Eating on the Wild Side Pt 2

Corn of today does not resemble corn of the past. This is putting it mildly. Even before Monsanto, in the 1830's Noyes Darling, mayor of New Haven, Connecticut and gentleman farmer wanted to breed a sweeter, whiter, faster growing corn, and within six years he did. Not knowing at the time that this breeding was eliminating the yellow, beta carotene nutrition from the corn and by breeding up the sweetness was turning the corn into a sugar laden food. The original, low sugar corn was denoted to “field corn” given to animals.

Our first corn was a wild ancestor called Teosinte from Mexico. It is dry and starchy, though twice as much protein as our modern corn and a lot less starch. Over the span of seven thousand years, several spontaneous mutations, hundreds of generations of human selective breeding and recently genetic manipulation corn has come to a be a pale colored, up to forty percent sugar, and much less in phytonutrients. The colored corn, purple, blue and multicolored, with their high anthocyanin with thirty percent more antioxidants than modern white corn, if available are almost impossible to find, even at farmers markets and usually have to be planted from seeds.

Unknown to some, in the 1930's plant genetics with corn began, not for a new type of corn but just to find out the sequencing of genes. What became of this is that in gathering corn seeds from old corn that had gone through the normal spontaneous mutations they decided to create their own mutant corn and subject it to X rays, UV light, toxic chemicals and cobalt radiation. They would plant the seeds and see what would happen. The resulting plants either did not look like corn or were shrunken or dwarfed. This is important as in 1946, the researchers thought of a way to mutate corn seeds and find out what would happen to large military ships (and probably people) in atomic warfare by blasting the seeds with an atomic bomb on the Bikini Atoll in the Marshall Islands as part of Operation Crossroads, a military research project. The secondary goal was to study the effects of radiation on plants and animals (i.e. people). The government document results are AD473888 “Effects of an Atomic Bomb Explosion on Corn Seeds” written in 1951 but not declassified until 1997. The government collected the seeds and planted them in a secure government facility near Washington, D.C. These plants grew into short-lived freaky looking plants. Samples of these corn seeds were sent to the Maize Genetic Cooperation Stock Center for future research. Geneticists and plant breeders could examine these samples as easily as a library book.

Where do you think our modern super sweet corn came from? The above mutated, atomic bombed seeds, of course. When a geneticist ordered some kernels from the Maize Genetics center to study, one that was shriveled and shrunken, he popped a few in his mouth, noticed the great sweetness and turned overnight into an entrepreneur. These turned out to be not just ten times sweeter than the original corn, it stayed sweet ten times longer with shipping across the states possible, revolutionizing the corn industry. He first has to fix one problem in that the sugar was so high, with so little starch, the seeds would not grow. He had to breed them with several old fashioned sweet corn varieties of old.

More current, plant breeders have been using technology to put multiple mutations onto a single variety of corn called “augmented super sweet corn the ultimate sweet and ship hardy corn on the cob. Ninety five percent of today's corn is this super-sweet mutated corn. Important to know that out of the thousands of mutant corn seeds, the only varieties that made it to the consumers are the super soft, sweet and yellow or white in color even though the center has kernels that are unusually high in protein, anthocyanins, or beta carotene.
How to choose the most nutritious corn in the supermarket.

The deepest yellow corn. Purple, blue and red are not seen in the stores. Deep yellow has fifty eight times more betacarotene, lutein and zexanthin than white corn. Farmers' markets are best as they usually sell heirloom varieties of yellow corn, and these were created before the 1960's, free from genetic manipulation. They are not so sweet as to mess with the blood sugar levels and thus have a cornier taste and creamier texture to the kernels as the starch is still the predominant ingredient.

Growing and Storing

Look for varieties that are not extra sweet and labeled “Kandy Korn”. The code next to each variety will tip you off. Avoid sh2 or se. Find varieties labeled “old-fashioned, “heritage,” or “heirloom.” (Seed Savers Exchange or Southern Exposure Seed Exchange catalogs have them. These are coded “su” for “sugary”. Buy as many as you can chill and eat in a day. The sugar turns to starch, losing its sweetness within a day of picking.

