
What is the connection?

MAKING THE CONNECTION BETWEEN NUTRITION AND AGRICULTURE

Agriculture produces food. And food directly influences nutrition and health. Yet, even with this inextricable connection, agriculture and nutrition are often miles apart in discussion and policy – if the respective policy makers even think about each other at all. Nutrition professionals generally think little about how food is produced, how it is distributed, how it is sold, or agriculture policy in general when they urge eating fresh fruit and vegetables for good health. Nor does it appear farmers are thinking about the nutrition and health of individuals as they plant another row of commodity corn in a mono-cropping system rather than tomatoes for fifty area families. The connections between agriculture and nutrition are not often made but are too important to ignore any longer. These two contingencies must talk. And a whisper is being heard.

There is a small contingent of nutrition professionals who are thinking about agriculture and its connection to nutrition and health. And likewise, there are farmers who are growing food in a sustainable manner for our individual and

our nation's health. Food Policy Councils are developing which look at these connections and help make the right ones happen. Making the connection between nutrition and agriculture may be the most important way to improve the health of our nation while at the same time the livelihood of rural farmers. This connection is our future.

Joint Crisis Nutrition & Health

You are what you eat. No matter how hard we try to ignore it, this old adage still rings true. The food you eat is one of the most important factors influencing how well you live and how long you live. Diet is a factor in nine out of the 10 leading causes of death. Of the two leading causes, heart disease takes the lives of three-quarters of a million people each year, cancer over one-half million. Food is a major risk or healer in both. Our eating habits are also a major factor in the obesity epidemic recently declared by the US Surgeon General. Two

You need to persevere so that when you have done the will of God, you will receive what God has promised.
Hebrew 10:36



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out of three adults are overweight. The percentage of overweight young children has doubled, and the percentage of overweight adolescents has tripled in the last 20 years. These maladies affect both the food rich and the food poor.

Even while knowing the enormous influence diet has on health, many Americans still eat poorly. Amazingly, only 2% of school-aged children meet the Food Guide Pyramid's serving recommendations for all five major food groups. At the same time, soda consumption is skyrocketing; in the US alone, enough soda is produced for every American of every age (infant through elderly) to drink 566 – 12 ounce soft drinks per year, or just under 200 calories per day. A nutrition and health crisis is here.

Farming

Simultaneously, a farming crisis is upon us. The number of farmers who are able to make a reasonable living and stay on the family farm is declining. Rural communities are becoming ghost towns. Farm prices are chronically low with farmers having less and less power to bargain for fair prices in a market that is controlled by a few large agribusinesses and the retail food industry. The farmer's share of the food dollar has dropped drastically from over 40% to less than 10%. Things do not look good for many farmers in this picture.

A Food System Perspective

A food system encompasses the entire chain that food progresses through from farm to fork: production, processing, distribution, promotion, sales, preparation, and consumption. Looking at this total agro/food system shows us the big picture and how each of the separate components has its own influence on nutrition and health.

Production

Both plant and animal on farm production practices influence our health. From agricultural crop production comes health connections with use of pesticides and the long term

health consequences not only for the consumer eating the crops with pesticide residues, but even more for the farmers and those living near who are exposed to the pesticides. Or new connections being made with recent research that shows that organically raised foods have higher levels of nutrients such as Vitamin C or antioxidants such as polyphenols. In the crop production health connection is the health and safety issue of genetically engineered (GE) crops. The huge controversy over the safety of GE food underscores the many questions not answered regarding the safety of this new technology. Or, how often in agriculture research is nutrition of the final product considered?

Animal husbandry production brings its own set of health connections: from use of human antibiotics in animal production with resultant antibiotic resistance causing a crisis in managing human microbial infections, to use of hormones in production with questionable health effects, to food poisonings caused by farm microbial agents such as *Salmonella* or *Campylobacter jejuni*. For example, *Campylobacter* bacterium causes the greatest number of food borne illnesses, which range in severity from inconvenient diarrhea to death. Reservoirs for the bacterium on the farm are poultry, cattle and pigs. It is estimated that 90% of poultry carcasses sold have *Campylobacter* – a direct connection from farm to health.



