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We Can Grow It: Reporting on Women in Agriculture in India, Belize and the U.S.

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WE CAN GROW IT

A Capstone Experience/Thesis Project
Presented in Partial Fulfillment of the Requirements for
The Degree Bachelor of Arts with
Honors College Graduate Distinction at Western Kentucky University

By
Colleen Stewart

Western Kentucky University
2011

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We Can Grow It!
REPORTING ON WOMEN IN AGRICULTURE
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ABSTRACT

Women produce more than half of the world’s food, according to the U.N. Food and Agricultural Organization. This aligns with the Chinese proverb—“Women Hold up Half the Sky.”

As the role of women in agriculture increases in the developed and developing world, female economic activity in agriculture serves as a beacon for poverty reduction, increased food security, and environmental sustainability.

In the United States, there has been a 30-percent increase in the number of female-run farms in the U.S. since 2002 and women, now the largest “minority” group in agriculture in the U.S., operate approximately 300,000 farms throughout the country.

In most of the developing world, the typical farmer is already a woman, often working with simple tools, barefoot, and with a child in-tow. The FAO stated that if women had the same access to productive resources as men, they could increase yields on their farms by 20 percent to 30 percent, which could lead to 100 million to 150 million fewer people living in hunger. United Nations Millennium Development Goal 1: “Eradicate extreme poverty and hunger” and Goal 3: “Promote gender equality and empower women”—are mutually reinforcing. When women grow food, nations grow stronger.

By focusing on three different countries- India, Belize, and the United States, I will illustrate the data from the UN, FAO and USDA, introducing the reader to women farmers in each country who emulate challenge and triumph in producing food and making a living. In India, farmer suicides are leaving women in debt and without skills to pull themselves out. In Central America, women are being encouraged to farm by government sponsored programs such as the Belize’s Ministry of Agriculture “Woman of the Year” competition. In the U.S., women are farming more and doing it unconventionally and sustainably.

Journalism offers the power to give voice to women farmers worldwide. As environmental reporting becomes a more predominant reporting niche, understanding the complexities of food system and its impacts on gender equality, poverty, malnutrition, politics and the economy becomes crucial.

Keywords: Women, Agriculture, India, Belize, Farming, Sustainability
Dedicated to my friends, family, teachers
and to the women farmers I met along the way
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Thank you to my friends and family for the steady flow of encouragement, advice, and reassurance as I grew with this project. Thank you Mom grandmas, aunts, nuns, Mrs. Bricking and women friends for constant inspiration.
VITA

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SCHOLARLY RESEARCH: The State of Women in Agriculture Worldwide
Women produce more than half of the world’s food, according to the Food and Agricultural Organization. This aligns with the Chinese proverb—“Women Hold up Half the Sky.”

As the role of women in agriculture increases in the developed and developing world, female economic activity in agriculture serves as a beacon for poverty reduction, increased food security, and environmental sustainability.

The emblematic man-on-a-tractor vision of the U.S. farmer is slowly becoming archaic, because there has been a 30-percent increase in the number of female-run farms in the U.S. since 2002. Women, now the largest minority group in agriculture in the U.S., operate about 300,000 farms throughout the country. And they’re doing it sustainably, intentionally farming smaller plots without chemical pesticides. The book Farmer Jane by Temra Costa states “of the top fifteen national nonprofits focusing on sustainable agriculture issues, women comprise 61.5 percent of the employees and 60 percent of the executive directors.”

In most of the developing world, the typical farmer is already a woman, often working with simple tools, barefoot, and with a child in-tow. Nearly 80 percent of those involved in farming in Africa and 60 percent in Asia, are women. The FAO report found that if women had the same access to productive resources as men, they could increase yields on their farms by 20-30 percent, which could lead to 100 million to 150 million fewer people living in hunger. United Nations Millennium Development Goal states 1:

4 FAO, 2011.
“eradicate extreme poverty and hunger” and Goal 3: “Promote gender equality and empower women- are mutually reinforcing. When women grow food, nations grow stronger.”

