

**Show Transcript
Deconstructing Dinner
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**Producer / Host: Jon Steinman
Transcript: Mike Hesla / Sarah Sherman**

Jon Steinman: Welcome to another episode of Deconstructing Dinner – a syndicated weekly one-hour radio show and Podcast produced at Kootenay Co-op Radio CJLY in Nelson, British Columbia. I'm Jon Steinman, and today sees the launch of a new ongoing series that will somewhat takeoff from where the last episode of our Chemical Food series left off back in November 2006. It was during that show that we received a Primer on Pesticides from Charles Benbrook of the Oregon-based Organic Centre, but today, we launch a series titled *A Primer on Pesticide Propaganda*. Similar to our recent series titled the Colonization of the Canadian Farmer, on this series we will take apart the messages that industry and government are passing along to the general public, and as we do so often here, we'll deconstruct them to determine their merit.

This series has long been in the works since I attended the CropLife Canada conference back in September 2007. It was there at this annual meeting of Canada's pesticide and biotechnology sector where I recorded, among others, CropLife President Lorne Hepworth as he presented to an audience of agribusiness executives, employees and scientists. On future episodes we will listen in on my one-on-one interview with Hepworth along with a subsequent interview with CropLife's Peter MacLeod.

But it was also at the conference where as a member of the media, I received a complimentary informative DVD titled *A Primer on Pesticides*, and as I imagine was their intention, we'll be airing some of that DVD here on today's broadcast and listen to a number of other interesting recordings along those lines.

And again, this is part I of our series titled - A Primer on Pesticide Propaganda, right here, on Deconstructing Dinner.

increase music and fade out

For frequent listeners of Deconstructing Dinner, there are a number of agricultural corporations that are mentioned on somewhat of an ongoing basis, companies like Monsanto, Bayer, Cargill, Dow, but one company that has evaded any substantial mention on the program is Swiss-based Syngenta, a

company that has only existed since the year 2000. In terms of volume, Syngenta is the third largest marketer of seeds in the world and one of the largest producers of crop protection products. Worldwide they employ around 21,000 people in over 90 countries and here in Canada, has their head office located in my old stomping grounds of Guelph, Ontario. Their western office is located in Calgary, Alberta.

Now this will be a company that certainly on today's broadcast we will be hearing quite a lot of, as it was Syngenta who produced the Primer on Pesticides DVD that we will be listening in on throughout today's broadcast.

Now for any new listeners of Deconstructing Dinner, I'll mention once again how back in September 2007 I took a trip to Saskatoon, Saskatchewan where I attended the annual CropLife Canada conference. CropLife is the trade association representing the major producers of agricultural chemicals and biotechnology products. Now since then, these recordings have frequently been making their way into broadcasts of Deconstructing Dinner, and it looks as though these recordings will continue to be used for months to come. So stay tuned for more.

But coming back to Syngenta, the company sent 18 employees to the CropLife Canada conference, one of whom, was Marian Stypa – the company's head of regulatory and biological development. It was Stypa who chose to pose a question to a conference panel, and it's a question that sets the stage for today's broadcast.

Marian Stypa: Ok, thank you very much. It's Marian Stypa with Syngenta. I'd just like to pursue a little bit further some of the questions that we had discussed a little bit earlier about the perception of the industry, and about the messaging and what's going on out there. It's somewhat alarming for us in the industry to wake up in the morning and read the headline that a significant leadership party is thinking about a new policy of outlawing the use of pesticides. I think we have to take that seriously and look at it as a threat, because what it's telling me is that unfortunately our politicians are not very well educated about our industry, they don't understand the regulatory process, they don't understand the scrutiny that our products go through, and the significance that this industry brings to Canada, and not only to agriculture, but to many other aspects of the economy. I would like to go back to this and challenge the panel, and specifically some of the educational leaders, and also obviously the regulators. We need to work together in a partnership to get the message out there exactly how these products are regulated, that they are safe, the risk assessments that are being done. We have to make sure that the general public gets that message. They are currently not getting it, and clearly the politicians aren't getting it. So you have local governments taking action. They feel they are more qualified than the PMRA to make the decisions to rule out the use of these products without even thinking about the consequences. If you have a lawn that is full of grubs, and you get a

bunch of skunks and whatnot invading your property, and they carry rabies, there is a bit of a threat to the neighborhood potentially, and so on. What can we do in a partnership way, the industry and the regulators, how can we get our message out exactly how these products are really evaluated and tested? To get the message to the general public and the politicians that these products are necessary, they are safe and they fulfill a need.

Jon Steinman: Now Marian Stypa was referring to the increasing number of pesticide bans being implemented within municipalities across the country, and perhaps on a future show we can bring a city official onto the program to discuss the supposed invasion of rabid skunks that must now be overtaking cities.

But of interest, was a recent incident in Brandon Manitoba where back in January of this year, two rabid skunks were spotted chasing horses just outside the city limits. Brandon was the first municipality in Manitoba to implement a pesticide ban back in 2006. Perhaps, we can bring the mayor of Brandon onto the show to discuss whether he believes the pesticide ban has led to the presence of these horse-chasing rabid skunks.

Pepe Le Pew: 'Ello baby,
I am ze locksmith of love, no?
Come darling, we must be grown up about zis thing; do not run away from ze love.
Here, what is this?