Cooking:

No boiling, all the nutrients go into the water. Steaming on the stove top with the husks on, just cut off the silks. Or put in the microwave, silks off, husk undisturbed 3-4 minutes for a single ear, 5-6minutes for two ears. Test for doneness by opening a bit of husk, trying a kernel, then when done, leave on the husk and let them sit for 5 minutes. Grilling in the husks for five minutes, then removing the husks and silk, then back on the grill until lightly grilled on all sides.

Canned corn recently has been found by food science labs to have more carotenoids when heated, because unlike Vitamin C, phytonutrients are maintained in spite of heating, though it will not taste like fresh corn. Frozen has the same nutritional content as fresh. Steaming without defrosting is best to retain nutrients. The only downside to these is that they are the super-sweet corn, but these both are the best idea for emergency storage, when fresh may be impossible.

When picking out corn products like cornmeal, tortilla chips, grits, look for colorful whole grain yellow, blue, red and purple cornmeal, which includes the oily germ. This makes it susceptible to rancidity, so store in the refrigerator or freezer no more than a month's supply.

GMO Corn

“In the summer of 2012 large quantities of GMO sweet corn appeared on grocery store shelves and roadside produce stands. In 2011, Monsanto announced plans to grow genetically modified sweet corn on 250,000 acres, roughly accounting for 40 percent of the sweet corn market. The sweet corn is being used for frozen and canned corn products, and is also available fresh across the country.

Here are key facts you need to know:

What?
GMO sweet corn is genetically engineered to be herbicide resistant (Roundup Ready) and to produce its own insecticide (Bt Toxin). Like all GMOs, genetically modified sweet corn has not been thoroughly tested to ensure that it is safe for consumption.
Who?
While GMO sweet corn has been produced in the past by Syngenta, this is the first attempt by a biotech company to corner the sweet corn market.

Where?
GMO sweet corn can be found in the produce aisle of your local food store and at farmers’ markets and farmstands. It can also be found in processed foods that contain sweet corn.

http://www.nongmoproject.org/

All of the Non-GMO Project Verified sweet corn is listed here; however, if you can’t find a Verified version, eating Certified Organic sweet corn is a great step towards protecting you and your family from this experimental food. Under the regulations of the National Organic Program, Certified Organic farmers are not allowed to knowingly plant GMO seed.”

http://www.nongmoproject.org/find-non-gmo/search-participating-products/?catID=13

Potatoes

History:
One hundred thirty pounds of potatoes a year are consumed by the average person a year. 7.5 billion pounds as french fries and eighteen million pounds as chips on Super Bowl Sunday alone. Thirty two percent of Americans diets involve the potato where less than one percent of the daily allowance includes dark green and cruciferous vegetables.

Approximately, four hundred years ago, the wild potato (Apio), a member of the pea family, has three times more protein than our modern potatoes. They are a rich source of the phytonutrient genistein (soybeans are also a pea member with the same nutrients). Genistein has been linked to lower breast and prostate cancer. It was used by the Sioux to make a paste and applied directly to skin tumors. It reduced blood pressure ten percent in a rat study. Sadly, their three year growth period and lack of commercial appeal for french fries makes them classified as a noxious weed.

The large, fast growing, Irish potatoes of today, are native to Chile and Peru, twelve thousand feet above sea level and thrive in poor soil, strong winds and freezing temperatures. They perfected a way to “freeze dry” the potatoes and keep them in cold storage to last up to ten years. During the Korean War, the U.S. Military observed the technique and replicated it to use as an instant potato product in troops K rations.

Modern Potato

The defects of the wild potato are gone, the productivity has increased six fold, but the food value has decreased steadily in the last hundred years. The loss of color is the key. The Purple Peruvian potato has twenty eight more times the bionutrients than the modern potato.