“Women make crucial contributions in agriculture in all developing country regions, as farmers, workers and entrepreneurs. Their roles vary across regions but, everywhere, women face gender-specific constraints that reduce their productivity and limit their contributions to agricultural production, economic growth and the well-being of their families, communities and countries.” –FAO State of Food and Agriculture 2010-11 report

Journalists Nicholas Kristof and Sheryl WuDunn's book Half the Sky: Turning Oppression into Opportunity Worldwide has triggered a movement to empower women in developing countries, addressing their plight as a moral issue, and also as an economic one. A study by the International Food Policy Research Institute found that women farmers received only 2 percent to 10 percent of extension services worldwide and 85 percent of agricultural extension agents are men. The same report showed that, throughout 63 countries, women’s education led to more productive farming and resulted in a 43-percent decline in malnutrition.

There is a gender gap on the farmfront in developing countries and in the U.S.

In the U.S., women farmers filed the Love v. Vilsack lawsuit. Plaintiffs sought to have the case certified as a class action on behalf of women farmers who were discriminated against while attempting to obtain farm loans from the Farm Service Agency (FSA.) Aside from women who their own farms, few get credit for partnering with their husbands, working as subsistence farmers, small-scale entrepreneurs, unpaid workers or casual wage laborers. Giving women in developing countries tools, financial
resources, and education could increase agricultural production in developing countries by 2.5 percent to 4 percent, stated the UN report.

Empowering women financially is likely to improve food security for entire families and villages, because women are more likely than men to spend income on food, education and basic household needs. Achieving gender equality and empowering women is not only morally right, it is also crucial for agricultural development, food security, and the well-being of the world.

Figure 1: Female share of the agricultural labor force

Although regional averages in Figure 1 may mask the variations within and among countries, the FAO has summarized production by region. In Latin America, the female share of the agricultural labor force ranges from about 20 percent. In Eastern and

< India 30%  
< U.S. 30%  
< Belize 20%
Southeastern Asia and sub-Saharan Africa, cultural norms have long encouraged women to be economically self-reliant and traditionally give women responsibility for agricultural production.

The female share of their agriculture force averages approximately 50 percent, with disparities between the countries: 36 percent in the Ivory Coast and the Niger to more than 60 percent in Lesotho, Mozambique and Sierra Leone.

**By the Numbers**

Women's Contributions to Agriculture vs. Investments in Women's Agricultural Productivity

- African women carry out 90 percent of the work of processing food crops and providing household water and wood, and 80 percent of the work of food storage and transport from farm to village.⁶
- In Southeast Asia, women provide up to 90 percent of labor for rice cultivation.⁷
- In Pakistan, rural women provide 50 percent of the labor to harvest wheat.⁸
- Women perform from 25 to 45 percent of agricultural field tasks in Colombia and Peru.⁹
- In Kenya, women provide approximately 75 percent of total agricultural labor.¹⁰
- Women receive only 5 percent of extension services worldwide.¹¹
- Only 15 percent of agricultural extension agents are women.¹²
- A World Bank review found that 74 percent of 54 completed agricultural projects with gender-related action were rated satisfactory for overall outcome, compared with 65 percent for the 81 projects with no gender related action.¹³

Women in Eastern and Southeastern Asia also make very substantial contributions to the agricultural labor force, almost as high on average as in sub-Saharan Africa. China has the highest percentage, almost 48 percent, in the region. Most other countries in the
region average steadily between 40 percent and 50 percent.

India’s percentage of more than 30 percent women in the agricultural labor force dominates the Southern Asian regional average. While India’s average has remained steady, female share of the agricultural labor force has tripled in Pakistan since 1980, from 10 percent to 30 percent. In Bangladesh, women make up more than 50 percent of the agricultural labor force. Percentages in the North Africa have risen from 30 percent in 1980 to almost 45 percent. Jordan, the Libyan Arab Jamahiriya and the Syrian Arab Republic have seen some of the highest and fastest-growing rates of female agricultural labor-force participation in the region.

