

# Chapter 1

## There is a problem with our food!

We are all concerned about the nutrition we consume and even more concerned about what we feed our children and grandchildren.

Personally, I want healthy and nutritiously dense food on my table, in my grocery store, and in my garden. But, the ugly truth is that this is not what we modern Americans are getting!

That may sound a bit bizarre to some, but it is none the less true. Modern science has proven *beyond a shadow of a doubt* that the fruit and vegetables we consume today are not only less nutritious than what our ancestors ate but are in fact, ***FAR LESS NUTRITIOUS!!***

Does that information worry you? It should! This is a problem that hasn't really received the media attention that it should. Nor is it taught in medical schools nor are most 'old school' nutritionists aware of the problem.

But those who are 'in the know' often tell us not to worry, this problem can be and is being addressed. My real concern is how we are addressing the issue. Yes, I want the problem fixed but I am not willing to take any chances with our food supply to get it solved.

One major group working to correct the issue is the food science community. The problem is that most of them want to fix the situation by using advanced science - the knowledge of DNA and genetic engineering - to find the answers we need. I worry about the potential dangers of GMOs. Entire books have been written on the dangers of GMOs so I will not beat a dead horse here, just let me say that for me, and let me stress right here that this is only my personal opinion, I can not help but be concerned that the endless science lab tinkering with our food and its internal make up is not only potentially dangerous, but is very nearly morally objectionable. Again, that is my personal opinion and my worry.

The whole idea of genetically modifying our foods, while I admit it has some promise, comes with too many risks and dangers. The problem, as I see it, is not with what people are trying to accomplish through this science, but is rather with *the potential of unforeseen problems genetic engineering might unleash*. I worry we are opening Pandora's Box and we may never be able to close it again.

So here I am on my soapbox proclaiming loudly for all the world to hear that I am 100% convinced of several things:

- 1) We need to be able to feed ourselves healthy, wholesome, nutritional rich foods.
- 2) No one should go hungry, We need to make the same high quality food available to all parts of the world.
- 3) We need to offer our children and the children in all parts of the world a safe and superior alternative to GMOs.
- 4) This is not only possible, but it is far less expensive, both in the short term and in the long term.

I believe that to address the issue we need to understand that their is a real and potentially dangerous problem with our modern food.

What is that problem? That problem is that the fruit and vegetables we eat today is lacking in much of the basic nutritional sustenance that we require simply to exist. More clearly stated the carrot, potato or tomato we eat today just is not as good for us as the carrot, potato or tomato used to be.

Which brings us to the question I am asked over and over again...

## **"Food today does not taste as good as it used to taste. Why? Is it just me?"**

No, it is not just you! Part of the reason for this is that the nutritional content of the conventional food supply has been rapidly declining for the last 100 or so years. Due to our modern farming and production practices which has led to increasingly poor soil conditions on modern farms and the over-reliance on chemical solutions, (usually petroleum or industrial waste-based,) pesticides and fertilizers. I believe this is a crisis that is getting worse and not better. In fact, the worse the depleted soil gets, the more modern farmers rely on potent chemicals to grow and keep the pests at bay on the very produce that makes its way to our supermarket shelves. In the past 50 to 100 years plowing, planting, and harvesting equipment have made life easier for farmers. It has also made it possible for farmers to work much larger farms growing much more food then ever before.

## **But everything (even good things) have consequences, right?**

Yes. These larger farms now produce far more food than is needed by the people in the surrounding communities, so at first the fruits and vegetables were transported to other nearby areas. More recently, with the advent of better trucks, trains and ships, commercial produce has begun to be transported thousands of miles and even *globally!*

At first glance this seems like a good thing. Let's send food all over the world and feed everyone! How can that be a bad thing? But the truth is that an unintended consequence has been the marked reduction in both the nutritional value and flavor of this long-hauled produce. Fruits and vegetables can now spend days or even weeks in transport and storage. This diminishes their nutritional content and natural sugars making them taste far more acidic, bitter, or just plain unappealing.

One hundred years ago, according to a study commissioned by the University of Illinois, apples were grown commercially in every state in the union. Now only thirty-six states have commercial apple concerns and that number is expected to drop to just twenty-five states by the year 2025.

So another question is, are those thirty-six states that are still growing apples shipping them hundreds of miles to the rest of America?

The surprise here is that the answer is both yes and no. Because while the apples that are sold in our American grocery stores are from the orchards found in those thirty-six states, **MANY** modern mega-marts are now selling apples that are grown in parts of Asia! Fruits that are picked there and then shipped thousands of miles to get here!

Needless to say, this increases the transport and storage time dramatically! The truth about this practice is that apples actually store relatively well and so are fairly well adapted to these conditions but the same can not be said for many, many other fruits and vegetables that receive the same treatment. Further adding to the problem, is the fact that to help the fruit and vegetable industry deal with the increased time of shipping and storage our twentieth-century solution was to allow producers to harvest their fruit **while it was still green** and firm enough to be handled without bruising or splitting. If the immature produce did not ripen during transport, science could force-ripen the

produce in climate-controlled warehouses once it reached its final destination (most often through the use of noxious chemical gases or dyes).

Surely it must be clear to even the most uninformed among us that fruit picked while still green and then artificially ripened is not going to be as nutritious, flavorful, or juicy as fruit that is allowed to fully ripen under the sun.

