Statement of

Nicholas Maravell, Maryland Organic Farmer

Before the U.S. House of Representatives

Subcommittee on Horticulture and Organic Agriculture

May 14, 2009

Mr. Chairman and Members of the Committee, I am Nick Maravell, an organic farmer for the past 30 years.

I appreciate the opportunity to provide testimony regarding organic agriculture and food safety to an Agriculture Committee. I request that my prepared attachments be included in the record.

I own and operate Nick's Organic Farm, located in Montgomery and Frederick Counties, Maryland. I have 170 acres in production.

I am a strong supporter of food safety. I will try to show how our farming practices, organic certification, and direct marketing give us unique and effective built in food safety advantages. And finally, I will offer a few recommendations I hope will shape any Congressional changes to food safety policy.

We raise grass fed Angus beef, pastured chickens and turkeys, and free range eggs. We grow various mixed hays, and we maintain different types of pastures. We produce field corn, soybeans, barley, rye grain, and hairy vetch. We grow fresh edible vegetable soybeans. On the farm we process and package our own chickens, turkeys, eggs, fresh soybeans, cover crop seeds, and poultry feeds.

Our system of farming has evolved over the decades. We started with all vegetables, added small grains, then added large grains and hay, and finally added livestock. Our system is constantly gaining more diversity

and complexity. We started with two year rotations, then three year, then five year, and now 8-12 year. We used to moldboard and chisel plow, now we rarely do either. Our earthworms and our mix of crops do the deep tillage.

We operate a diversified and integrated farm. This means we raise several types of crops and animals together. Generally our system demonstrates the advantages of encouraging diversity, of fostering synergies, and of relying on nutrient recycling and self-regulating systems. These terms simply mean the parts of our system are designed to work well together and require little re-direction to maintain the system once it is established.

For example, by extending our rotations to include hay and pasture, we have been able to break weed, disease, insect, and intestinal parasite cycles in our row crops, forages and cattle. Consequently we use no insecticides, herbicides, fungicides, or parasiticides-- one component of ensuring food safety.

In addition, our crops and livestock are chosen only partially for economic marketability. More importantly the mix of plants and animals is intended to compliment each other as a self-sustaining system

This diversity also determines our marketing strategy. We must add on farm value to our products to be economically viable. We do this by making the products certified organic and by selling most of them directly to the final user, either a consumer or another organic farm, remaining only one step down from the final consumer. This direct marketing system builds in ultimate accountability and traceability for the customer, a major factor in food safety.

Unique Food Safety Characteristics of Certified Organic Food

As a certified operation, we are part of the organic industry which is proactive and uniquely positioned on food safety in ways that are not standard in other food sectors. All of these provisions are required of organic operations, but not of conventional operations.

1) Organic farmers and processors are required by law to maintain five year records that allow "one up, one down" traceability for all inputs and for all sales. From field to fork, every entity in the supply chain or in the stream of commerce must maintain an audit trail that permits full traceability and accountability.

2) Raw livestock manure cannot be used on crops for human consumption without an extended waiting period before harvest.

3) Compost made with animal manure must meet temperature, mixing, and time requirements to ensure its safety or else be treated as raw manure.

Recommendations on Future Congressional Action

Regarding recommendations for pending proposals, today's food safety concerns have not emerged from organic or family sized producers and processors. I will mention only one of five points contained in my written statement, since I feel this one point is often overlooked.

> Congress should be very cautious in drawing organic food safety conclusions from studies that did not look at organic food production systems. For example, manure mineralization rates and counts of antibiotic resistant bacteria on conventional farms and processing plants are not reliable indicators of what would be found on organic operations. The ecological science base for organic agriculture in general, and for organic food safety in specific, is expanding rapidly. The organic community has begun advancing research proposals to federal competitive grant programs, and we can expect to see appropriate organic food safety studies funded this year and in the coming years. These studies can both document the level of safety of the organic food supply and develop additional procedures and processes that can make organic products available to a wider audience at a more cost effective price.

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Nick Maravell has been farming organically since 1979. Currently, he has 170 acres under cultivation in Montgomery and Frederick Counties, Maryland. He uses a diversified farming system to raise vegetable, forage, grain, seed, and livestock products. For the past two decades he has conducted on-farm research through grant programs and in cooperation with USDA's Beltsville Agricultural Research Center, the University of Maryland, and the Maryland Department of Agriculture.

Nick has also been active for many years at the national and state level in the development of organic legislation and standards, organic research priorities, and organic marketing issues. He is a founding board member of the Maryland Organic Food and Farming Association and has served in many leadership positions in the association. He has also served as a steering committee member on the Scientific Congress on Organic Agricultural Research and actively participated in drafting its National Organic Research Agenda, published in 2007. He has also served as board member of Future Harvest-Chesapeake Alliance for Sustainable Agriculture, and a member of the Farming Practices Committee of the Organic Trade Association.