Jon Steinman: And that was Pepe Le Pew.

Now in ensuring the concerns of Syngenta's Marian Stypa don't go unaddressed, this entire broadcast will be devoted to responding to his concerns that politicians and the media are uninformed. In fact, over the course of the next few weeks, we'll spend hours listening in on the recordings and interviews recorded at the CropLife Canada conference that dealt with this topic of pesticides. But before we dive into the Pesticide Propaganda that will provide the basis for today's show, we can first also look over at the organic sector and, well, their propaganda. Located in the United States, the Organic Trade Association a few years ago commissioned the production of a film titled Grocery Store Wars featuring a storyboard of fruits and vegetables, all of whom, resembled Star Wars characters. The film begins with a screen that reads, "not long ago, in a supermarket not so far away," and into the screen enters an ominous shopping cart chasing after a small basket of organic fruit.

Obi Won Cannoli: these are dark times, young Cuke.

Cuke Skywalker: What do you mean Obi Won Cannoli?

OWC: For over a thousand generations, organic food like us lived in harmony with the ways of the farm.

CS: The farm?

OWC: Yes Cuke, the farm. The farm is what gives us our power. It's a kind of field that creates all edible things.

CS: Wow.

OWC: But alas, the market has been taken over by the dark side of the farm. An empire of pollution and pesticides has ruthlessly conquered the market nearly wiping out our organic birthright with unsustainable short-sighted practices like genetic engineering, irradiation, and massive chemical pesticide use. Seduced by artificially lower prices, people don't even want to know where their food comes from. The true ways of the farm are now almost forgotten.

CS: hah.

OWC: But there is a new hope. A growing resistance called the organic rebellion is fighting back.

TofuD2 where are you?

TofuD2: (squeaks)

You must learn the ways of the farm if you are to join the rebellion and rescue Princess Lettuce.

Princess Lettuce: Help me Obi Won Cannoli. You're my only hope.

CS: Woah.

OWC: Of course, you will need to find friends to help you on your way.

Ham Solo: I'm Ham Solo, Captain of the Millennium Scallion. I hear you are looking for a passage to the organic system.

OWC: Yes indeed, if it's a fast ship.

HS: Sure is, and I got the best co-pilot in the produce section: Chewbroccoli.

Chewbroccoli: Arg.

OWC: There will be many dangers.

CS: Watch out for those tie-fighters.

HS: I see them, I see them.

CS: Quick, they're headed for that small moon.

OWC: That's no moon, that's a melon.

All: The Death Melon!

C: Arg.

OWC: That giant fruit threatens us all.

Princess Lettuce: A little tall for an egg, aren't you?

CS: Oh, the uniform. I am Cuke Skywalker, and I am here to rescue you. I am here with Obi Won Cannoli. Come on!

PL: For luck!

OWC: Your path will not be easy. For you must confront the evil lord of the dark side: Darth Tater. Tater was once a pupil of mine before he turned to the dark side of the farm. He's now more chemical than vegetable. Twisted and evil. He betrayed and murdered your father: Organican Skywalker.

CS: Ow!

DT: Obi won never told you about your father.

CS: He told me enough. He told me you killed him.

DT: No, I am your father.

CS: That's really impossible.

DT: Search your peelings, Cuke. You know it to be true. Join me, and together we can rule the supermarket as father and son.

CS: No! I will never join you.

OWC: Learn about the farm, Cuke. Help the rebels expose the Dark Side's technological shortcuts and their true costs. We must win this battle. Use the farm, Cuke. Stretch out with your peelings. It's up to you, Cuke. You're the rebels' last hope. Isn't that right, Yogurt?

Yogurt: Strong with the farm he is, but our last hope Cuke is not. There is another: you! When the market you visit, you can keep your family and the planet safe from the dark side by choosing organic.

All: May the farm be with you always!

C: Arg.

Jon Steinman: And this is Deconstructing Dinner and that was the audio of a short film titled Grocery Store Wars and produced by FreeRange Graphics in association with the Organic Trade Association based in Greenfield Massachusetts.

Today marks the first episode of an ongoing series here on the program titled A Primer on Pesticide Propaganda – a multi-part series that will lead us into learning more about pesticides in relation to regulations, health concerns, migrant workers, promises of higher crop yields and the environment.

But we would be getting ahead of ourselves if we jumped right in to the *current* messages that the Canadian public receives on pesticides, unless we first explored the many messages that have contributed to our current food system – one that has been built upon the prevalent use of chemical pesticides. And so in this segment of today's show we'll touch on the history of agricultural pesticide use in North America because when taking apart this history, we can begin to discover some of the foundational values and beliefs that have helped create our food system of today.

