

Center for Business Ethics

AT BENTLEY UNIVERSITY

Raytheon Lectureship in Business Ethics

OCTOBER 18, 2011

Inventing a Win-Win-Win-Win-Win Future

GARY HIRSHBERG

Chairman, President, and CEO of Stonyfield Farm



BENTLEY UNIVERSITY is a leader in business education. Centered on education and research in business and related professions, Bentley blends the breadth and technological strength of a university with the values and student focus of a small college. Our undergraduate curriculum combines business study with a strong foundation in the arts and sciences. A broad array of offerings at the McCallum Graduate School emphasize the impact of technology on business practice, including MBA and Master of Science programs, PhD programs in accountancy and in business, and selected executive programs. Enrolling approximately 4,000 full-time undergraduate, 250 adult part-time undergraduate, 1,400 graduate, and 20 doctoral students, Bentley is located in Waltham, Mass., minutes west of Boston.

The Center for Business Ethics at Bentley University is a nonprofit educational and consulting organization whose vision is a world in which all businesses contribute positively to society through their ethically sound and responsible operations. The center's mission is to provide leadership in the creation of organizational cultures that align effective business performance with ethical business conduct. It endeavors to do so by the application of expertise, research, education and a collaborative approach to disseminating best practices. With a vast network of practitioners and scholars and an extensive multimedia library, the center offers an international forum for benchmarking and research in business ethics.

Through educational programming such as the Raytheon Lectureship in Business Ethics, the center helps corporations and other organizations to strengthen their ethical culture.



Executive Director
Center for Business Ethics and
Heiken Professor of Business and Professional Ethics
Bentley University



W. Michael Hoffman, PhD

If you want to get a sense of the richness and variety of business ethics, you should simply reflect on the richness and variety of business itself. Every year, many new types of business emerge and each one of them involves unique issues and opportunities, not only in terms of products and services, but also in terms of business ethics. In this monograph, we have an outstanding presentation by Gary Hirshberg, the chairman, president, and CEO of Stonyfield Farm, the world's largest producer of organic yogurt. "Yogurt?" you say. "So is this a discussion on yogurt ethics?" In a way, yes; but it is much more than that.

Gary Hirshberg's lecture is an important one if you happen to eat food. Spend some time with Hirshberg and you will soon recognize the ethical complexity associated with food production. It involves everything from what we feed animals to how they are treated, the pesticides used in food production, and how waste is managed. And it doesn't stop there... How should companies handle profits? How should they work with their suppliers, etc.?

Both in terms of business and ethics, Stonyfield Farm is a microcosm of the world around us. And Hirshberg faces it all with realism and passion. His response has been to take to heart the ethical interests of all his company's stakeholders. How? By producing "yogurt on a mission." What mission? One answer is "to save the planet." No one company can do that single-handedly. But Stonyfield Farm doesn't just produce yogurt; it also models the power of ethical business. This lecture is one of the most lucid practical illustrations of stakeholder theory I've ever heard. Moreover, in its commitment to ethics, Stonyfield has pushed the envelope on innovation as well.

And here is the good news: it works. Hirshberg took a seven-cow organic farming school and turned it into a business with \$370 million in annual sales, with a compounded annual growth rate above 23 percent for more than 18 years! The results speak for themselves... and for the power of ethical business.

The RAYTHEON LECTURESHIP IN BUSINESS ETHICS at Bentley University is made possible through the generous support of the Raytheon Company.

Raytheon is a technology and innovation leader specializing in defense, homeland security and other government markets throughout the world. With a history of innovation spanning 90 years, Raytheon provides state-of-the-art electronics, mission systems integration and other capabilities in the areas of sensing; effects; and command, control, communications and intelligence systems, as well as a broad range of mission support services. The company reported sales of \$25 billion in 2011 and employs 71,000 people worldwide. It has built a reputation for adhering to the highest ethical standards in the industry. The Raytheon Lectureship in Business Ethics series aims to illuminate and promote ethical values and conduct in business, highlighting best practices in corporations throughout the United States. Learn more about Raytheon online at www.raytheon.com.

Chairman and Chief Executive Officer
Raytheon Company

William H. Swanson



Ethics in business is about so much more than just following rules. Fundamentally, it is a matter of creating the right culture in our organizations, so that people have the ability and support to make decisions that are not only effective, but consistent with the values and principles we hold dear. Raytheon has worked very hard in establishing an ethical business culture that is accepted by our employees and woven into the fabric of the ways in which we work. Our continued growth and profitability depend on it.

Raytheon has supported the Center for Business Ethics at Bentley University for many years, and our sponsorship of its Lectureship in Business Ethics is an important commitment for the company. We recognize the enormous value of the leadership given by the center for more than three decades, to promote ethical business practices and cultures in the United States and around the world. And ethical leadership — illuminating and inspiring conduct that is instinctively ethical — is what the Raytheon Lectureship in Business Ethics is about. I'm proud that Raytheon can play a part in bringing to the Bentley campus highly respected leaders of companies that have a manifest and deep-rooted commitment to doing business in the right way. Their insights contribute much to an important discourse on how the business community can and should achieve ethical excellence.

Stonyfield, celebrating its 28th year, is the world's leading organic yogurt company. Its certified organic yogurt, smoothies, milk, cultured soy, frozen yogurt and ice cream are distributed nationally. The company advocates that healthy food can only come from a healthy planet. Its use of organic ingredients helps keep more than 200,000 farm acres free of toxic, persistent pesticides and chemical fertilizers known to contaminate soil, drinking water and food. To help reduce climate change, Stonyfield offsets all of the CO₂ emissions generated from its facility energy use. The company also started a nonprofit called Climate Counts (climatecounts.org) which shows people how they can help fight climate change by the way they shop and invest. Stonyfield also donates 10 percent of its profits to efforts that help protect and restore the Earth. For more information about Stonyfield Farm, its products and initiatives, visit www.stonyfield.com or follow Stonyfield on Twitter @Stonyfield and @StonyfieldBiz, and on Facebook at www.facebook.com/StonyfieldFarm.



(FROM LEFT) W. Michael Hoffman, PhD, founding executive director of the Center for Business Ethics and Hieken Professor of Business and Professional Ethics at Bentley; David Lajoie, director, Business Ethics and Compliance for Raytheon's Integrated Defense Systems Business, Gary Hirshberg, chairman, president and CEO of Stonyfield Farm; and Gloria Larson, president of Bentley University.

CHAIRMAN, PRESIDENT AND CEO
STONYFIELD FARM

Gary Hirshberg



Gary Hirshberg is the chairman, president and CEO of Stonyfield Farm. Since Hirshberg took the reins of the company in 1983, Stonyfield Farm has only been recognized not only as an organic industry leader, but a pioneer in social and environmentally responsible corporate practices as well. From its infancy as a seven-cow organic farming school to its current \$370 million in annual sales, Stonyfield has enjoyed a compounded annual growth rate of more than 23 percent for more than 18 years by consistently producing great-tasting products and using innovative marketing techniques that blend the company’s social, environmental, and financial missions. Stonyfield Farm has been the recipient of numerous awards, including *Ethisphere* magazine’s 2011 “World’s Most Ethical Companies Award,” and the EPA’s 2009 “Clean Air Excellence Award.”

Inventing a Win-Win-Win-Win-Win Future

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October 18, 2011

GARY HIRSHBERG

Chairman, President, and CEO of Stonyfield Farm

Thank you, Dr. Hoffman, and thank you to all of you for being here.

I want to say a word about my title and the history of commerce. I'm the son and grandson of shoe manufacturers. I grew up in New Hampshire just up the road from here, so I speak from a longer-term perspective.

The history of commerce to my mind has always had somebody paying the price for someone else to gain. It might be laborers; it might be farmers who are not getting paid a proper price; it might be consumers who are getting a product that doesn't have the benefits that are being promised. It might be future generations whose planet is being stripped or denuded for profits that are being taken today.

I'm here to tell you it doesn't have to be that way. When I think about discussions of sustainability and ethics and so on, I think about my favorite philosopher, Lily Tomlin, who said, "no matter how cynical I get, it's hard to keep up." And that's because there's an awful lot of lip service being given to these topics. However, I am going to try to prove to you today that it doesn't have to be so.