During the 1970's and 80's in Washington DC, Nick served in a variety of managerial and staff positions in the areas of policy development, research, and financial and program management. Nick served with the following organizations: National Institute of Education, US Senate Labor and Education Committee, Office of Education, National School Boards Association, Office of Management and Budget, Federal Council on the Arts and Humanities, National Endowment for the Arts, US Treasury, National Academy of Sciences Board on Agriculture.

Nick received his B.A. from Columbia College in Sociology and Urban Studies and his M.Ed. from Columbia Teachers College in Administration of Educational Systems.

Committee on Agriculture
U.S. House of Representatives
Required Witness Disclosure Form

House Rules* require nongovernmental witnesses to disclose the amount and source of Federal grants received since October 1, 2006.

Name: Nicholas Maravell

Address: 9565 Horseshoe Lane, Potomac, MD 20854

Telephone: 301-983-2167

Organization you represent (if any): none

1. **Please list any federal grants or contracts (including subgrants and subcontracts) you have received since October 1, 2006, as well as the source and the amount of each grant or contract. House Rules do NOT require disclosure of federal payments to individuals, such as Social Security or Medicare benefits, farm program payments, or assistance to agricultural producers:**

Source: none **Amount:**

Source: **Amount:**

2. **If you are appearing on behalf of an organization, please list any federal grants or contracts (including subgrants and subcontracts) the organization has received since October 1, 2006, as well as the source and the amount of each grant or contract:**

Source: none **Amount:**

Source: **Amount:**

Please check here if this form is NOT applicable to you:

Signature: N C Maravell

* Rule XI, clause 2(g)(4) of the U.S. House of Representatives provides: *Each committee shall, to the greatest extent practicable, require witnesses who appear before it to submit in advance written statements of proposed testimony and to limit their initial presentations to the committee to brief summaries thereof. In the case of a witness appearing in a nongovernmental capacity, a written statement of proposed testimony shall include a curriculum vitae and a disclosure of the amount and source (by agency and program) of each Federal grant (or subgrant thereof) or contract (or subcontract thereof) received during the current fiscal year or either of the two previous fiscal years by the witness or by any entity represented by the witness.*

PLEASE ATTACH DISCLOSURE FORM TO EACH COPY OF TESTIMONY.

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May 14, 2009

Mr. Cardoza, Ms. Schmidt, and Members of the Committee, I am Nick Maravell, an organic farmer for the past 30 years.

I appreciate the opportunity to provide testimony regarding organic agriculture and food safety to an Agriculture Committee.

I own and operate Nick's Organic Farm, located in Montgomery and Frederick Counties, Maryland—not too far from here. It is a relatively small operation. I have 170 acres in production, the vast majority of which is in farmland preservation.

To give you an idea of where I am coming from, I thought a little background about myself would be helpful. Over the last 30 years, I have been active at the national and state level in establishing organic legislation and regulations, advancing scientific organic research, and increasing awareness of organic methods and improving markets for organic products. I have worked through such organizations as the Organic Trade Association, the Organic Farming Research Foundation, and the Maryland Organic Food and Farming Association. [As a life long member of the Organic Trade Association, I worked on a variety of policy and regulatory issues with the Farming Practices Committee. As a member of the Organic Farming Research Foundation, I have actively participated in the drafting of the National Organic Research Agenda, published in 2007. And I am a founding Board Member of our state association, the Maryland Organic Food and Farming Association, where I have worked in a variety of leadership capacities to advance the interests of organic farming and to expand markets for organic products. Today I am testifying as an individual representing no organization.

I am a strong supporter of food safety, and I often think that I am more concerned about food safety than my customers are--and that is the way it should be-- my customers should not have to worry about the safety of my products. I would like to explain to how various aspects of food safety are built into the way we farm and market our products. To do this I need to briefly tell you what we produce, how we produce it, how we market it, and generally what is behind our thinking.

Hopefully, I will be able to show that our farming practices, our organic certification, and our direct marketing give us unique and effective built in food safety advantages. And finally, I would like to offer a few observations which I believe should shape the Subcommittee's thinking regard changes to food safety policy, especially with regard to organic and family sized operations.

We raise grass fed Angus beef, pastured chickens and turkeys, and free range eggs. We grow various types of grass/clover and alfalfa/grass hays, and we maintain different types of pastures. We produce field corn, soybeans, barley, rye grain, and hairy vetch. We grow fresh edible vegetable soybeans, also known as edamame.