Now it's been raised on this program on a number of occasions, the connection between our industrial food system and war. There are clear connections that the food we eat today has very much been influenced by war - this machine of death and destruction. One of the first pesticides ever used on a mass scale is known as 2,4-D, and today is said to be the most widely used pesticide around the world. 2,4-D was developed during World War II with the aim to increase crop yields for a nation at war. Now here is where we can get somewhat philosophical as we examine the war and food connections. In 2001, the University of Virginia's Edmund Russell released what is now an award-winning book titled, *War and Nature: Fighting Humans and Insects with Chemicals from World War I to Silent Spring.* Now Russell is referring to the seminal book *Silent Spring* published by Rachel Carson in 1962 that is often suggested to have launched the modern day environmental movement. And it was Carson who described the control of pests in a rather provocative way – she said that pest control is a self-defeating form of

warfare. Now Russell's book *War and Nature* essentially expands on such an idea, and as in it he writes in his introduction, this is a book that attempts to rethink the relationship between war, nature and human history. He suggests that war and interactions with nature have often been viewed as opposite endeavors. But he points to one of the most recognized passages ever referred to on this relationship between war and nature, and it was the prophet Isaiah who said, "They shall beat their swords into plowshares, and their spears into pruning hooks." Now when we begin to look at our industrial food system, this is indeed the case, however, for chemical companies like Dow, the first company to market 2,4-D post World War II, they quite literally beat their chemical weapons into agricultural tools as well. The only difference from the intention of the words of Isaiah, is that Dow, simply moved from profiting off of a war on people, to doing so, off of a war on nature.

As we take apart this relationship between war and food we can't ignore the contrast between the more common industrial relationship we have to food versus the alternative, whereby instead of dominating and controlling nature, we work *with* nature's rhythms and use nature as our guide. Now this latter relationship does indeed form the foundation for many innovative systems of growing food, one of which is of course permaculture, a topic we've previously explored here on *Deconstructing Dinner*.

This series on pesticide propaganda will nicely lead us into exploring more on this topic of alternative farming systems that work *with* nature instead of against it, but until then, we can look at the more commonly used methods of chemical agriculture today, and again, refer to them as a war on nature.

One of the many interesting ideas referenced in the book *War and Nature* by Edmund Russell, was his reference to Prussian military strategist Karl von Clausewitz who suggested that war virtually ignored nature and certainly, many would look at our current way of growing and producing food as doing just that. And this is where the connections between war and nature get even more interesting. The common rhetoric from government regulators and the pesticide industry is that the benefits of using chemical pesticides far outweigh the risks of not using them (this is otherwise known as acceptable risk). Now this is the very same message we hear coming from military tyrants such as George W. Bush, who is often heard justifying civilian casualties as an unfortunate and unavoidable circumstance in war. But as is also the tactic, it is the terminology of war, of terror and of fear, that has the ability to immobilize people to the point of submission. And this was exactly the case in 1947, when Dow Chemical, a company that had profited heavily from the war, was looking for a place to continue marketing their chemicals, and they found agriculture. The soldiers, were the American and Canadian public, the enemy, pests and the weapon 2,4-D.

Heard here in the background is the launch of *Death to Weeds* – a short film produced in 1947 outlining the benefits of Dow’s pesticide products. The launch of the film contains a text-based introduction that reads this, “Bill of Indictment – The People vs. Weeds. On behalf of the People, it is charged that weeds are Nature’s outlaws. Weeds overgrow and crowd out crop plants, rob them of needed water and plant food. Weeds harbour insects and diseases. Weeds disfigure the land, affect the national health and the national pocketbook. Death to weeds!”

Death to Weeds: Weeds are our common enemy. Plaguing the homeowner, ruining golf courses, and our tempers, cursing us with hay fever, piling up work by millions of man hours for railroads and highway maintenance departments, but worst of all is their never ending warfare against the American Farmer. It is officially estimated that farm losses caused by weeds are approximately three billion dollars annually, second only to the loss from soil erosion. Though the enemy is powerful, the fight is no longer one sided. For here at the Dow Chemical Company in Midland, Michigan, Revolutionary chemical killers are being produced to help rid us of these costly pests. For years, Dow research technicians, leaders in agricultural chemical developments have experimented with organic herbicides to control weeds, or kill them outright, to kill them inexpensively without harm to the crops they infest or to the soil. Thousands of tests in field and laboratory have resulted in the development of four major weed killers: Dow Selective Weed Killer, Dow Contact Weed Killer, 2,4 Dow Weed Killers, and Esteron 44. Dow Selective Weed Killer has proven highly effective for the chemical weeding of flax, peas, and grain. The water-soluble spray destroys weeds without causing permanent damage to the crops. Where mechanical mowing is difficult, and all vegetation must be kept in check, Dow Contact Weed Killer is useful such as for fencerows, orchards, roadsides, and vacant lots. One of the newest and most versatile weapons in Dows arsenal of chemical warfare is 2,4 Dow Weed Killer. Proved in action against hundreds of weeds, and a wide variety of crops. 2,4-D kills the entire weed, roots and all. Its’ victims include most broad leafed annual weeds, as well as perennials. Even perennials with deep root systems may be eradicated by repeated applications.