The world young people are inheriting is far different from the world I inherited. Clearly, the bad news is we messed things up when it comes to the environment. The good news is there are incredible economic development opportunities in fixing these problems. From my perspective, the problems from the taking, denuding, and depleting, are

evidence of what I'm talking about — this tendency of commerce to take and not always give back. I hope to persuade you otherwise; this is why I talk about this as a win-win-win-win-win prospect.

I am going to get you depressed for a couple of minutes. Bear with me, I'll get over that. Today's problems are serious. We know that we will have 9.2 billion co-inhabitants in about 40 years. Clearly, the ways we used resources in the 20th century are not going to hold up. Our overdependence on fossil fuels and other trends are certainly known to all of you. We are also depleting species at rapid rates — thought to be one about every 45 seconds. The decline of pollinator bees, for example, is a serious issue. There are hundreds of thousands of other species out there that we haven't even become acquainted with yet. And yet, because of toxification or depletion of natural resources, they're disappearing even before we've been out on our first date. These are the kinds of challenges that modern living has brought to bear on our future.

Indeed, you could look at almost any aspect of how we relate to the planet and see signs of this failure, signs of this history of taking. Think of water: water is being talked about as the "oil of the 21st century." I just came back from a farming group in the Southwest, and, trust me, they are absolutely and utterly focused on water. The Colorado River doesn't even reach the Pacific anymore, and at current rates of depletion, it may not continue to meet the needs of the entire Southwest. And when the water dries up,

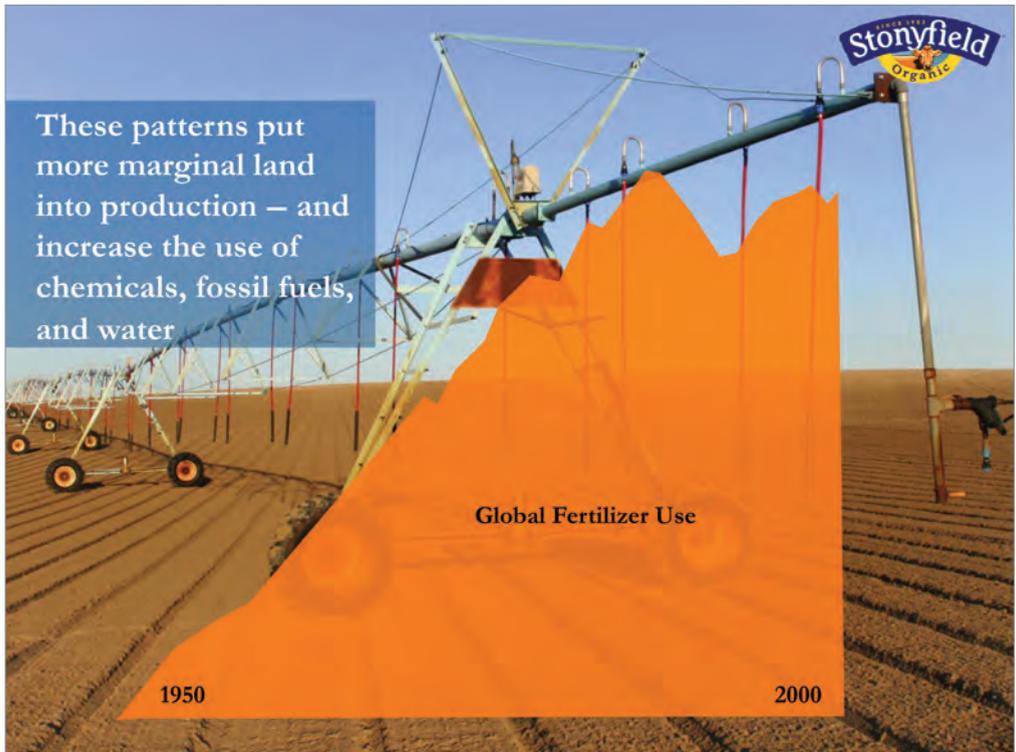


Illustration 1: Global Fertilizer Use 1950-2000

everything we know to be the Southwest will be completely different. Reasons for this are obvious and well documented. We've been doubling water usage every 21 years; we've had a six-fold increase in the last 111 years in water use due to rising standards of living. We just assume now that water is always available at the tap, but we've also created unsustainable levels of irrigated farmland. We're irrigating deserts out there. Seventy percent of the water that strikes the ground in desert regions, like the Southwest, doesn't help the crops; it evaporates before it even reaches the roots because there isn't enough carbon matter in the soil. We haven't thought in a systemic way about using that water because we just turn on the tap. Even if it's 30 percent efficient, we think that is okay. As a result, much of the water that we're taking out of the ground isn't being replaced. Aquifers are shrinking.

The corollary is that we're also depleting topsoil. Fifty percent of the topsoils that were here when Lewis and Clark made their way across the country are gone. Not technically gone — they're now at the bottoms of our oceans. They've been blown off by wind or drained off by rainfall. Areas larger than India and China have actually been depleted of topsoil in the last 50 years. As we've used up this topsoil, it's made us much more dependent on fossil fuel, like chemical fertilizer, to replace the fertility that once occurred there naturally.

The Mediterranean region was once the breadbasket of the world, but anyone who's traveled to the Mediterranean knows that you don't see a lot of topsoil anymore. The Fertile Crescent, as it was known, was exactly that: many feet deep of rich, fertile topsoil. But in our human, underdeveloped, immature

2000: WORLD POPULATION

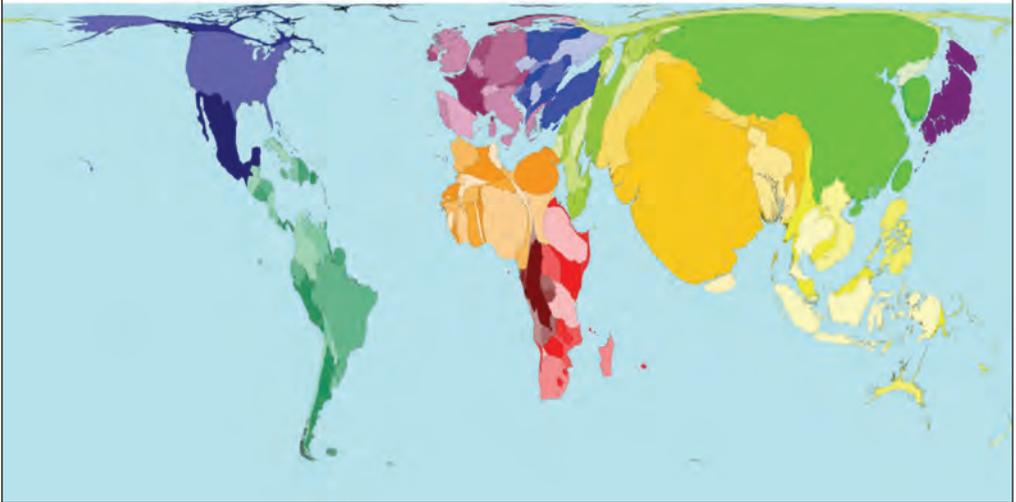


Illustration 2: 2000 World Population

way of relating to the world, we never really thought about those resources as something we need to protect. We've used them, we've taken nutrients up, we've grown food, we don't put down anti-erosive measures, and the net result is that we lose them.

A case could be made that we're certainly not the only culture in history that has used up our topsoil. A case can be made that many cultures — Egypt, Rome, Mesopotamia — have all risen and fallen on the strength of having vital topsoil. When fertility declined, the culture lost its strength, and the people have to journey farther and farther out to bring back food. That makes them vulnerable to raiding tribes and other threats to their society.

Illustration 1 shows a chart of fertilizer use in my lifetime. It looks a lot like the charts you see of almost any natural resource consumption. Right after World War II, the chart shows steep curves of resource use. As topsoils were depleted, their fertility was replaced with chemical fertilizers (made from fossil fuels). The result: an absolutely skyrocketing rise in fossil-fuel-based fertilizer use.