“Across diverse regions and contexts, women engaged in agriculture face gender-specific constraints that limit their access to productive inputs, assets and services. Gender gaps are observed for land, livestock, farm labor, education, extension services, financial services and technology.” –FAO State of Food and Agriculture 2010-2011 report

The percentage of women in the agricultural labor force in developing countries doesn’t correlate with the number of women holders in each country. Figure 2 shows that, even in regions like Sub-Saharan Africa, where women are predominantly the ones farming, they are not the ones owning land. Even in the U.S., men make up the majority of farm owners, when their wives labor just as much on the farm. When women do not own the land they farm, they are not able to become economically independent and therefore are subject to the decisions of others.
Is it by nature or by plight that women farm operators are farming in a more “sustainable” way? Figures 3, 4, 5, and 6 show that women in developing countries are generally: owning less livestock, using less mechanical equipment, using fertilizer less, and farming smaller plots of land. The USDA 2007 Agriculture Census showed the same trend of American women farming smaller plots of land, owning a fewer percentage of acres. (Figure 7) While the FAO states that gender inequality causes women to have lack of mechanical resources, lack of financial resources to purchase land, lack of livestock, and lack of technologies like fertilizers, they do not speculate on Climate change repercussions and environmental prospects of all women becoming large-scale farmers like men. According to the International Panel on Climate Change, agriculture accounted for an estimated emission of 10 percent to 12 percent of total global anthropogenic emissions of greenhouse gases in 2005. That breaks down into emissions from livestock, from fossil fuels burned to power machines, from deforestation, often to clear the land for
agriculture. Women are farming more sustainably, less harmfully, than men.

Vandana Shiva, a famous ecofeminist and farmer from India, suggested in her essay *Empowering Women*, that a more sustainable and productive approach to

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agriculture can be achieved by a system that is centered around engaging women. She advocates against the prevalent "patriarchal logic of exclusion," claiming that a woman-focused system would change the current system in an extremely positive manner.

“Food systems evolved by women based on biodiversity based production rather than chemical based production produce hundreds of times more food, with better nutrition, quality, and taste,” – Vandana Shiva in Empowering Women

In most areas of the world, developed and undeveloped, women are starting to farm more. In some countries, they have made up the majority of the farm labor force for decades. Empowering women to not only farm, but to reap the benefits of farming by owning land and garnering profit, is the first step to a sustainable future. When women are educated to do skilled labor, they are less likely to give birth early and often. When women are economically independent, they are likely to invest their money in their families and their community. When women are in positions of power-- farm-owners, agricultural extension officers, and politicians-- they will have greater influence of large-scale agricultural practices and gender equality.
FIELD RESEARCH: GENDER ON THE FARMFRONT
Women in Agriculture Nationwide and in Kentucky
Geography component
INTRODUCTION

The 2007 Census of Agriculture shows that women have a growing presence in U.S. agriculture. Women are running more farms and ranches, operating more land, and producing a greater value of agricultural products than they were five years ago. Research shows that women in America have begun farming small-scale and sustainable farms on the West and East coasts.

What are the trends for women who are farming in Kentucky and do they reflect the national trends? By mapping out U.S. Agriculture Census data, research reflected where in America, and where in Kentucky, the most women farm. By assessing which crops grow best in predominantly women-farmed areas, and comparing the data to where women statistically farm the most, research will show what kind of farmers women are.

Approximately 300,000 women in the U.S. are primary farm operators of their family farm, according to the US Department of Agriculture. Making up over 17 percent of the family farmer population, women are the largest group of minority farmers in the country.

The USDA states on its website that “The householder (or principal farm operator) of farm households is generally older, more likely to be a White male, and more likely to live in the South and Midwest than the average U.S. household,” but those presumptions may be changing. More than 30 percent of U.S. farm operators are women. Eleven percent of Kentucky farm operators are women. This data and graphic is from the 2007 Agricultural Census.

While the total number of farms has been declining for many years, the number owned and operated by women is increasing.

HYPOTHESIS

Women farmer trends in Kentucky reflect trends for women farmers in the rest of North America. This means: 1) Kentucky will have around the same percentage of women farming as does the rest of America. 2) They will be farming generally small-scale and alternative crops, such as fruits and vegetables.