Our system of farming has evolved over the decades. We started with all vegetables, added small grains, then added large grains and hay, and finally added livestock. Our system is constantly gaining more diversity and complexity. We started with two year rotations, then 3 year, then five year, and now 8-12 year. We used to moldboard and chisel plow, now we rarely do either. Our earthworms and our mix of crops do the deep tillage.

As or system evolved, we recognized the tremendous gaps in scientific knowledge to help guide our future development. So we began experiments on the farm. Now we conduct ongoing long-term research on the farm in cooperation with USDA's Beltsville Agricultural Research Center and with personnel from the University of Maryland. We also cooperate in demonstrations with the Maryland Natural Resource Conservation Service.

We have found that by extending our rotations to include hay and pasture, we have been able to break weed, disease, and insect cycles in both our row crops and our forages. Consequently we use no insecticides, herbicides, or fungicides on our crops.

We have found that leaving our cattle on pasture, never putting them in inside, and feeding no grain, even during the cold winter months, results in an annual veterinary bill of zero. We have found that management intensive rotational grazing improperly used simply spreads intestinal parasites to all of our pastures. We have found that grazing poultry across our pastures, rotating pastures through hay and row crop cycles, and carefully selecting beef genetics for parasite resistance has resulted in never having to use parasiticides on any organic cattle born on our farm.

We have found that proper use of winter and summer cover crops can suppress weeds, increase nitrogen available for subsequent crops, add to soil organic matter, and improve soil tilth, and increase water penetration and moisture retention. We have found that multi-species cover cops with 2-4 different plant types are almost always better that single species covers.

We have found that virtually all of our fall and summer cover crops can be planted with organic no-till methods, helping to maintain good soil structure, reducing microbiological disruption and soil compaction, reducing organic matter depletion and CO2 releases, saving energy, and making it more difficult for small seeded annual weeds to become established.

By using nitrogen fixing legumes such as soybeans, alfalfa, clover and hairy vetch in both our crop rotations and our cover crops, we do not need to purchase any nitrogen fertilizer. We add naturally occurring and slow release minerals, such as high calcium lime, rock phosphate, and potassium sulfate. The latter two minerals are added to selected fields maybe once every 10-20 years.

Pardon me if I have given you what appear to be random examples of how we farm. Now at the risk of using some jargon, I will attempt to explain how this fits together and is related to food safety.

We operate a diversified and integrated farm. This means we raise several types of crops and animals together. Generally our system demonstrates the advantages of encouraging diversity and decentralization, of fostering synergy and symbiosis, and of relying on nutrient recycling and self-regulating systems. These terms simply mean the parts of our system are designed to work well together and require little re-direction to maintain the system once it is established. Our crops and livestock are chosen only partially for economic marketability. More importantly the mix of plants and animals is intended to compliment each other as a self-sustaining system. People often ask me, what is the main thing that we do that makes our organic system work? My response is: "No one thing we do is very important—everything we do is important, each in its own small way."

I view half of our farm operation as living above the ground as crops and animals. I view the other half as living below the ground in the soil. While both halves are important, I begin constructing my farming system around the long term sustainability of the soil because it very often takes longer to produce desired changes in the soil than in crops and animals. A rich active living soil is a prerequisite to producing healthy plants and animals. As we will see, healthy plants and animals are a first step towards food safety.

In general, adding organic matter is a good way to achieve a biologically active and healthy soil because it feeds the microbiota, such as bacteria and fungi, and the macrobiota, larger organisms, such as earthworms. The micro biota are organisms, that are so small a million could live in a teaspoon of healthy soil rich in organic matter. These two types soil organisms digest decaying organic matter and release nutrients that plants use to grow. Quite simply, Feed the Earth and it will feed us.

So for example, we leave our corn stover and barley straw on the surface of the field and no-till our cover crops through it. When we later incorporate our cover crops into the soil, we use shallow tillage. This tillage leaves some organic matter on the surface to reduce soil erosion and run off and places the rest of the organic residues in the top four inches where air, moisture and temperature create ideal conditions for the soil biota to digest the organic matter quickly. From the mixture of mature plant matter with fresh plant matter, including legumes, the soil biota create longer lasting carbon compounds and associated stable plant nutrients which will not easily leach away. Stable soil nutrients mean less need to add additional fertility from organic sources, such as manure, and less run off to contaminate water, both leading to safer food crop production.

Our animals are not fed antibiotics, and our ground is not treated with pesticides. Both antibiotic and pesticide residues can impede the growth of certain species of micro and macro biota, thereby suppressing their activity. We are grazeirs. Our animals are managed to spread their own manure on an active soil with plenty of vegetative cover to take up the nutrients. Except in the coldest months of winter, manure breaks down quickly. We move our animals all the time. Water and feed for the animals is constantly moved so there are no concentrations of manure to collect large masses flies and diseases. We cannot collect manure, we do not spread manure, and our animals do not graze in areas that will be used for human crop production within the next year. These measures, designed to build a healthy soil, also help ensure the safety of food products by not encouraging antibiotic resistant bacteria in our animals and by preventing bacterial contamination of our food crops.