One of the most serious problems is in the Gulf of Mexico region, although it also occurs in 400 major estuaries around the world. Not only do we lose the topsoils by not protecting them from erosion, but when we put down chemical fertilizer, it blows or washes away, heads through the tributaries of the Mississippi River, for example, and

2009: GLOBAL CO₂ EMISSIONS

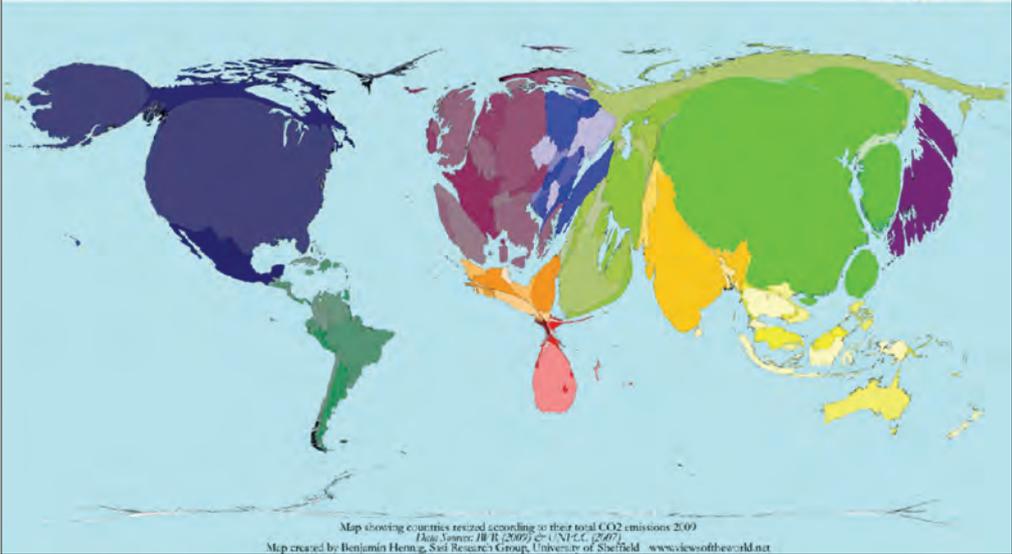


Illustration 3: 2009 Global CO₂ Emissions

ultimately those nitrogen compounds make their way out into the Gulf of Mexico. The net result is a dead zone. Add a lot of nitrogen and you get an algal bloom that feeds on the nitrogen; the algae break down and absorb the dissolved oxygen so none remains. Soon there are no fish, no birds, no wildlife. The waters off of the Mississippi outlet into the Gulf are literally a hypoxic zone, a zone with no oxygen. This Gulf dead zone, about the size of New Jersey already, is growing roughly 20 percent annually. It's also true in Chesapeake Bay, in Massachusetts Bay, in San Francisco Bay; it is happening all over the world.

World population and carbon emissions are also critical issues. In Illustrations 2 and 3,¹ you can see that in the Western Hemisphere we're pretty skinny [in terms of population]; however, if you superimpose our carbon footprint on it, which shows the impact we have, you realize that we are actually quite obese. It isn't so much the numbers of people, as how we live, which is really the point of this illustration.

When you look at how we live, these patterns are repeated *ad nauseam*. We actually waste more energy in the U.S. than we use.

¹From the website found at <http://www.sasi.group.shef.ac.uk/worldmapper/index.html>

Global CO₂ emissions slide, source: Benjamin D. Hennig, SASI Research Group, University of Sheffield, United Kingdom

It's a remarkable statement in 2011, with the cost of fossil fuels what they are, but we waste about 54 percent of our energy, mostly through heat lost in electricity production. We waste more energy than Japan uses, which is the third-largest GDP.

I've been talking to you about the planet up until now, and I see some people slumping in their seats, because this is kind of overwhelming. Let me talk to you quickly about health, because it's the same exact problem. We have treated our bodies like we've treated the Earth. Leaving aside the ethical issues related to obesity, two-thirds of us are now obese, meaning your weight is 20 percent more than it should be. If you just focus on the dollar sign, as of 2008 the obesity problem costs our country \$150 billion, perhaps even \$200 billion. We're paying billions to deal with a preventable problem, something that really doesn't have to be... and these are dollars going right out of our pockets.

Consider diabetes, which is the corollary of obesity, and see this horrifying statistic: 50 percent of African Americans and Hispanics are affected by type-two diabetes, which didn't even have that name when I was a boy. It was called adult onset diabetes because only adults got it from abusing their pancreas and overusing sugar. We had to come up with a new name for it because kids were becoming diabetic. Indeed, the patterns of diabetes follow the same patterns of obesity. Again, it is the same thing — another couple of hundred billion dollars are being spent to treat a completely preventable disease.

In the whole debate on health care that we went through in the last year and a half, you never heard the words “preventative health,” but that's clearly the cheapest form of health care. Not getting sick is the best form of health care, and certainly the least expensive.

You get into the statistics, it's horrifying. A fifth grade boy in my lifetime today weighs 13.2 pounds or 18 percent more than when I was a kid; girls weigh 16 percent more. Some of that is sedentary lifestyle, but again, an incredible price tag comes with this and a serious price tag for individuals who suffer these maladies.

And while sedentary lifestyle can be blamed, it's also an explosion of sugar. Illustration 4 looks a lot like the fertilizer chart, with a lot of stuff beginning to happen in the middle part of the 20th century. Clearly it's out of control. Our problems with diet go much deeper than obesity and diabetes.

Now, look at Illustration 5: If you have seen *Food, Inc.*, you know that a lot of our food, especially our beef and dairy, are grown in places like this. These are called confined animal feeding operations (CAFO), or feed lots. Cows in CAFOs only eat corn, or soy, or other kinds of feed that is high in Omega-6 fatty acids — the “bad kind,” unlike Omega-3 “good” fatty acids. That's the only input they're getting, which is certainly not anything they're supposed to be eating. They're not “corn-ivores.” They're herbivores. They're supposed to be eating grass. There's not a lot of grass in a CAFO. As a matter of fact, those animals stand in their own manure, usually up to their knees. So there are a whole lot of problems with *E. coli* bacteria and other implications of an unhealthy system.

Everyone should be eating a balanced diet. You should be doing it for the simple reason that we're supposed to maintain a balanced ratio of Omega-6s to 3s in our diets. Omega-6s are derived from soy and processed foods; Omega-3s come from fresh foods; in the case of the cows, from alfalfa, flax, grass, and hay. Humans get it through vitamins, vegetables, fish, and so forth. In a feedlot like this, the Omega-3s completely disappear within 150

to 200 days, which means the meat from animals in these feedlots is not the same as it would be if they were eating grass.

If you compare 1960 to 2000, the foods you see today, are fundamentally different on a molecular and nutritional basis. Indeed, if we go back thousands of years through human history (see Illustration 6), we've always had this balanced diet ratio of about three Omega-6 to one Omega-3. Today that ratio of Omega-6 to Omega-3 is more like 20 or 25 to 1. And if you ate at McDonald's three times in one week, the ratio can go as high as 30 to 1, although McDonald's is finally beginning to address this matter through its offerings as well.

Today, pesticides are endemic in everyday life, but there were no pesticides in used 70 years ago. People say to me, "Organic food is a cute idea but is not really proven." But as I said to a class earlier this afternoon, it's actually the *chemicals* that are not proven. We've been on a chemical experiment for 60 to 70 years. There is a report that comes to the president every two years. The Bush-appointed oncologic panel reporting to President Obama said that 41 percent of us alive today are going to be diagnosed with cancers. That's almost 1 in 2 Americans. When the panel was first convened by President Reagan, that number was only 20 percent of Americans. The number has doubled in just 20 or 30 years. So that's the trend line. What's it going to be when our president in 2020 receives the report?

The number one implication in the report pertained to the chemicals in our food. Of course we are exposed to thousands of chemical every day, from lead paint, auto emissions, and all kinds of stuff. But the number one thing the report suggested was that the president use his authority to reduce our exposure to chemicals in our food, pesticide or herbicide residuals in our food.

And there are other reports like this one: an explosion of ADHD, an explosion of allergies, an explosion of all manner of health issues. So what's going on out there? Why are we seeing these levels of pesticides? Why is the president's panel saying this?

These compounds are persistent. They stick around. Every person in this audience has DDT in their tissue — even though many of you were born decades after this chemical was banned in this country — in part because it's still being used around the world, and in part because it is extremely persistent. These compounds do their job. They're effective. So this idea that pesticides are "on the peel and can be washed off the fruit" has been long since disavowed. It's a complete myth.