METHODOLOGY

By comparing USDA Agricultural Census data for the nation to data from Kentucky, researchers will be able to assess how trend in women farming differ on a national scale from what is happening on a state scale.

Items that will be observed are gender of primary operator, land size of women farmers, what women farmers are growing, how much subsidies are women farmers getting, what is the average age for women farmers, whether more women farming from 2002 to 2007.

Researchers will give a survey to women farmers in the state, asking them about women farming issues (See Appendix 1) and garnering qualitative data. From this qualitative and
quantitative data, researchers will be able to assess whether Kentucky is following the same trends as women farmers nationwide, and what that could mean for the state of agriculture in America and in Kentucky.

KEY TERMS
-Agribusiness- Producers and manufacturers of agricultural goods and services, such as fertilizer and farm equipment makers, food and fiber processors, wholesalers, transporters, and retail food and fiber outlets.
-subsidy is a governmental subsidy paid to farmers and agribusinesses to supplement their income, manage the supply of agricultural commodities, and influence the cost and supply of such commodities.
-Farm Service Agency (FSA) - is the USDA agency into which were merged several predecessor agencies, including the Agricultural Stabilization and Conservation Service (ASCS). The ASCS was, as the FSA is now, primarily tasked with the implementation of farm conservation and regulation laws around the country.
-Socially disadvantaged (SDA) farmer- rancher, or agricultural producer is one of a group whose members have been subjected to racial, ethnic, or gender prejudice because of his or her identity as a member of the group without regard to his or her individual qualities. SDA groups are women, African Americans, American Indians, Alaskan Natives, Hispanics, Asian Americans and Pacific Islanders.
-United States Department of Agriculture (informally the Agriculture Department or USDA) is the United States federal executive department responsible for developing and executing U.S. federal government policy on farming, agriculture, and food.
-Love v. Vilsack, Case No. 1:00CV02502 (U.S. District Court for the District of Columbia) was initially filed on October 19, 2000 by a number of women farmers against the U.S. Department of Agriculture for gender discrimination in the administration of the USDA's farm loan programs.
-Principal operator is the person primarily responsible for the on-site, day-to-day operation of the farm or ranch business.

RESEARCH/LIT REVIEW
WOMEN FARMERS IN THE U.S.
Women have been farming across America in increasing numbers, running more farms and ranches, operating more land, and producing a greater value of products than they were just five years ago, according to the 2007 Agricultural Census.

Of the 3.3 million U.S. farm operators, 30 percent were women, a 19 percent increase from the 2002 to the 2007 Census. In addition, the number of women who were principal operators of their farms increased 30 percent in that time, meaning 14 percent of the nation’s 2.2 million farms are principally operated by women.

Female farms tend to be smaller in size and sales and women tend to not take part in large agribusiness ventures or highly subsidized crops. They tend to operate diverse farms, surpassing men in farming categories of sheep, goats and other animals; poultry and eggs, horticulture and vegetables.
The highest percentage of female principal farm operators are located on the West Coast and in New England, the top five highest being Arizona, New Hampshire, Massachusetts, Maine and Alaska. States with the lowest percentages of female principal operators are concentrated in the Midwest in states like South Dakota, Nebraska, Minnesota, and Iowa, where commercial farm ventures tend to be large scale grain and corn crops.

WOMEN FARMERS IN KENTUCKY
In Kentucky nearly 11 percent of principal operators are women while nearly seven percent of farm acreage belongs to women. The state’s average farm size is 164 acres and average farm size for women principal operators in the state is 105 acres, according to the USDA Agricultural Census.

Women account for only four percent of the state’s total value of agricultural products sold. The primary occupation of the majority of female operators, 65 percent, was outside of the farm. The average age of female principal operators is 59.
IN WARREN COUNTY
In Warren County around 10 percent of principal operators are women while around seven percent of farm acreage belongs to women. The county’s average farm size is 145 acres and average farm size for women principal operators in the state is 105 acres, according to the USDA Agricultural Census.

Women account for only four percent of the county’s total value of agricultural products sold. The primary occupation of the majority of female operators, 33 percent, was outside of the farm. The average age of female principal operators is 60.
Figure 1: More than 30 percent of U.S. farm operators are women. Eleven percent of Kentucky farm operators are women. This data and graphic is from the 2007 Agricultural Census.