As a small diversified and integrated farm, our marketing strategy must add on farm value to our products to be economically viable. We do this by making the products organic and by selling most of them directly to the final user, either a consumer or another organic farm. About 90% of our sales are direct. For example, we process our chickens and turkeys, and pack our eggs, and clean and pack our fresh vegetable soybeans. Customers come to our farms and pick up our products and a small amount of our products are delivered to local retailers and regional wholesalers. In most cases, we are only one step down from the final consumer. This direct marketing system builds in ultimate accountability and traceability for the customer, another factor in food safety.

Unique Food Safety Characteristics of Certified Organic Food

However, the organic industry as a whole is proactive and uniquely positioned on food safety in ways that are not yet standard in other food sectors.

1) Organic farmers and processors are required by law to maintain records that allow "one up, one down" traceability for all inputs and for all sales. From field to fork, every entity in the supply chain or in the

stream of commerce must maintain an audit trail that permits full traceability and accountability.

2) Raw manure cannot be used on crops for human consumption without an extended waiting period before harvest.

3) Compost made with animal manure must meet temperature, mixing, and time requirements to ensure its safety or else be treated as raw manure.

4) Synthetic pesticides are prohibited, reducing the risk of over-application or excessive pesticide residues.

5) Antibiotics are prohibited in livestock feed and routine organic health programs. Organic farms do not increase the risk of creating antibiotic resistant bacteria.

6) Organic livestock cannot be fed animal by-products, adding a layer of protection against the possibility of transmission of certain diseases. This prohibition exceeds current non-organic rules which, for example, allow nonmammalian animal by products to be fed to cattle and vice versa.

Recommendations for Future Congressional Action

Consumers over the past two decades have clearly exercised new choices with their food dollars. Witness the explosive growth of organic sales, the tremendous resurgence of farmer's markets, the continued growth of Community Supported Agriculture (CSAs), and the strong emergence of the Buy Local and Slow Food movements. Organic, direct marketing, and small family sized operations have almost exclusively met these consumer demands.

At the same time, I think it is fair to say that the pressing food safety concerns facing Congress today have not emerged from organic or family sized producers and processors. Consumers have, not surprisingly, gravitated to these areas that provide several unique characteristics, including certain food safety assurances. In devising changes to food safety laws, Congress should consider the specific impact these change could have on organic, direct marketing and family sized operations.

1) Legislative measures should be appropriate to the size, scope and nature of an operation. The "one size fits all" approach is fraught with unintended consequences. And in this case, consumers could find it more difficult to obtain the products they want.

2) Unless there is a specific scientifically documented need to solve a clearly defined problem, solutions should not be imposed. For example, while new technologies, like bar coding and electronically tracking palletized fresh products,

may assist certain food sectors in attaining better food safety, these same measures may be burdensome, costly and unnecessary for smaller, direct marketing, and organic operations. Farmers say, "If it ain't broke, don't fix it."

3) Local and state food safety laws currently regulate direct sales from farmers to consumers. Direct farmer to consumer sales are inherently traceable, and largely accountable, and should not require any further traceability measures. Special disposition should be afforded to clearly defined local markets which just happen to be multi-jurisdictional, such as my market which is a "tri-state" area, so that interstate commerce requirements do not automatically apply when they are clearly not appropriate or needed.

4) The organic industry already has in place legally mandated safeguards necessary to ensure food safety, including full traceability and accountability of food products, and strict controls on known potential sources of food contamination such as manure and synthetic pesticide residues. The organic certification system allows all producers and processors, small and large, the flexibility to maintain traceability records appropriate to the type and scale of operation. The record keeping system is outlined in the organic system plan. Independent third party onsite inspections verify each of these organic system plans annually providing excellent accountability. These procedures should be left intact and should be allowed to satisfy any corresponding new requirements that Congress may institute on the larger food sector

5) Congress should be very cautious in drawing organic food safety conclusions from studies that did not look at organic food production systems. For example, manure mineralization rates and counts of antibiotic resistant bacteria on conventional farms and processing plants are not reliable indicators of what would be found on organic operations. The science base for organic agriculture in general, and for organic food safety in specific, is expanding rapidly. The organic community has begun advancing research proposals to federal competitive grant programs, and we can expect to see appropriate organic food safety studies funded this year and in the coming years. These studies can both document the level of safety of the organic food supply and develop additional procedures and processes that can make organic products available to a wider audience at a more cost effective price.