Jon Steinman: Now when we look at the war that has been waged on nature by our dominant food system of which we are all mostly a part, author Edmund Russell also suggests that, historically, nature was the chief promoter of democracy. And what he was referring to were the abundant resources that European colonizers recognized in what is now North America as being the source of freedom and liberty. It was the promise of untouched mountain ranges, forests and prairies that formed the basis of the democracies now called Canada and the United States. Russell writes that it was nature that also protected the country from external and internal threats by supplying bountiful natural resources. Now this was of course pretty sufficient security, but it was when the colonizers of this land began to assume dominion over nature instead of working with it as the indigenous habitants of the land had been doing, that it was then

that colonizers began to essentially smother the source of their democracy. It was then that the colonizers found themselves waging a war with nature, and today, that war seems to carry on, and it seems quite likely that this war on nature will continue until we can find ourselves in a more symbiotic relationship with nature once again.

soundbite

But if dominion over nature led to our current war with nature and has hence challenged democracy, well then, this seems no different from the more common reference to war, as it too, challenges democracy. One need only observe the irony that today, we're bombarded with messages that democracy must be instilled in Iraq and Afghanistan, yet the very effort to do so is at the same time, destroying the so-called democracies that we call Canada and the United States. The most striking example of this is the manner in which during times of war, liberties are swiftly smothered, and if not transferred to the State for greater control, are passed on to the corporation. We see this in both Canada and the US today, that following September 11th both countries governments assumed unprecedented control over the people who elected them. The so-called Security and Prosperity Partnership (the SPP) is yet another example of this system of placing the power of the people into the hands of corporate interests. Invading Iraq has resulted in the granting of huge contracts to national and multi-national corporations, and as the money pours in for their operations overseas, so too does it strengthen their foothold right here in Canada and the United States.

This is strikingly similar to what happened when our industrial food system was first formed. Following World War II in particular, the same companies, the same technologies and same networks created during the war, took on a more secure footing right here in North America.

In the case of agriculture, this is again happening today, this system of control, but instead as an outcome of the invasion of Iraq. When looking at some of the major members of CropLife Canada, we can look at agricultural giant Bayer, who sponsored the Iraq Development Program summit held in Jordan in June of 2005. In August 2007, Dow began preparations for a \$2.1 billion dollar petrochemical plant near Basra, and when a company like seed-giant Monsanto has had an ongoing history of its executives making their way into the United States Department of Agriculture and vice versa, one can expect that investment in the birthplace of agriculture will indeed carry with it patents on seeds. And sure enough, that appears to be the case, as it was in 2005, when US proconsul Paul Bremer left Iraq, but not prior to enacting 100 orders that essentially have the status of law. In particular was Order 81, that addressed, "patent industrial design, undisclosed information, integrated circuits and plant variety." As Journalist Michael Meacher wrote in The Times, this order is "virtually a takeover of Iraqi agriculture." Meacher cites Monsanto, Bayer, Dow and Syngenta as being likely candidates to assume such a role.

Now while the Death to Weeds video dates back to 1947, the message is not so different from the 2006 production of A Primer on Pesticides, the DVD that was handed to me in my media package back in September 2007 at the CropLife Canada conference in Saskatoon. The DVD was produced by Syngenta – again one of the world’s largest marketers of seeds and agricultural chemicals. Now we’ll listen in more detail to clips of this production later on the broadcast, but of interest to this current segment was one comment made by Syngenta’s Robert Wright. Wright is the Field Development Manager for Syngenta’s Eastern Canada operations. Take a listen.

Female voice 1: What do you mean by invasive species?

Robert Wright: These are species, either plants, insects, fungi, animals or mollusks, that are not native to Canada. Their introduction to Canada has resulted in damage to our native species and or their habitats because the introduced species thrive here without their natural enemies to keep their population in check. Although not all pests are classified as invasive, they do represent a major source of environmental and economic damage.

Jon Steinman: And here is perhaps where living in harmony with our surroundings has failed. As Syngenta’s Robert Wright refers to the many invasive species of plants, insects and animals, there’s one important piece of the invasion puzzle missing.

Female voice 1: What do you mean by invasive species?

Male voice 1: A map of colonial America, pioneer America in the 1760’s and 1770’s looked like this: the countryside through the valleys and forests were rich in wild game and black soil, and the American pioneer knew how to use both once he had decided upon the spot he wanted to settle. But before he could reach his destination, he would have to conquer the weather, wide swollen rivers, high mountains, protect himself, his cattle and his possessions, and fight hostile Indians whose land he was invading.

Jon Steinman: Comparing the invasion and conquering of people to the invasion and conquering of nature, dovetails nicely off the recent series here on Deconstructing Dinner titled the Colonization of the Canadian Farmer. It was then when the colonization of land through conquest was also compared to the colonization of life through patenting on seeds. Now Syngenta is one of these very companies that has sought control of seeds and hence the food system. Syngenta is too, not unfamiliar with the idea of invasion, and in the case I’m about to share with you, is connected with the October 21st 2007 brutal murder of Valmir Mota de Oliveira.

This is not a story that made headlines but is certainly one that should have, because what this story helps bring to light, is the apathy among North Americans in responding to the many threats posed by the corporate control of food. Once moving south of the United States, the efforts that communities and farmers have taken in Central and South America to preserve a socially and environmentally responsible food system are quite different from those here in North America. In March 2006, in the State of Parana in Brazil, La Via Campesina, the international peasant movement, chose to occupy an experimental farm owned by Syngenta after it discovered that the company was illegally cultivating genetically engineered soybeans and corn. The farmers and community feared their land would be contaminated and the occupation of the farm drew such strong international support, that state governor Roberto Requiao signed a decree of intent to expropriate the Syngenta farm. Syngenta succeeded in overturning the decree and returned to the farm in July 2007. La Via Campesina was evicted from the site, but the group, simply moved next door, to the property of Olga Benario. It was at this point that Syngenta hired armed guards who began showing up on Benario's land and threatening those there by firing gunshots into the air. And so, on October 21st 2007, about 150 members of La Via Campesina and the MST, another movement of landless peasants, reoccupied the Syngenta site, but at 1pm, a bus pulled up in front of the property and forty armed gunmen stepped out and started shooting. One of them walked right up to Valmir Mota de Oliveira and shot him twice, point blank in the chest. He died instantly, and five others were wounded.