Wild potatoes are lower in sugar and rapid digesting starch than the modern potato, which makes our bodies rise quickly in blood sugar.

Pesticides
The potato makes the list of the Environmental Working Group's annual “Dirty Dozen” list of the most contaminated foods. Scrubbing only removes twenty five percent and peeling seventy jpercent. The peels are the most nutritious part of the potato. Fifty percent of the potatoes antioxidants are removed with the peel.

Buy and Store

So buy organic and eat the skins. Surprisingly, the Russet Burbank, called an old potato, is very high in phytonutrients, C and B vitamins, but it also has a high glycemic index. Old potatoes can be stored outside the refrigerator at forty to fifty degrees for several months. The refrigerator makes their sugar content increase and reduces the storage life of other vegetables.

New potatoes have the waxy flesh, great for potato salads and are red, black, white and purple and harvested early and thus, not being mature have half the glycemic index and are high in phytonutrients approaching the wild potato. New potatoes thin skin need to be stored in the refrigerator and eaten within a week.

Maximize the Flavor and Health Benefits

Cook potatoes and then chill them for about twenty four hours before you eat them, they turn into a moderately low glycemic vegetables. Thus chilling potato salad overnight accomplishes the same thing. You can also then reheat the potatoes after chilling and keep the glycemic index down. Adding fat to potatoes or cooking them in fat and sprinkling them with vinegar like the British do also slows down digestion.

Other Root Crops

Carrots
The wild carrot, the ancestor of our modern carrot, is a plant native to Afghanistan. Up until four hundred years ago, orange carrots did not exist. Only purple, red, yellow and white were, until Dutch breeders made the orange variety, which became the common variety in the Western World. Unfortunately, the orange carrots do not have the promise of disease preventative chemicals, like the purple, they are a good source of beta carotene. You can triple the nutrients you get from orange carrots and increase their flavor too. Buy them with their green tops as this tells you they are no more than a few weeks old. Cut off the tops before refrigerating to preserve the moisture in the carrots. Freezing carrots can reduce their antioxidants by half. Fresh carrots are most nutritious sauteed or steamed, not boiled, which has been known in Chinese medicine for a long time. It breaks down the outer walls making the nutrients more available. The most recent discovery of cooing carrots whole and then slicing or chopping after they've been cooked, you get more nutrients than cutting before cooking. This is because of a discovery at Newcastle University in England, whole cooked carrots have twenty five percent more falcarinol, a cancer fighting substance than carrots cut before cooking. They also retain more sweetness cooked this way. Serving them with an oil or fat makes them more absorbable.

Storing
Carrots can be stored for weeks without losing their food value as they have a low respiration rate. Keep them away from ethylene gas producing veggies and fruits as it makes carrots bitter. Put carrots in a sealed plastic bag and store in the crisper drawer of the refrigerator or another dark, cool and humid environment.
Ingredients (Makes 2 Liters)

4 ears of purple corn (I'll tell you where to buy them below)
3 sticks cinnamon (whole cinnamon, not powdered)
6 whole cloves (again, not powdered)
2 liters (1/2 gallon) of safe drinking water
1 cup sugar (just add sugar or sugar substitute to taste)
juice of 3 whole squeezed lemons (or 4-5 limes)
2 diced apples or pears

Instructions

In a pot, place the 4 ears of corn, cinnamon and cloves to cook. Cover them with water until the corn is completely covered with the 1/2 gallon of water.

When the water begins to boil, uncover the pot and allow the corn to cook at a boil for 10-15 minutes. Strain the juice into a pitcher to separate the juice from the corn. Do not throw away the water/juice - it's what you're going to drink!

Add sugar and lemon juice and stir until the sugar dissolves (you can substitute the lemon for lime if you want a slightly less acidic taste - I prefer limes to lemons myself, but you'll need about 4-5 to get the same amount of juice as the lemons because limes are dryer inside).

