this intersection without an incident.

So the experience we had in Vietnam for the short period we were there was incredible. And New Zealand is known for its great tasting ice cream in Vietnam. I cant wait to get some organic/biological ice cream over there for them to try.

I am going back next year to help set a program where we start to detoxify these soils and make the soil healthy so these people can reuse their land.

We will be formally requesting assistance from the government to do this. I have no doubt what their response will be, but they don't know me, so watch this space !

But by you supporting our company here in NZ we hope to achieve 2 things, provide a range of cheap products from Vietnam and also to help the Vietnamese people gain their soil health back.

After all, your wealth is in your health which is in your soil.



Pesticides on our food

The EWG (environmental working group) cleverly calls the 12 fruits and vegetables listed below the “dirty dozen” due to their high levels of pesticides, when compared to other produce.

The Dirty Dozen

1. Apples
2. Celery
3. Strawberries
4. Peaches
5. Spinach
6. Nectarines
7. Grapes
8. Sweet bell peppers
9. Potatoes
10. Blueberries
11. Lettuce
12. Kale/collard greens

If possible, purchase these foods as organic produce.



This next group of 15 products are known by the EWG as the “clean 15”. They are the lowest in toxic pesticides, so if you’re going to buy non-organic produce, these would be the ones to buy.

The Clean 15

1. Onions
2. Sweet corn
3. Pineapples
4. Avocado
5. Asparagus
6. Sweet peas
7. Mangoes
8. Eggplant
9. Cantaloupe
10. Kiwi
11. Cabbage
12. Watermelon
13. Sweet potatoes
14. Grapefruit
15. Mushrooms



Consuming foods from the clean 15 will lower your pesticide exposure a whopping 92% when compared with the dirty dozen. By choosing five fruits and vegetables a day from the clean 15 list you’ll consume fewer than two pesticides per day, whereas consuming five fruits and vegetables a day from the dirty dozen will cause you to ingest as many as 14 different pesticides every day.

What is this information based on?

This information is based on an analysis of 51,000 tests for pesticides conducted from 2001-2009 by the USDA and the FDA on 53 popular fruits and vegetables. The produce in the tests were rinsed and peeled so that they would simulate the conditions in which they are normally consumed.

How bad are pesticides?

We don’t have enough data on long-term pesticide exposure on humans, but it is likely that Americans are polluted with far more pesticides than current studies report. Not surprisingly, pesticide manufacturers and the companies that use the pesticides claim there is no link between pesticide exposure and health risks. It’s this type of false claim that should make Americans question exactly how dangerous pesticides are and the possible long-term health effects of them. Pesticides are designed to kill living organisms. With that in mind we should all make an effort to purchase the “Dirty Dozen” products from the organic section.

Sources for this article include:

www.ewg.org/foodnews/list/

www.eartheasy.com/eat_pesticides_produce

www.abcnews.go.com

Our Goal

To maintain and grow your soil health & productivity, pasture & crop yields & profitability by supplying fertilizers producing mineral-dense feed/food.

Our Motto

Healthy soil, healthy pasture/crops, healthy animals, healthy consumers.



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