These kinds of things are being found in studies of pregnant women — all kinds of compounds are being found in *utero*, and in many cases these compounds were introduced to the environment before the mother was even born. We find pesticide levels in three- to six-year-olds and even see these toxins in the cord blood of newborns.

A friend of mine who passed away this summer, David Servan-Schreiber, was a research MD and PhD who developed an aggressive form of brain cancer about 18 years ago that normally kills people within six months. It's a fatal diagnosis, and David died after living with it for more than 17 years. During that time, he put forward a theory in a book that I recommend you read, called *Anticancer: A New Way of Life*. He really was a living example. He went 17 years longer than he should have or was expected to. He said, "Every trend I have shared with you is avoidable, is preventable. All you have to do is consider the theory that cancer cells are present in all of us and that it [cancer] is essentially an inflammatory disease. It's a question of whether we create the conditions for it to grow or not."

REFINED SUGAR CONSUMPTION

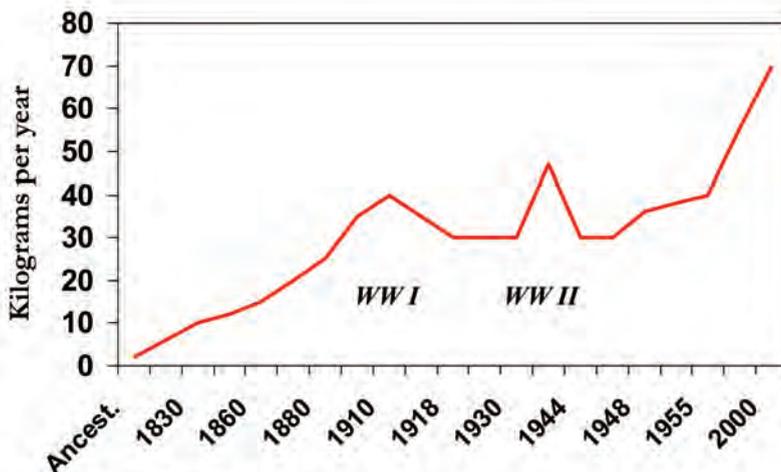


Illustration 4: Refined Sugar Consumption

David pointed at what I have been talking to you about today. Since 1945, we've seen this explosion in cancer diagnosis and since 1945 an explosion in the consumption of sugar. (That's also when the television was introduced, which has a lot to do with a more sedentary lifestyle). We certainly have the chemical exposures and finally of course what I've talked about earlier. Again, when you think about Omega-3 and Omega-6, recognize that Omega-3s are anti-inflammatory. You create a pro-inflammatory environment by eating only processed food and not eating enough fresh food and not eating fish oil (a key source of Omega-3s).

David's point was simply this: we need to change how we think. I would say his point is relevant to every aspect of our commerce. Whether we are looking at biodiversity, or topsoil loss, or the fact that millions of farmers have disappeared in the last 50 years,

you can see that we have to change how we think in order to have a future. And if we do change the way we think, I will submit to you that it will be a far more profitable future for us all.

Now I am going to share with you a more hopeful picture than the one I've just depressed you with. However, I needed to do that so you could understand the scale of the problem we are talking about.

Essentially, modern economics is founded on what I consider to be myths. There's the basic myth: the Earth is a subsidiary of our economics. It's there for the taking — and the dumping. No one would say those words, but that's actually exactly how we behave. We think of the world under our feet as ours, so we're not partners with the Earth. We're not partners with nature; we think we're somehow above it.

CAFO's

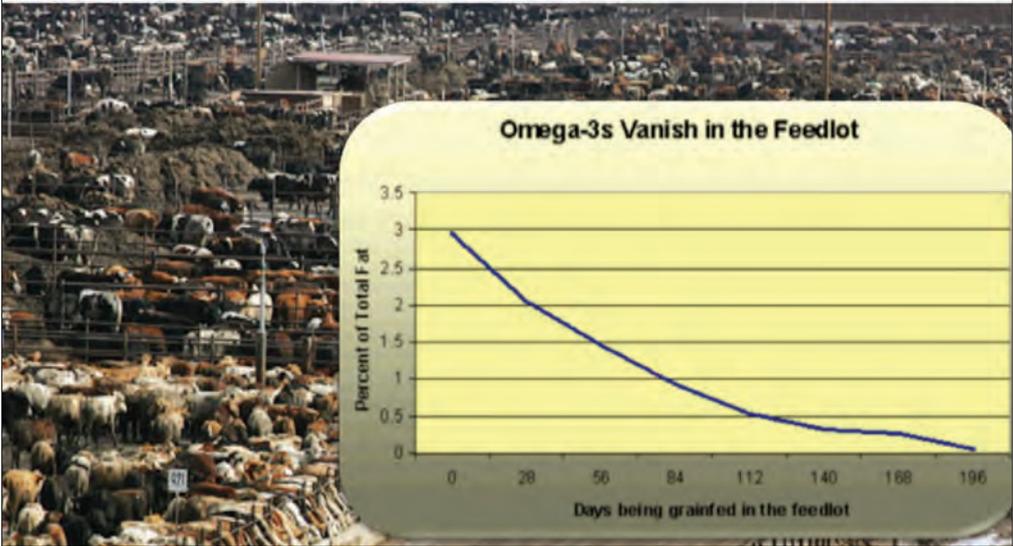


Illustration 5: Confined Animal Feeding Operations (CAFO)

The net result is that we have these clever mythologies, like the myth of waste. We are the only species on Earth that produces waste. Other species produce waste in one system that becomes food for another system.

Then we have a myth called “away,” to which we send our waste. I don’t know what zip code that is but I haven’t found it yet.

The most fundamental myth, the one that goes to the heart of what we are talking about today, is the myth of externalities. Those of you who have taken economics know that externalities are those direct consequences of our economic activities, the direct results of economic choices, but they don’t appear on our income statement or balance sheet so therefore we’re not held accountable for them.

A national obesity epidemic, a diabetes epidemic, a cancer epidemic, the depletion of topsoil, hypoxia in the Gulf of Mexico, and climate change — these are externalities. These are the results of economic choices we make, either as consumers or as producers, whether it is Stonyfield, or Raytheon, or any other company. We have externalities, whether it’s the clothes you are wearing or the Blackberry or iPad you are using. From a lifecycle point of view, there’s a whole lot of stuff that has happened along the way to bring the product to you. As humans, we have a mindset that says: “Those are okay. They are affordable costs because of the benefits we are going to get.”

I am here to suggest to you that they’re not. Actually, the big opportunity lies in *internalizing* those externalities and attacking them. The simplest form of this from a business point of view is: when you attack waste, you save money.

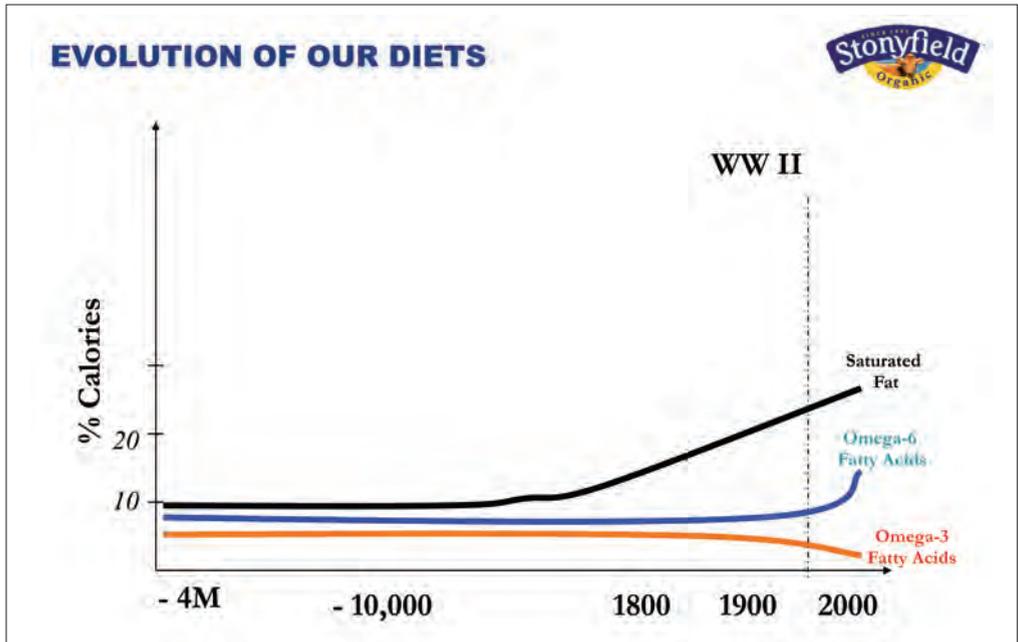


Illustration 6: Change in Dietary Fats and Acids

But what I'm really saying is, "We need to change how we think." We have to think differently for there to be any hope of feeding 9.2 billion fellow inhabitants. Think of a cup of coffee. If I asked you how much water was in the cup of coffee you may have had today, you might say, "Well, it depends on the size. Is it a grande, or tall, or whatever?" But let's call it 12 ounces, or 14 ounces; 16 ounces if you're really tanking up on the caffeine. Never happens on campus, right? You'd be partly right. In fact, there are about 208 pints of water in this cup of coffee. There's the water needed to grow the coffee itself, there's the water needed to grow the grain to feed the cows, there's water needed to irrigate the field for growing the sugar. Of course, all these industrial processes require water. From a lifecycle point of view, far more water went into this cup of coffee than the water you think you are drinking. And this is true of everything