Wait until the boiled juice is cool, then add the diced apples or pears and put it into the refrigerator to get cold (do NOT put the hot chicha in the fridge). The apples or pears (your choice) will float on top and will turn a dark red or purple as they absorb the color of the chicha.

Alternatives

At this point, instead of adding fruit, in Bolivia people sometimes strip the purple corn kernels from the cob with a knife and add the kernels to the juice. If you choose to do this, you're actually not going to eat the corn. You leave it in the bottom of the glass and drink only the liquid. By leaving the kernels in the juice, it turns darker and the flavor is stronger. The juice also gets a little thicker after a while - maybe because corn is a starch. I like to strain it and drink just the juice.

Important: The corn kernels will eventually ferment so if you do add the kernels, you must drink the chicha within 1-2 days. Fermented chicha is a different recipe - people add alcohol to it and let it ferment before they drink it. It loses all its healthy qualities once you do that.

Looks sort of like grape juice, doesn't it? Drink this as cold as possible - it's delicious. Or add ice if you like. If you thought iced tea was refreshing, try chicha morada!

http://www.suntavapurplecorn.com/where-to-find
http://sensiblesurvival.blogspot.com/
As medical advances increase the length of our natural lives, there's growing interest in remaining healthier through those extended years.

Of late, there's much interest in traditional foods from our more primitive pasts. We look to science to validate the wisdom of the ages and to answer questions such as: Is Green Tea better than Earl Gray? Is caffeine bad? Is cooked better than raw? What about alcohol?

One of the up-and-comers on the list of healthy foods is Purple Corn (sometimes called Blue Corn) and one of the most refreshing ways to enjoy the benefits of Purple Corn is with a nice, cold glass of Chicha Morada.

Chicha Morada - Healthier Adaptation Recipe
Serves: the whole family
Prep Time: 5 minutes
Total Time: 2 hours
By adding fruit juice rather than cooking the fruit, this Chicha Morada delivers more vitamins, needs no added sugar and has a crisper, fresher taste than the traditional recipes.

Enjoy

Ingredients
Purple Corn: 15 ounce bag of kernels
Water: 2 gallons
Cinnamon: 2 sticks
Cloves: 2 or 3
Lime Juice: 1/2 cup more or less
Fruit Juice: 1 or 2 cups. Apple juice grape juice and/or pineapple juice.

Instructions

Add corn, cinnamon sticks, cloves and 1 gallon of water to a pot that you don't mind staining.

Boil for 1 hour

Strain liquid into a glass (non-staining) container. Retain corn and spices.

Add the 2nd gallon of water to the corn and spices and boil again for 45 minutes to 1 hour.

Add 2nd batch of strained liquid to the first.

Add lime juice and fruit juice.

Store under refrigeration and serve well chilled.
http://www.squidoo.com/chicha-morada
A Melange of Roasted Root Vegetables

Ingredients
• 2 pounds carrots, peeled, stem and root ends trimmed, cut into 2-inch by 1-inch pieces
• 2 pounds red beets, peeled, stem and root ends trimmed, cut into 8 wedges
• 1 pound golden beets, peeled, stem and root ends trimmed, cut into 8 wedges
• 1 pound parsnips, peeled, stem and root ends trimmed, cut into 2 inch-by-1 inch pieces
• 1 pound golden or red new potatoes, scrubbed clean and quartered
• 1 pound shallots, peeled and halved or quartered, depending on size
• 4 teaspoons kosher salt
• 1 1/2 teaspoons fresh ground black pepper
• 1/3 cup extra-virgin olive oil

Instructions

Serves 6 to 8

Preheat oven to 450 degrees.

Place all ingredients in a large mixing bowl and toss well to combine. Transfer to an Emerilware Hard Anodized Roasting Pan and place in oven. Roast vegetables, stirring occasionally, until tender, about 1 hour. Remove pan from oven and allow cool slightly before serving.