It was only one month before Valmir was murdered by Syngenta's armed guards that I walked into the CropLife Canada conference in Saskatoon, and received my media package, which included a DVD designed to educate Canadian media on the wonderful products produced by Syngenta.

And this is Deconstructing Dinner a weekly one-hour radio program and Podcast produced at Kootenay Co-op Radio CJLY in Nelson, British Columbia. I'm Jon Steinman your host for today's part I of a multi-part series here on the program titled, A Primer on Pesticide Propaganda. More information on today's broadcast and on this program can be found on our website at cjly.net/deconstructingdinner. The title and idea for this series was sparked after my visit to Saskatoon Saskatchewan in September of 2007. It was there that I attended the CropLife Canada conference – and again, CropLife is the trade association representing the manufacturers of agricultural chemicals and plant biotechnology (genetically-engineered technologies). Now one of the goals of today's broadcast was to compare the DVD on pesticides that I received at the conference and produced by Syngenta with the 1947 film titled Death to Weeds – produced by Dow Chemical. And so here again is a clip from Death to Weeds.

Death to Weeds: The rich Red River Valley region of North Dakota afforded an ideal proving ground. In this area, farms cover thousands of acres, and weed control is a tremendous job. In the past, this meant following the land, or reduced

yield because of weed competition. But today, modern chemical methods provide the answer. A plane dusts a field of young wheat with 2,4-D quickly and inexpensively. Less spectacular, but equally efficient, is the down to earth method. The 2,4-D dust, ready mixed and free flowing, is poured into the hopper. The canvas floating behind the boom duster helps confine the powder to give better coverage and better weed kill. Early morning dusting when the air is calm gives good results. 2,4-D is also provided for liquid spraying. Spray pressure can be low; just enough to give uniform coverage. This work can be done satisfactorily without the help of the dog.

Jon Steinman: I will mention that this film will be linked to from the Deconstructing Dinner website, as it was during that clip where a farmer is seen dumping 2,4-D dust into a bin with the dust literally enveloping his head as he pours it in. We'll explore more on the prevalence of farm worker exposure to pesticides as this series evolves. But 2,4-D, the feature of the Death to Weeds film, is now a very common ingredient in many pesticide products used around the world. Syngenta is just one of these companies offering such products, but according to Donna Houghton, a toxicologist working at Syngenta's Guelph offices, the safety of their products is nothing to fear. Houghton's message is one of a strategy being used by the company that has been appearing throughout Canadian media in recent months. In a January 2008 issue of Today's Farmer – an Ontario publication, an article appeared titled Uninformed Media Blamed for Pesticide Fears. Donna Houghton was quoted in that article. Her message was identical to that recorded for the DVD that I received at the CropLife conference. So, as a member of the media, I chose to inform myself and dispel any pesticide fears.

Female voice 1: Isn't it true that natural chemicals are safer than man made chemicals created in a lab?

Female voice 2: Actually this is a common misconception among the general public and it couldn't be further from the truth. The toxicity of any chemical actually has nothing to do with a: where it comes from (Mother Nature or the lab), or b: what it is used for. It has to do with its chemical structure: the combination and configuration of the basic building blocks called atoms that make up the substance. There are many natural chemicals that are very toxic and many man made chemicals that are not, and the reverse is also true. The most toxic substance known to humans is actually natural. It is botulinus toxin, which is produced by a bacteria and causes botulism; a very serious form of food poisoning that can cause fatalities. In everyday life people are exposed to many chemicals that are far more toxic than pesticides, for example, nicotine, caffeine and vitamin D.

So the message seems somewhat clear, that there are many more toxic substances we interact with daily. Nicotine is one example used, albeit for the small percentage of the population who *choose* to smoke, but what Houghton

fails to mention, is that tobacco is one of the most heavily sprayed agricultural crops in the world. It would have come as a shock had Houghton pointed the finger at tobacco if Syngenta was actually profiting off of cigarettes, and sure enough, upon a little research, Syngenta's brand name Denim is used widely on tobacco crops worldwide. In fact when looking at the many agricultural pesticides used on tobacco, we come across one of the most commonly used pesticides - Aldicarb (which has been shown to cause genetic damage in human cells and is toxic to birds, fish, honey bees and earthworms). It contains dichloromethane which is known to cause damage to hearing, vision, kidneys, livers, and is both carcinogenic and mutagenic. In fact, Aldicarb is banned in 13 countries, just not in the US or Canada. But what about pesticide residues on tobacco and in cigarettes. Well in 2006, scientists at the Colorado School of Mines discovered three pesticides present in tobacco that are suspected of being toxic to humans. One of them was Flemtralin, a product banned for use on tobacco in Europe, and the producer of Flemtralin is Syngenta.

soundbite

In the Syngenta Primer on Pesticide DVD, Donna Houghton listed the toxicity of a number of agricultural chemicals alongside nicotine, salt and caffeine, and it's interesting to note that also a member of CropLife Canada (the association that provided me with this DVD) is Cargill, and Cargill, is one of North America's leading producers of, salt, and on the caffeine front, well, here's a clip from the CropLife Canada conference.