we consume. My yogurt cups have much greater input than what's there. There is an enormous footprint to make every cup of yogurt. That's true of carpeting, the chairs you are sitting on, the shirts and hats you are wearing.

It's only when we think from a lifecycle, systemic, big-picture point of view that we will begin to understand the true costs of things. I submit to you that there are real opportunities in thinking this way.

When we started Stonyfield in 1983, we asked: "Is it possible to create a business that would not have negative effects, that would actually be beneficial to the environment, that in fact could be the basis for how we feed people in the 21st century?" Since then, Stonyfield has come a long way. It wasn't easy. There was one stretch that my wife affectionately calls the "bad old days" —



Illustration 7: Stonyfield Farm Factory

seven years of rough sledding before we finally figured out what we were doing. We started an organic yogurt company in 1983 when organic yogurt was still considered kind of “out there.” We had a wonderful company back then, but no supply and no demand. We eventually began to figure that out.

Look at Illustration 7. This is Stonyfield today. There are all kinds of amazing things going on here that I cannot take any credit for. It’s my 500 incredible colleagues who make efforts every single day to reduce our footprint and harvest dollars by fighting inefficiency. I’m just going to summarize them. Illustration 8 shows that we created nine teams in the company to attack our carbon footprint, our environmental footprint. We have a water footprint, a toxin footprint, and so forth. These teams look primarily at our carbon footprint, from our largest footprint to our ninth largest.

The largest footprint is the cows — not the milking, but their burping. When cows eat corn or grain, they burp a lot. When they burp, there is a lot of methane in it. Methane has 23 times more impact than CO₂, the global warming gas. So it’s a big problem that we are attacking, and I will tell you how we’re doing it.

The ninth largest footprint is the one in the upper corner is called “Stonyfield Walking Our Talk,” SWOT. That’s the employee commuting mile, and the food we feed our employees, the other employee amenities. But if you add up those nine footprints, that’s really close to about 95 percent of Stonyfield’s environmental impact. By convening teams of five or six people, sometimes a dozen, we have found that we can actually harvest some serious dollars.

TEAMS MAP-ING THE FUTURE



Transportation



Zero Waste



SWOT



Facility/GHG Emissions



Milk GHG Emissions



Water



Sustainable Packaging



Ingredients



Green Chemistry

Illustration 8: Stonyfield's Mission Action Program (MAP)

Illustration 9 shows the bottom line: these measures we have taken with the nine teams have saved us almost \$18.2 million in the last six years. Put in more simple terms, that's 84 jobs. We have grown jobs and our company right through the recession. But our growth has been partly because of demand and very much because of identifying inefficiencies in our operation. For example, 17 percent of our West Coast loads go by train; it didn't six years ago. Why train? It takes 50 percent less fuel to ship by rail than truck.

There are hundreds of things we have discovered in the course of achieving these savings. By attacking the inefficiencies, by looking at ways we can internalize the externalities to avoid waste, by looking at ways we can think more systematically and in a more lifecycle way, we have also harvested some serious dollars. I will give you a couple of examples.

We built a wastewater treatment plant for our facility, a pre-treatment plant, because we exceeded the capacity of the local wastewater treatment plant. Here we discovered another myth — and most of us in the United States employ this myth every day — that we treat our waste with a rule: “the solution to pollution is dilution.” In our society, we take our waste, add water, oxygenate it, agitate it, and maybe add some chemicals. You've seen these treatment plants, with sprinklers going, and so forth. We send that treated, potable water away, usually toward a river, and ultimately to the ocean. But we're left with something called sludge. I'm sure you have run into this; almost every community has this problem. I knew that if I built a traditional treatment facility I would produce one truckload of sludge every week. I didn't want to be a net exporter of sludge, so I went to the local authorities and said, “What do I do with the sludge if I build one of these?”

“It’s really easy,” they said. “You send it to Vermont.” That was their definition of “away.”

I’m picturing Ben & Jerry’s meeting with their local authority, who tells them, “Oh yeah, you just send it to New Hampshire.” I thought maybe we should just meet at the Connecticut River and exchange sludge, but then what would we do with it?

So instead we build an anaerobic digester — one that breaks down waste without oxygenating, without agitating, in fact with a complete absence of oxygen. Inside that big tank the waste breaks down anaerobically, and produces methane, a biogas that we actually use as an energy source for the wastewater facility. We use it to provide necessary heat for the wastewater facility; we also use it to make electricity. It has been enormously productive for us. The bottom line is we produce virtually no sludge from this plant. We’re supposed to have a truckload of sludge every few years, at the most.

The important part to understand economically is that this treatment facility did cost me more to build, I admit that. It cost about \$400,000 more, but I got that paid back in about 16 months. Stonyfield’s waste has now become a profit center for me. I make money from the waste unit because I have paid off the extra costs of doing it. Now the facility produces useful energy, and we’re harvesting it.

To put this in simple terms, we decided to partner with nature instead of trying to impose a human system on it. We said, “Let’s just do what goes on in nature every day.” This happens in swamps; if you’ve ever paddled in a swamp or a marsh, and your paddle hits the bottom and you get all the bubbles coming up, that’s methane coming up from anaerobic decomposition. We’re trapping the gas that occurs naturally and using it for fuel.

We brought the same kind of thinking to our packaging. The six packs and four packs in our products are made from plants. We no longer use oil as a basis of the production of our packaging. I’m incredibly proud of this. The packaging is made of corn right now, which is not ideal, but we believe that within 20 to 24 months we’ll actually be using agricultural waste or switch grass or even methane, which you can use to make polylactic acid, which is the material here. This is incredibly strong plastic. It’s so strong and durable, we were able to cut the weight of the packaging in half.

A lot of people say recycling is the “Holy Grail.” If you ask people what’s the greenest thing they do, they’ll say, “Well, I recycle.” Actually, recycling is the failure to reduce or reuse. I’m not knocking recycling — we recycle a lot — but there’s a carbon footprint to recycling. When you collect those wastes, melt them down, shred them, reform them, transport them, there’s an actual energy footprint. It’s much better to not use it in the first place.

This is a step on the way to success. When we have methane or a switch grass or a waste product packaging, that will be terrific, but it’s not the goal. The goal is when you finish eating the yogurt, you’ll eat the cup too. That sounds funny now, but it’s going to happen. Think about an ice cream cone. That’s a package that you eat when you’ve finished the ice cream. We’re working on that, but when we make it from switch grass, you’ll literally be able to finish eating, put the container in your backyard compost pile, and it will go away in about 21 days. The ultimate example of partnering with nature, of not imposing our human notion of externality, is to go organic.

Since MAP began in 2006...



- ✓ Achieved 46% absolute reduction in transportation GHG 2006-2010
2006-2010 \$12,400,000 saved



- ✓ Prevented 18 tractor-trailer loads plastic per year
2007-2010 \$3,200,000 saved



- ✓ Reduced facility energy and GHG 11%
2007 - 2010 \$2,000,000 saved



- ✓ Reduced waste to incinerator by 57%
2007 - 2010 \$600,000 saved

TOTAL SAVED SINCE 2006: \$18,200,000

Illustration 9: Savings from Reduced Consumption

Let me make the case more explicitly. Here are hard facts that result from Stonyfield being an organic operation. We now utilize more than 200,000 acres of chemical-free farmland. We've avoided using 10 million pounds of synthetic nitrogen fertilizer. We've avoided hundreds of thousands of drug treatments and antibiotics, saving antibiotics for when they're needed as opposed to using them prophylactically. We've avoided using almost 200,000 pounds of herbicides and insecticides.