Grocery stores all over the U.S. have fruits and vegetables for sale during every season of the year, but to provide this selection to hungry and demanding consumers the produce must be shipped in from vast distances. The end result is that the produce no longer tastes as good as it looks. Strawberries are a great example of this problem. Yes, today our strawberries are bigger than they used to be but they haven't got even half the flavor. Why? Because they are now legally allowed to be picked when only actually 75% ripened. Worse yet is that even the industry now calls this 'mature'.

Yes you read that correctly, we have now legally redefined what a mature strawberry is. In modern America a strawberry may be picked and sold a fully ripe fruit when it is only 75% ripened. Look, I am no botanist but even I know that Strawberries are meant to be 100% ripe - red all over! A legally 'mature' strawberry will often still have a white, or worse green cap near the stem end. Any gardener worth his salt can tell you that means that the strawberry is not yet fully ripe! It will now taste anywhere near as sweet and delicious as a fully ripened, fully red strawberry! The problem here is that no strawberries will ever ripen any further once picked off the vine; so flavor no longer develops and phytonutrients are no longer produced. Farmers know that many of the most important elements of flavor are not reached in a strawberry if picked before it has fully ripened, but the practice still exists. All too often, peaches, plums, and nectarines turn out to be mealy, bland, and down right tasteless for the same reasons.

I believe we need a twenty-first century solution to this problem and it needs to be executed as soon as possible! **But what is that solution?** Not GMO foods. I firmly believe that natural high performance farming and gardening techniques which were practiced for hundreds of years, and are only recently being rediscovered and put into practice, such as optimizing soil microbiology through composting and the use of sea solids for natural soil nutrient enrichment are exciting alternatives. These promise fast results and far

healthier soil. Better still, they are steps that can be taken quickly, relatively inexpensively, and can produce positive results right away.

## **The problem is even bigger ...**

Food has actually been getting gradually less nutritious for far longer than the last 100 or so years. Many see this as a direct result of our human preference for sweeter, starchier, and more oil rich fruits and vegetables. That's right, we did it!

As *The New York Times* reported on its nytimes.com website (May 25th, 2013):

*“Unwittingly, man has been stripping phytonutrients from our diet since we stopped foraging for wild plants some 10,000 years ago when we planted gardens and became farmers.”*

Ancient wild plants provided an astounding level of phytonutrients that are largely absent from our modern cultivated fruits and vegetables. For instance, wild dandelions found the world over contain seven times more phytonutrients than spinach, and purple potatoes native to Peru contain 28 times more anthocyanins than commonly consumed russet potatoes.

In general, you can identify the healthiest super foods in our grocery stores simply by looks and taste; the more bitter and the more colorful a natural food is, the more antioxidants and other phytonutrients it is likely to contain.

But disease-fighting bitter or astringent foods, such as arugula, mustard greens, and Brussels sprouts are often avoided by consumers today; they were similarly avoided by our ancient ancestors as access to sweeter foods increased. So, too, was the case with colorful foods, which have slowly fallen out of favor in many cases.

The evolution of corn provides one of the most telling examples. The richly colored “Indian corn” now mostly used for fall decorating was once widely eaten and enjoyed. It contained far more disease-fighting antioxidants and less sugar than today's popular yellow or white super sweet corn.

*Genetic modification is also making our modern food less nutritious* than it used to be, according to a 2012 report given to the

organization Moms Across America, by an employee of DeDell Seed Company (Canada's only non-GMO corn seed company).

This report offers a stunning picture of the nutritional differences between genetically modified and non-GMO corn. Clearly, the former is **NOT** equivalent to the latter. That is made even worse when one considers that *the very premise by which genetically modified crops were government approved in the first place was that they promised to be not only as good as non-GMO but exceedingly better!* That has turned out not to be even remotely true!

Below is a small sampling of the nutritional differences found in this 2012 nutritional analysis compiled by the DeDell Seed Company of Canada:

- **Calcium:** GMO corn = 14 ppm / Non-GMO corn = 6,130 ppm (437 times more)
- **Magnesium:** GMO corn = 2 ppm / Non-GMO corn = 113 ppm (56 times more)
- **Manganese:** GMO corn = 2 ppm / Non-GMO corn = 14 ppm (7 times more)

GMO Corn was also found to contain up to 13 parts per million of glyphosate (the active ingredient in Roundup Ready herbicide) compared to 0 ppm in non-GMO corn, along with extremely high levels of formaldehyde, which is a well known carcinogen. Perhaps it is no wonder that animals, both on farms and in research labs, avoid genetically modified foods when given a choice. They are not smarter than we are but they do seem to know better than we



do on this account. Yet, in the U.S. upwards of 95% of all corn grown is now genetically modified.

There is no question that when farming (or gardening), one wants to start with the highest quality seed one can get their hands on, this is just common sense. The trouble is that independent study after study is now showing that GMO seeds are *vastly inferior* to most non-GMO seeds. However, I also believe epigenetic expression is every bit as valid in plants as it is in humans, which is to say that if we optimize the plant's nutrients through soil microbiology, we can improve the nutrient density of even GMO seeds. Better yet, if these optimization and enrichment techniques are used with seeds that have good genes to begin with you can far exceed even the optimal levels you could reach with GMO seeds.