Clip: So now it is break time, we will pause for a short break. Coffee is at the back of the room, which I would like at this time to thank Cargill for being our sponsor for our coffee breaks in the conference. How about that?

Jon Steinman: These companies really do love their toxins.

In addition to appearing in a January edition of Today's Farmer, Donna Houghton's strategy to dispel fears of pesticides by suggesting other items are toxic too, was also found in a December 12th 2007 article posted on the CBC website. Her comments were following the Prince Edward Island legislative committee's decision to look into banning the cosmetic use of pesticides on the Island. Donna Houghton travelled over to PEI to make her case and protect Syngenta's interests, and ensured politicians that while pesticides carry risks, they are in line with other risks people take daily. Smoking, drinking alcohol, being out in the sun, all of those things have risks – said Houghton to the committee.

Just prior to her comments being published there, she was also quoted using the same argument in a December issue of the Western Producer in an article titled, Farmers Share Common Pesticide Misconceptions.

But perhaps one of the greatest misconceptions shared by those at Syngenta, and perhaps among most North Americans, are the many *beneficial* weeds, which in many cases are far more nutritious and suited to individual climates than most of the foods making up the North American diet.

Here again is a clip from the film *Death to Weeds* produced in 1947.

Death to Weeds: This is sow thistle growing in wheat. A young plant, and one about ready to bloom. In this plant, the growing point is killed after treatment with 2,4-D. This field of healthy wheat shows what can be accomplished through the proper application of 2,4-Dow Weed Killer. Compare this healthy unsprayed water plantain with this beat up specimen after a bout with 2,4-D. Compare the lamb's quarters on the right from this treated mylo field with the healthy unsprayed specimen on the left. Free of weeds thirty days after spraying with 2,4-Dow Weed Killer. In Texas, where everything is on a grand scale, even the weed problem is prodigious. Ranchers and farmers fight a never ending battle against the plant pests crowding in on their range land and cultivated acres. They fight against mesquite, which spreads over millions of acres. Promise of health through chemistry aroused much interest in the Dow experiments conducted in this region. 2,4-D was used in the experiments on mesquite. Once again, 2,4-D proved to be the answer. Many woody species succumb to treatment. Here is sumac, wild cherry, none of these look very healthy. If the brush has reached considerable height, it is best to first cut the plants down, but it need be done only once, not every year or two, as has been necessary in the past. Spraying the stumps is a promising method of application to kill the root system. Dandelions, one of the biggest nuisances to golfers and greens keepers alike are killed roots and all without harm to the turf. Dandelion, buckhorn and plantain cannot resist 2,4-D. Ten days after treatment, most plants will be past any hope of recovery. The list of weeds which can be killed or controlled by Dow weed killers is virtually endless. Barnyard weeds such as burdock, dog fennel and lambs quarters, sow thistle, elderberry, which is particularly susceptible to 2,4-D, as can be seen in this test area. Whatever your weed problem, whether as a homeowner with a lawn and garden to maintain, a greens keeper at a golf club, a farmer with hundreds of acres under cultivation, an operator of a railroad, a sugarcane planter, or the operator of a public utility, Dow agricultural chemists have the answer.

Jon Steinman: Fast-forward to today, here again is Syngenta's Donna Houghton speaking on the Primer on Pesticides DVD given to me at the CropLife Canada conference.

Donna Houghton: As you can see the idea that natural substances are safe, and man made chemicals toxic is a misconception. Callisto is a herbicide used in corn to control broadleaf weeds such as pigweed and lambs quarters. Kill-X, also known as par three, is a mixture of three herbicides that are commonly used on residential lawns to control weeds such as dandelions.

Jon Steinman: A similar message, of pesky plant shared between the two recordings was in reference to lamb's quarters and dandelions.

Now here is where the very principles upon which our food system is built can very easily be questioned. It's ingrained in our culture that dandelions for one are a pesky weed that must be eradicated, yet the dandelion is one of the most beneficial plants known. Its leaves and roots are used to treat various ailments by Europeans and Asians among others. It stimulates the liver, the kidneys, and digestion, and can even be used as a mild laxative. Dandelion juice can allow for an easy way to absorb the wealth of vitamins and nutrients found within it. Dandelion leaves are richer in vitamin A than are carrots. One cup of dandelion greens can provide a healthy dose of calories, protein, carbohydrates, Vitamin C and calcium. Talk about local food, dandelions are free, and often plentiful yet Syngenta along with much of the North American population wants to destroy them.

Now what about Lamb's Quarters? Well lamb's quarters are more nutritious than spinach, with the flavour being somewhat similar. The plant is a favourite among many indigenous populations and contains a healthy dose of phosphorous, iron, calcium, vitamins A, B2, C and niacin. The plant is even used as a medicine and can grow as high as 12,000 ft above sea level. Again, a pretty important plant, and this one too, destroyed by agricultural chemicals every day.

Now jumping back to the *Death to Weeds* film, a number of other plants were listed off as the enemy in this war on weeds. One of them was Mesquite, of which the bean pods can be dried and ground into flour and can add a sweetness to breads, jellies, meats, eggs, soups or wine.

Sow Thistle, another enemy, can be consumed as a salad green and most livestock will choose sow thistle over grass.