The benefits of organic are extraordinary because beyond simply using less of these toxins, we're also building topsoils, we're building fertility. Organic cows, for example, live twice as long as non-organic cows. You decide: which milk do you want? I've stood on organic farms in the Central Valley of California where there are bees and birds and butterflies flying all over the place, and I've gotten in the pickup truck of the farm owner

and driven to his cousin's farm a quarter-mile away, a non-organic farm, and there's nothing flying around. Do this sometime, you'll see the difference. The bees and birds didn't do a focus group to figure out where to go. They're not going to live in a place where toxins are going to kill them. Which place do you want to live? Putting it differently, where do you want to get your food? That's the question that I would ask you.

Milk production is the biggest contributor to Stonyfield's greenhouse gas emissions' footprint. Here, organics play a special role. For example, because our farmers must get fertility into the soil without chemical fertilizers, we've convinced and helped support them to put small-scale biogas adjusters on their farms. These are digesters that do exactly what I do with my waste treatment: break down the waste, in this case manure, and produce a gas that the farm can use for

energy. The sludge that's left can be used on the fields because it's completely organic, made from manure and composts. It's very economical, very profitable, and helps the farmers to cut expenses and produce income.

We have another project where we're switching our cows away from corn and soy because again, there's the methane-burping problem. You may ask why we even have corn and soy because in New Zealand or Ireland, for example, cows are 100 percent grass-fed. In New England, we run into a problem called winter (although climate change will probably take care of that). We don't have grass all year round, so we have to feed the cows grain to give them some protein. We've introduced flax and other high Omega-3, fatty-acid feeds in place of soy and corn, and we've seen tremendous improvements. We've had dramatic increases in Omega-3s, and we've had huge reductions in methane emissions. Cows literally burp less. How do I know that? There are instruments that actually measure the gas that comes out. You have to see this to believe it, but they do. The bottom line is that the animals are either producing the same as they were before or less. The animals that already live twice as long as non-organic animals, and the veterinarians tell us their body conditioning is so improved that we've probably added 15 to 20 percent to their lives. We don't know this, but we'll be measuring it over time.

So when I talk about win-win-win-win-win, here even the animals are benefiting, the farmers benefit, the cows certainly like it, the farmers do too, and so do we. If we took this pilot program to scale, if we had all our cows eating these high Omega-3 inputs, it would be like taking 500,000 cars off the road. That's the kind of impact we're talking about with the emissions.

When I talk about win-win-win-win-win, I'm talking about my supply chain. Traditionally in food you view the supply chain, the farmer, as an adversary. You want to keep the farmer's price down. Well, we do the exact opposite; we pay them more. Right now non-organic farmers are paid below the cost of production. That's why you have so many conventional farmers going under today, whereas our farmers are earning a price that's 60-plus percent more than what they were getting as non-organic. Yet, I'm still able to deliver my bottom-line result and still enrich my investors, my employees, and myself even while paying the higher price — for a variety of reasons that I'll explain.

The bottom line for this product is that the organic farmers make more money than conventional farmers. You can ask, "Why aren't all farmers going organic?" It's not that complicated. There are two reasons. One is that the playing field is not level. Conventional farming is largely subsidized by yours and my tax dollars, although I think this Congress is finally starting to focus on that. Second, we are now subsidizing ethanol production domestically, which pays farmers the same price they could be getting for organic feed to produce corn or products for ethanol production, which is thermodynamically not smart. It takes as much energy to make corn-based ethanol as you get from it, but because it's subsidized it means that farmers have more choices. My argument is: let's get rid of the subsidies. We're not arguing for subsidies on the organic side, we're arguing to level the playing field and let the market take it over.

Once I get a farmer's attention, it's fairly easy to get them to switch. As the ethanol subsidies evaporate, this is going to work in my favor, and of course, obviously it works in our farmers' favor. I would say to those of you who are in manufacturing: why would you want your supplier not to be profitable?

BRAZIL ORGANIC SUGAR



**In 1997, converted 3,000 acres to organic
Today, 35,000+ acres are certified organic**



Illustration 10: Organic Sugar Production in Brazil

Illustration 10 is the ultimate example I want to share with you. You're looking at a picture of 40,000 acres of organic sugar cane in Brazil. There's a lot of photosynthesis needed to produce sugar cane. For every stalk of sugar cane you see here, there is a huge amount of leafy matter because you need to collect a lot of the sun's rays to concentrate that energy into carbohydrate, into sugar. Of course that leafy matter is not "useful" to humans, so traditionally when they harvest, they burn the field because the cane itself won't burn; it might blacken but it won't burn. They burn all the grasses off to make it easy to get access to the sugar cane and also, by the way, to eliminate snakes and other so-called threats that are part of the natural controls for the area. When you do that, you're releasing a huge amount of carbon into the atmosphere. I've flown over Florida and the Southeast during sugarcane harvests. There's a giant carbon cloud rising up, which of course contributes to global warming. But

it's also doubly inefficient in that any carbon matter that was built up in the topsoil during harvesting, from leaves crumbling or insects dying or whatever, is also burned and sent up into the atmosphere, which means next year you have to replace that carbon fertility with something synthesized that you're bringing in from somewhere else. It's this kind of underdeveloped, immature approach that we take, which I've been trying to explain to you — that we take a linear approach where we ignore the externalities.

So in 1997, our Brazilian partners said, "Gee, this is very inflationary. We keep burning, we keep sending this stuff up, and then we need to replace it with more, and by the way, it happens to be more expensive this year." So today it's 40,000 acres. The leafy matter is about a meter deep, so the soil underlying these fields is never exposed to the erosive effects of wind or rain for even one second. In fact, that topsoil is richer now

than when the farmers started because all that matter is breaking down. And of course there's an enormous amount of wildlife because they've created a completely healthy system.

Here are some of the stats. These farmers have had a 15- to 20-percent yield increase over when they were non-organic — and this is with inputs going down over time, so any businessperson gets that right away. Higher yields with lower inputs? Let me write the check right now. We've also seen tremendous reductions in CO₂, an almost 100 percent reduction in pest damage. By the way, you never want 100-percent pest elimination because that's what keeps the whole food chain alive — the birds and insects that eat other insects are part of the healthy food system. There are cougars, bigger than me, that wander through these fields because the entire food chain is healthy. Fully 312 species have returned to the fields. This is an agro-ecosystem. It is as rich and diverse as you can find in nature, and they have improved the carbon content of the soil and the groundwater quality.

I can't prove it yet, but I'm convinced they've probably improved worker health as well. Why? Those workers are not exposed to pesticides every day. We know farm workers are the most endangered part of our species because of exposure to pesticides and toxins.

But getting back to my win-win-win-win-win point, here's the real bottom line for me: When I started buying organic sugar, it used to be 100 percent more expensive than non-organic. Today, it's exactly the same price. In fact, earlier this summer it was less expensive than conventional sugar, when oil prices were a little bit higher. So it's a win for everybody. The farmers win, nature wins, our species wins, and as a customer I win as well. It's a classic example.

Another example is our work with corn. We just celebrated the 30th anniversary of farming trials in Pennsylvania where, side by side, organic corn has been grown next to conventional corn. Year after year after year, they watch to see which one does better. In the first couple years, when chemicals are taken out of the field and corn is removed from its addiction to inputs, organic yields are definitely lower. But by years four and five, the yields were statistically equal, and thereafter organic produces more bushels per acre than conventional. I could show you this with vanilla; I could show you this with cocoa. Particularly in a drought year, there's more water available to the plants in the soil because there is carbon matter in the soil. What we think of as organic food is actually a system of agriculture that is a real partnership with nature.