Do to others
whatever you
would have
them do to
you.
Matthew 5:12

Blessed are
they who
hunger and
thirst for
righteousness,
for they will
be satisfied.
Matthew 56



Processing

As a general rule, the more close to nature or wholesome a food is the better it is for our health. Some processing is often necessary and even desirable, but very highly processed foods tend to lose valuable nutrients and take on unhealthy components such as fat, salt, sugar and preservatives. For example, corn is a highly nutritious food and staple of many cultures for millennia. Frozen corn on the dinner table can be a healthy family favorite. But take that same corn and process it into a corn sweetener which is added to a highly processed cookie with fat, salt, preservatives, and of course excessive calories, and we have a detriment to our health. Food processing affects our health.

Distribution

The development of our vast food distribution system of boats, trains, planes and trucks has allowed food to be transported all over the world. We can eat a fresh tomato in the dead of winter in Iowa. But for what benefit? And at what cost? The benefit is often touted as a more healthy diet year round. We need those tomatoes for our salads in the winter. Not so. Based on research looking at a Northeast diet using only locally available foods (i.e.: no fresh tomatoes or oranges in winter), researchers found the local Northeast diet to be nutritionally outstanding in all seasons. This makes sense considering that throughout history humans have survived on local foods.

In addition, how many nutrients are lost from a tomato that is picked green, so that it can be transported over 1500 miles, compared to the tomato that is allowed to ripen on the vine and delivered locally? Or what is the cost of this vast distribution system with loss of freshness and taste? It's understandable that children will eat and enjoy fresh, tasty tomatoes grown locally but turn up their noses at cardboard, tasteless ones shipped miles, making ketchup the closest thing to a tomato they ever eat. These influences on their eating habits can last a lifetime and dramatically affect their health.

Promotion, Sales, Preparation, Consumption

The last links in an international food system have continued influence on the nutrition and health of all. From billions of dollars spent on advertising to convince you to eat highly processed, unhealthy food, to sales tactics that promote eating super-sized for just a few pennies more, to preparation guidance convincing everyone they have no time to cook, we end up with the finale – a nutrient-wasted, super-sized, instant, microwave meal. No wonder our health statistics are what they are.

The Future

We know the best diet for health. It is one with vegetables; fruits; unrefined whole grains; a moderate amount of protein from nuts, beans, lean meats and or dairy products; and a

moderate amount of fat from oils. However, the food produced by our agro/food system does not generally reflect this healthy diet. Our system produces too much food – estimated at 200-500 calories per day. This excess makes it cheap. The end result is too much cheap food produced, often stripped of beneficial nutrients in processing, transported 1500 miles to our plate losing more nutrition and taste, which we then blast with a microwave or pick up and eat while driving our car because we have been convinced we are too busy to enjoy cooking and eating. This takes its toll.

However, there are bright spots where both nutrition and agriculture are connecting and benefiting. Where farmers are diversifying and growing a variety of healthy vegetables and grains for people using methods which replenish the soil and protect our waters. Or where farmers are humanely raising animals in their natural habitat while protecting our environment. Consumers are doing their part in supporting these farmers by seeking out local farmers and buying their locally produced food.

Schools are another perfect juncture for teaching the interconnectedness of nutrition and agriculture. Schools are buying foods from local farmers to offer a salad bar or serve

local apples. The benefits are multiple as the farmer wins, the school wins, and the kids win by eating food which tastes good and promotes their health. Schools are also teaching institutions: the place where we can teach children about food production with a school garden; where we can teach children about food processing and cooking to maintain the wholesomeness and nutritional value of food; where we can teach children about eating and the joys of setting down to the table with friends and family for a real meal which they helped raise, pick and prepare.

These examples need to be multiplied many times over across the country. We know they work. But they are not the only answer. Our national agricultural policy must move too. It must move away from rewards based on more and more production to rewards based on considerations of nourishment, health and sustainability. Our health and our farmers will be the winners when this connection is made.

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