Sumac was yet another on the hit list for 2,4-D. Yet, in August of 2006, researchers discovered that a water-soluble sumac berry extract had been found to increase the shelf life and decrease bacteria contamination of chicken wings. Sumac berries are also rich in tannins, which are known to have antimicrobial and antioxidant properties. But alas, growing corn for a can of soda, takes precedence, so out it goes with a dose of 2,4-D.

Elderberry is seen as a pest according to our industrial agriculture system, yet is an excellent source of vitamin A, B6, iron and potassium, and an even better source of dietary fiber and vitamin C.

Also listed in the film as an evil plant was burdock. Yet burdock is one of the most widely used as a medicinal herb and is eaten as a vegetable in many parts of the world. Some of the active ingredients of burdock are polyacetylenes, which

are known to be effective antibacterials and antifungals. Burdock is also known to enhance the performance of many of the organs which purify the body and eliminate toxins or waste. In fact, Russian writer Leo Tolstoy, author of War and Peace, wrote in his journal in 1896 about a tiny shoot of burdock that he saw in a ploughed field and he wrote this, "black from dust but still alive and red in the center, it makes me want to write. It asserts life to the end." But then along came, 2,4-D or perhaps Syngenta's Callisto, either way, our agricultural system seems hell-bent on destroying some of the most nutritious and resilient plants found on this continent. One can only wonder whether the health of North Americans would be any different if we only listened to what nature was telling us, instead of continually trying to conquer it.

Female voice 1: Isn't there a cancer epidemic that is going on, and aren't pesticides responsible?

Donna Houghton: On the contrary, Canadian cancer statistics actually show that the incidence of all cancers combined has been relatively flat since the mid 1980's. Where I think the confusion probably lies is with the statistic that receives the most press. Our population in Canada is growing and it's aging. And since the incidence of cancer increases as we age, all cancer statistics must be adjusted for average age of the population and presented as the number of new cases per 100,000 people in the population. This is the only way that you can compare cancer statistics from one year to the next.

Jon Steinman: And again, that was Donna Houghton, a toxicologist at Syngenta's offices in Guelph, Ontario. Now two things you can expect from this recent segment, one of them is on the next installment of this Pesticide Propaganda series here on Deconstructing Dinner, we'll hear from some experts in the field of pesticide and cancer research, and further down the road, we'll explore in depth the knowledge of the many wild and beneficial plants that grow in and around homes, and we'll focus in on dandelions, a plant that we clearly have a very mixed-up relationship with.

music of Terry Winchell, The Pesticide Song

*Pesticides, pesticides, have screwed up my insides
What am I gonna do?
In 1962 Rachel Carson warned about the Silent Spring
All this time we haven't learned a thing.*

*Mom and Dad told me one day that the stuff we sprayed would always stay
Kills the bugs on his potatoes, kills a lot more than that years later.
Gravity pulls all things down and everyone's gotta drink the well in town, when it rains it pours it soaks into the ground.*

Let's do it pesticide free.

*Oh, pesticides, pesticides, screwed up my insides.
What are we gonna do?
In 1962 Rachel Carson warned about the Silent Spring
All this time we haven't learned a thing.*

*So put on your rose tinted glasses, look at your garden it's a pretty sight.
One squirt of a pesticide kill the weeds, you do it 'cause it's easy, not cause it's
right.*

Chorus Repeats.

Female Voice 1: Do farmers really need to use pesticides on their crops?

Nancy Tout: Farmers do need to use pesticides to control pests on their crops. The use of pesticides allows farmers to provide us with a safe, abundant and affordable food supply. Eliminating pesticides would make fruits and vegetables more expensive, thereby decreasing consumption and increasing the risk of disease.

Robert Wright: The use of pesticides results in a low cost supply of food for consumers.

OWC: Seduced by artificially lower prices, people don't even want to know where their food comes from.

Jon Steinman: And this is Deconstructing Dinner, and that was New York musician Terry Winchell and her tune The Pesticide Song. Following her song were again some clips from the Syngenta DVD titled A Primer on Pesticides. And those were the voices of Syngenta's Nancy Tout, the lead scientist for dietary safety assessment and Robert Wright, the field development manager for syngenta's eastern Canada operations. And again a reminder that if you missed any of today's broadcast you can listen to the full version by visiting our website at cjly.net/deconstructingdinner.

On the next installment of this Primer on Pesticide Propaganda series we'll hear from a number of new voices including CropLife Canada President Lorne Hepworth. Now of greatest interest is Hepworth's history as it was he who was the Minister of Finance leading up to the 1991 demise of the Conservative party in Saskatchewan premier Grant Devine who essentially drove that province into the ground after going on a streak of privatizing the province's public assets. The case of fraud that came upon many of Devine's cabinet is a whole other story, and we'll learn more about that on the next episode of the series.

But following his time as Saskatchewan's Minister of Finance, Hepworth became the President of CropLife Canada, and was of course, a keynote presenter at the

2007 CropLife Canada conference which I attended. Now we'll hear more from my one-on-one interview with Hepworth in the coming weeks, but to give you a taste for the theme of his presentation, here's a clip of Hepworth as he's introduced, and it's during his first few remarks, where one can hear his hatred of anything to do with Greenpeace. As was also heard on a recent broadcast of Deconstructing Dinner, and as we'll hear again on the next episode of this series, Hepworth also takes quite the disliking towards David Suzuki. Yet, with all of his distaste for environmentalists, Hepworth themed his presentation around the "environmentally friendly industry" that CropLife represents. And here's Lorne Hepworth being introduced by Thor Cruse - the Business Director of Crop Protection for E.I. du Pont Canada.