This is relevant to how we produce energy. New Hampshire, my state, spends \$15 billion per year on energy. Ninety percent of that money leaves the state, going to places like Venezuela for natural gas, Kuwait for oil. Yet we know now that 93 percent of our energy could be produced within the state; 93 percent, mostly from woodchips. Just think about that. If we could reduce the outflow by 10 percent, that's money that stays in local circulation that creates local jobs. So, ecology is long-term economics. The United Nations says the same thing for the fastest-growing regions in the world: Africa, India and China. Organic is going to be the solution because, over time, you're building soil fertility; you're making yourself less dependent on non-sustainable inputs.

Let me talk quickly about a campaign we've undertaken — the “Just Label It” campaign. This is something that Stonyfield and some 400 other companies have launched. It's a response to the proliferation of genetically engineered crops.

Right now, 50 percent of the world's production of genetically engineered crops takes place in the U.S. Thus far, in the 16 years since these genetically engineered crops were introduced, we have not yet seen proof of the claims of higher yields. In fact, what we've seen is higher profits to the chemical company that produces the seeds. But we've seen other problems as well. We've seen a 400-million-pound increase in herbicides because most of the genetically engineered crops that have been introduced are herbicide tolerant. That has resulted in farmers using much more herbicide — which, by the way, happens to be sold by the very same companies — and a rapid increase in herbicide-tolerant weeds. Like the insects in California, the weeds didn't wait around for focus groups to figure out what to do. They just evolved through nature very quickly, they developed hardiness.

These herbicide-tolerant weeds now grow in 26 states. In some cases, they grow 8 and 10 feet tall; imagine amaranth that's thicker than my wrist. The farmers only have two choices for controlling them: use expensive mechanical harvesting, or defoliants.

The last time defoliant was in the news was when the U.S. used it widely in Vietnam to eliminate forests and flush out our enemies. The most notorious defoliant was called Agent Orange, which you may have heard about. That is exactly what we are using now in 26 states. Agent Orange was responsible for a wide range of ailments among Vietnam veterans who were exposed to it. You can look it up yourselves. The bottom line is we are sanctioning the expansion of the genetically engineered, herbicide-tolerant crop. We are sanctioning the application of defoliants in America right here at home, the very same carcinogenic compounds that created all these illnesses.

By the way, the biotech people do not disagree with anything I just said. They admit there's a management problem right now; in fact they are developing defoliant-tolerant seeds, which would be one answer to widespread use of defoliants. Again, there are consequences we don't tend to think about.

The "Just Label It" campaign's proposal is simple: while science figures this out, we as consumers should have the right to know whether it's in our food or not. Europe labels genetically modified food; China has labeling; Australia and New Zealand have labeling. We are the lone major Western country that does not. We're simply asking you to go to justlabelit.org and say, "I have a right to know." This is a forum created by the people, the citizens for the FDA, not just the six chemical companies producing these crops. I have not met a consumer who says, "Give me the milk with synthetic growth hormones, please; give me the yogurt with more herbicide in it, please." There have been some big steps backward. This is an expression of the very same problem I talked about: take-take-take, not win-win-win-win-win. The reality is we have rising seed cost, rising use of herbicide, and no increased yields. You can do something right now today. Just send an email.

Since we have announced this campaign a week ago, 265,000 people have joined us and sent comments. If we get to 1 million comments, I think the FDA will have to consider labeling. They have 180 days from the time the petition is submitted to decide whether to do something. I won't belabor the point other than to say there is something you can do right now — instead of walking out thinking there's nothing I can do about this. Just demand labeling. It's our government, our country, our food; we ought to know.

My point to you, in the bigger picture, is this: you look at our research budget for organic food, and it doesn't even match the five percent of U.S. food that organic currently occupies. So there are some political challenges here. Twentieth-century industries that are successful and now essentially control policy have to make way for organic. The good news is most of the major companies have organic: Pepsi, Coke, Nabisco, Kellogg, Dannon, and so forth. All are playing in organic, so we are getting there. But I've suggested ways you can help expedite that forward movement.

I have talked about how we can think differently about a win-win-win-win-win system. I want to explain one last aspect. You're all business students, you understand gross margin. Understand this: Stonyfield has a lower gross margin than its non-organic counterparts, despite the fact that my cost of goods is much higher than theirs, and I have explained why. I don't use cheap shortcuts; I have this crazy idea that if it's going to be in a package for consumption and ought to be real food — not modified food, not starches, not gelatin, not dyes, not shortcuts that we're allowed to take which provide stability or color or body or whatever. For instance, there is ice cream out there that doesn't change shape when it melts, and they still say "natural" in the label (which tells you that their definition of "natural" means exactly zero). The truth is that we pay farmers the full price so our gross margins are deficient. Yet my net margin is better than our non-organic competition. Somewhere between the gross margin (where we are 1,000 basis points behind them), we have actually overcome that and made it up. How have we done that?

You all know the answer: I spend less in advertising. Why? Because I build loyalty. How do we do that? Because we produce

food that is actually good for people, that they feel good about putting into their mouths and feeding their families. They feel good about the kind of system we support. I am not pretending this is a large percentage; in fact 53 percent of Stonyfield consumption is found in only one percent of U.S. households. So you understand that we are a niche, a rounding error. Truthfully, Stonyfield comprises 6.8 percent of yogurt sales bought at U.S. grocery stores, as well as the number four national brand and growing rapidly.

What did I just explain to you? Very simply this: the traditional way of growing consumer products is a simple algorithm of making a product as cheaply as possible and giving yourself a huge gross margin so you can buy lots of advertising. You all know: you can get reach; with reach in frequency you get awareness, trial, repeat trial, purchase, repeat purchase, and finally you get to the Holy Grail, which is loyalty.

The reason I know all this can be summarized with an anecdote. About two years ago, I was in Florida, holding a competitor's yogurt cup at a public supermarket. I was reading the label when a little old lady came up to me, tagged my elbow, and said, "Young man, excuse me, somebody at your age really should be eating Stonyfield instead of that stuff." This is a true story. So I said, "Thank you, mom!" (No, it wasn't my mom.) I said, "Thank you very much — but why?"

She said, "Do you know they give 10 percent of their profit to environmental causes? Do you know they are the first dairy in America to pay farmers not to use synthetic growth hormone? Do you know they measure and reduce their carbon footprint? They support hundreds of thousands of acres of organic farming."

I was speechless and said “Wait, wait, wait, how do you know this stuff?”

She told me a sad story. “My husband just died of a colon cancer about six months ago. I have a granddaughter who is graduating from high school soon. I want to see her go to college. I want to see her grow up, have children, have a great future.” She said, “The girls and I [her bridge club], we all want to stick around for our grandchildren. So we go to the websites of companies whether is bananas or beer or whatever. We go and read how it’s being made, and we support each other.”

Of course, here she was, meeting a total stranger in the supermarket aisle, saying, “Eat this stuff.” (Of course, I hired her on the spot.) The point is, she demonstrates exactly what I want to share with you. It’s the ultimate example of win-win-win-win-win.

We used gimmicks like this one here in the early days: if you sent in five yogurt tops you could become the owner of a cow. You get a certificate naming you the co-owner of your cow; you get a picture of your cow, and twice a year the cow sends you a letter. Nowadays, the cows don’t send letters because we’ve gone paperless. Four times a year they send out an email: the cows are tweeting, they are on Facebook, and they’re very active. I tell you, I have intelligent cows; organic cows are very smart cows. But seriously, hundreds of thousands of people have adopted cows. The cost of this from an advertising standpoint is nothing, while the loyalty we receive is incredible. Joan Rivers adopted a live cow on her television show. Al Gore gave a cow to somebody at the Nobel Awards. Lots of people have done this. This is where you build loyalty. Loyalty comes from an

emotional place. Loyalty doesn’t have to come from a blast of advertising, pounding us to death with messages. And anyway, how many of you watch ads anymore? With Tivo, we click, and in a blink pass right through the ads.

For Stonyfield, we have figured out a culture of using many low-cost ways to communicate. Instead of YouTube, we have Yo-Tube — of course you have to have yogurt puns! These are short films — 30 seconds, 60 seconds, three minutes — that talk about things we care about. I do a rap song; Google “Just Eat Organic,” and you can see it. This site makes us transparent; we have people going to our website and staying there for 10 to 12 minutes watching films on how the strawberries are produced. How are the cows fed? What’s going on with methane? What’s happening with packaging?

Several of our farmers have cameras — we call them “cow cams.” They walk around filming themselves, talking about a day at their farm. This guy on Wall Street wrote me a thank-you note telling me that at lunch they sat there, wolfing down their food, and watched a cow chewing its cud. It’s not exactly exciting but it was like a vacation for them. It was like going to the country. We have hundreds of thousands of people go to this site to see these.

This summer we asked consumers “Hey! Instead of us sending you films, send us a film. Send us a film about your organic moment. When did you discover organic? Where were you when it happened?” We received 2,400 videos. That’s loyalty. We have millions of consumers now online. But this is what I am talking about with loyalty.

The point of all of these is that when you do the right thing, when you commit to a win-win-win-win-win system, when you commit to a system that is fighting for people's health, for transparency, you not only make a better bottom line but you build the ultimate holy grail of business. Loyal customers are what we all want. When customers are loyal, you don't have to spend as much to get them again. And like the little old lady in Florida, you get one enormous benefit, which is word-of-mouth.

I hope you take away two things today. First, commerce doesn't have to be about somebody losing. If my 28 years of experience can be a guide, it can be about everybody winning. Our shareholders have won, our employees have won. (By the way, we have some of the best benefits in the country. If you work at our company for five years, you get a two-month paid sabbatical. This is a dairy company with low margins, yet we are able to offer two months of paid sabbatical every five years. That builds loyalty.) Our shareholders have received some excellent return on investment. Our farmers have been paid well. Commerce can really be this way. This is the type of commerce I think we need in order to deal with the problems I shared with you earlier.

Second, whether you go into business or not, you are consumers. All of American business is aimed at your age group in particular; 17 to 30 is the primary target. When you buy an item, when you run an item past a scanner, you're voting for the kind of world you want. The choice of organic is a political choice; it has a big impact on externalities. You run that item past the scanner, and corporate America spends billions tallying up those votes. You have a power greater than any other economic power could possibly match — the power of one to make change.

Gandhi said it beautifully: "Anyone who thinks they're too small to make a difference has never been in bed with a mosquito." That's the way we need to be. Individual purchases add up. No item, no consumer product out there, the shape, size, color, cost, none of it is an accident. It's all a result of tallying up those votes, and those votes have a direct impact on what's being produced. I know that as students you can't afford to buy an enormous amount of organic goods, but even when you buy one item, it makes a difference. Stonyfield exists because of individuals, one spoonful at a time, one consumer at a time. That's the kind of power you've got.

Thank you.

Questions & Answers

Below are highlights of Gary Hirshberg's question-and-answer session with Bentley University students, faculty, staff and guests.

QUESTION: You talked a lot about your suppliers, your farmers, and other vendors. Can you talk about the different ways in which you help and work with your partners?

GARY HIRSHBERG: Great question. Yes, it's a significant part of our business. Our purchasing and supply chain group is not a one-way street. They are out in the farms all the time. Our flax program is a good example of us working with the farmers. We did the research, and now we're on the farms helping them figure out how to implement it. They've told us, "Great, we're ready to go, but we need an exclusion plan to actually make the seed." We've got the flax in Canada; we've got the demand down here, now we have to go between. So we're partnering with our co-op to finance an exclusion plan that will help the farmers get it here.

In Costa Rica, 90 percent of the bananas are one species called the Cavendish banana, which evolved because it's a hearty banana, they all ripen at the same time, they travel well, when they drop they bounce, they're good for modern commerce, and they have good shelf life. The problem is a virus now growing in many places worldwide that specifically attacks the Cavendish banana, and anytime you have a monoculture, you're vulnerable. Of course we want to support a polyculture, a diverse range of species, so our cooperative in Costa Rica produces something like a dozen different species. But they have found that other banana species don't last as long as the Cavendish. So we help them process bananas on the farm so that what leaves the farm is a purée. But you need a specific piece of technology, which we have financed, and are now putting in place there.

We did the same thing with the Brazil sugar operation. We work closely with them. The benefit of being in the U.S. is that we have an enormous amount of university brain power. We have Cornell people working with us, University of California-Davis, University of New Hampshire, and others, so we can bridge those gaps between us and our producers.

Ten percent of our profits go to help the planet; more goes to supply-chain enhancements. We work with farmers to help them get technology training, or we might place some veterinary assistants. We are really active with the farmers.

We're also active with the processors, the people who collect those goods. For example, our fruit processor, one of the biggest in the world, knew nothing about organics when we began working with them. So we went in there and explained organic compliance, showed them how they can do it safely and economically. For me, this whole idea of trying to beat your suppliers for a lower price — and I'm not being a Pollyanna here; we get the best prices we can — but we understand their costs. We don't want to get to the point where the price we're getting is below what the supplier can sustain.

QUESTION: Would you be willing to expand the products outside of the United States, such as Central America, Asia, to somehow expand the idea of organics?

GARY HIRSHBERG: We are expanding outside the U.S., but not by exporting. In Ireland right now, we have an organic dairy that we co-own. We've started a new organic dairy company in France called Les Deux Vaches, "The Two Cows." We have it in Canada, and we are now working with Danone, the majority owner in the company. We sold about 84 percent of the company 10 years ago to Danone, although they've left me with majority control; it's an interesting deal. Nevertheless, they're our partner in expanding the supply chain and the demand side. So yes, ultimately our mission is that organic does not remain five percent of foods, that it grows to double digits, and ultimately to a majority of foods out there.

One thing many people focus on is the distance food is shipped. The whole local movement has been exciting in terms of building support for local farms. I don't export because of distance, frankly. It's a perishable product so it's not that easy. I don't export because I believe we need to create local production wherever we are. But don't be fooled; food miles are not the big footprint when you look at the carbon footprint of foods. The majority of the footprint is in how it's grown. A couple years ago, when we thought there was an organic milk supply shortage, we found a surplus of milk in New Zealand where cows are all grass-fed. We discovered we could, on a carbon-footprint basis, get organic dry milk product from New Zealand to the U.S. with a lower footprint than buying it from the Midwest and bringing it to New Hampshire. Halfway around the world and still a lower footprint. The reason is because it's 100-percent grass-based. When you don't have grain, it's a much lower carbon footprint. The milk is turned into powder and shipped by boat. It's very efficient. In the end, we didn't buy the powder that way, but I make the point to your question that exports are not innately a bad thing. In fact, from a balance-of-trade standpoint I think it's going to be a critical salvation for the U.S. economy. But that's not why we don't export; it's for other practical reasons.

QUESTION: What do you feel the role of big retailers such as Wal-Mart play in fueling the organic movement?

GARY HIRSHBERG: Wal-Mart is a critical partner for us. There are 1,000 reasons to eat organic food (and I think I gave you 980 of them today). There's one reason not to, and it happens to be a very good reason for most of the world: it's more expensive. Much of the world is on limited disposable income; in fact, one-third of the planet is going to bed hungry tonight. So to have more expensive food is not a solution when you have to watch dollars, which of course a huge number of our fellow Americans must do. Wal-Mart and Trader Joe's and large discounters like the club stores, perform an important service. And Whole Foods also is offering, with their 365 program, other ways of making food more affordable through private label and other techniques, and that's critical.

Ultimately, we have to get the premium price of organic down to where it's at parity with conventional. Keep in mind that we Americans pay a smaller percentage of our income for food than any nation on Earth; less than Bangladesh or European countries. So when we're obsessed with cheap — and by the way, cheap food isn't really cheap, we're paying for it elsewhere with our healthcare costs — but our obsession with cheapness, our sense of entitlement, is part of the problem. And over time, as the real costs are realized — the cost of oil, the cost of pollution, the cost of our healthcare — then those conventional food prices will go up.

But the way we're going to get that premium down is volume. It's two-fold: getting rid of subsidies on the conventional side, which keep the costs artificially low, and the primary thing, which is volume. Remember the organic sugar example I gave you, where it was 100 percent more expensive 10 years ago than it is now, relative to conventional. It's come down because we've bought more and more and more of it. They've become more efficient.

When I started picking up organic milk in Vermont I picked up from a farm here and a farm there and a farm there, which meant the miles per gallon, were really high. Now we have farm, farm, farm, farm, farm; we're very efficient. We fill the tank as we fill the trucks. When you do that, your variable costs go down. So Wal-Mart, the big discounters, the big retailers, play a critical role in growing the volume because it makes it accessible to people who couldn't otherwise afford it.

Thank you so much for listening.



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