Thor Cruse: So our next speaker needs no introduction. But let me just say that Dr. Lorne Hepworth has been president of CropLife for a full decade. He has exemplified partnership in action and it is partnership that he will highlight today. He will speak on the plant science industry's roll in developing environmentally sustainable solutions through the power of partnership. Ladies and gentleman please welcome Dr. Lorne Hepworth.

Dr. Lorne Hepworth: Thank you Thor and Gord and Will, and ladies and gentleman, thank you Mr. Chairman. Let me add to what was said by our conference Chair this morning and on behalf of CropLife Canada, once again I would like to say we're very pleased to be hosting our annual conference here in Saskatchewan in the city of Saskatoon, Saskatoon, the science city and home to University and my Alma Madder as well and we were particularly pleased with our Board Chairman being able to present on behalf of CropLife to the University, the \$100,000 in celebration of the University's and the College of Agriculture's 100th anniversary.

I'm also pleased to be in Saskatchewan for another reason. It's my home province. I still have a small farm in Southern Saskatchewan in the middle of the bottom of the Paliser Triangle which John Paliser said in 1885, we shouldn't grow crops there. This year it really lived up to its reputation with this past hot dry summer. I swear you guys didn't need many fungicides down there this year.

Part of the farm includes the original homestead that was granted to my grandfather in 1907. So like the University our family is celebrating the farm's 100th anniversary and I have a confession to make to all of my members in the room. Apparently my grandfather was an Organic Farmer. He really didn't have any choice. There really were no tools then, and I'm not so sure that Greenpeace would acknowledge that, my early roots in that organic farming venture.

I want to continue on with the environmental theme. Our industry takes its responsibility to the environment very seriously. We put stewardship of the environment and minimizing any risk to the environment from our technologies as a first order of priority. But more than that, our industry's technologies are and in

the future, it will increasingly bring solutions to some of the world's great environmental challenges. So in the time allotted to me I want to review the plant science industry's commitment to the environment and our solutions for the future.

We haven't been around for 100 years, but there has been a lot of changes over the years and a lot more change coming. Today's modern industry, modern plant science industry is definitely not your grandfather's Studebaker.

Old advertisement: The wagoner, the car that makes other station wagons obsolete with Studebaker features that you'll want to see. The ladies will love the exclusive beauty vanity complete with mirror. And you can have your wagoner equipped with caliber disc breaks, at higher speeds they stop your car in about half the distance as conventional breaks. A totally new concept from Studebaker, a family convertible, carryall, fun car. A new design from the advanced thinking of Studebaker Corporation.

Jon Steinman: In closing out today's broadcast, I do want to leave you with a few more modern versions of Dow Chemicals' pesticide propaganda, as it was Dow's 1947 film *Death to Weeds* that helped form the basis for today's broadcast. And while I say more modern, the commercials you're about to hear are still nevertheless, somewhat dated, and links to the actual videos themselves will be made available on the Deconstructing Dinner website.

Dow Commercial 1: (female voice singing) You're on your way, the world is opening its door.

(male voice) Dear Dad, just got back from my interview with Dow. Sounds like my kind of research, finding new ways to grow more food, ways to help sick people. I'm gonna go for it Dad, and I'm gonna try to make you proud.

(female voice singing) You can make a difference in what tomorrow brings because Dow lets you do great things.

Jon Steinman: And one more as part of the Dow campaign

Dow Commercial 2: (female voice singing) You're on your way.

(male voice) Piloting a corporate jet for Dow can be interesting and rewarding, particularly when it's an angel flight. The corporate angel network uses empty seats on company business trips to fly cancer patients who need specialized treatment. Patients like Kristi. Dow is the first to make over 100 of these flights. "Welcome aboard Angel." This company does great things, this is one of them.

(female voice singing) Dow lets you do great things.

Jon Steinman: And again, you can stay tuned for more from this multi-part series here on Deconstructing Dinner titled *A Primer on Pesticide Propaganda*, and I invite listeners to also lend their financial support to the Deconstructing Dinner

project by visiting our website and pledging either a monthly subscription or a one-time donation.

Dow Commercial 3: This fair golfer is playing on a course that has not been treated, when her ball rolls into a clover grove, it's very hard to see, her temper can be ruffled and her game is delayed as her ball hides in the clover blossoms. This young lady is more fortunate. Just before blossom time, the greens keeper sprayed with 2,4-D, although the clover was not eradicated, blossoming was stopped and her ball shows up clearly against the green turf.

ending theme

Jon Steinman: That was this week's edition of Deconstructing Dinner, produced and recorded at Nelson, British Columbia's Kootenay Co-op Radio. I've been your host Jon Steinman. I thank my technical assistant John Ryan.

The theme music for Deconstructing Dinner is courtesy of Nelson-area resident Adham Shaikh.

This radio program is provided free of charge to campus/community radio stations across the country, and relies on the financial support from you the listener. Support for the program can be donated through our website at cjly.net/deconstructingdinner or by dialing 250-352-9600.