In Kentucky, nearly 11 percent of principal farm operators are women, one percent more than were five years ago.

The term “Socially Disadvantaged Applicants- gender” is what women file as when applying for FSA loans. Kentucky was 4th in the Nation last year in making loans to SDA applicants, said state Farm Loan Chief Mitchell Whittle.

The following SDA loans were filed in 2010:
Disclaimer: the Direct and Guaranteed Operating loans both include SDA - Ethnic loan numbers as well as SDA- Gender loan numbers. Direct loan numbers are much higher that the Guarantee numbers as Direct loans have much better interest rates and loan terms.
Direct Operating loans – 106
Direct Operating Youth loans – 75
Direct Farm Ownership loans – 24
Guaranteed Operating loans – 7
Guaranteed Farm Ownership loans – 6
( Guaranteed loans are those made by a private lender and given up to a 95% guarantee against loss by FSA )
Two SDA gender applications were rejected in Kentucky this year, both due to a poor credit history, Whittle said.

In terms of existing SDA -Gender loan caseload, Kentucky currently distributes 754 Direct loans for Operating and Farm Ownership and 48 total Guarantees. (Some of the SDA –Ethnic borrowers are also female, thus again these figures could be slightly higher.)

“The Kentucky female farmer operations fairly well cover the gamut from tobacco, grain crops, beef, dairy, swine, poultry, goats, horticultural crops, etc.,” said Whittle.

Nationwide, women farmers are not typically farming large-scale agribusinesses. This information and graphic was provided by the 2007 Agricultural Census.

Statistics, nationwide and statewide show that women farm differently than men. Nationwide, women farmers are not typically farming large-scale agribusinesses. Women typically farm on much smaller scales and tend to farm vegetables, fruits and nuts, alternative livestock like goats and sheep, poultry, eggs. Women-operated farms tend to be diverse. Women are much more likely than their male counterparts to operate farms classified as “other livestock farms,” a category that includes horse farms, or “all other crops,” which includes hay farms. Men, meanwhile, are much more likely to run grain and oilseed farms and beef cattle operations.

The most highly subsidized crops in the United States are corn, wheat and cotton, according to the Environmental Working Group’s subsidy data. In Kentucky, the highest
subsidized crops are corn, soybean and tobacco.

Because women are not typically farming highly subsidized crops, they are often not high ranking on the list of subsidies given. On the list of highest subsidized farms in Kentucky, the first solely women-owned farm to rank comes in 82nd, preceded by jointly-owned farms, male-owned farms and farms that contain “sons” and “brothers.”

Because of the position women farmers are in, Heck said she more and more women getting involved in sustainable practices. She moved off of the conventional farm she owned with her partner Donald in order to study sustainability and work during the summer and school year on different Kentucky farms. Because of the limitations, because of the challenges or the benefits of being a woman farmer, or because women are just different by nature, they are at the forefront of sustainable small-scale growing said Dr. Elmer Gray of the Agriculture Department at Western Kentucky University. The department taught its first Sustainable Gardening class this fall, taught by two female teachers and taken by seven female students.

Out of the ten women farmers surveyed, two stuck out in particular as examples of the two different types of women farming in Kentucky: Deborah Hill as the small-scale, sustainable, first-generation farmer, and Michelle Armstrong as the large-scale, business-oriented, inheritance farmer.

Deborah Hill, a Forestry professor at the University of Kentucky, bought her 2 acres of land in Franklin County in 1997. Since then she has been singlehandedly producing shiitake mushrooms, strawberries, blueberries, raspberries, blackberries, plums, Pawpaws, and other fruit crops. At the age of 68 she is the primary owner/operator and sole worker of her farm. She didn’t grow up on a farm and she didn’t inherit one. “In some cases, women in Kentucky are farming more because the men have died; in others, women want to control food production and care for the land,” she said. Hill, who farms organically, but isn’t certified, is on the Board for Organic Association of Kentucky, a board composed of half men, half women. She sells her produce through Lexington Farmers market and to personal customers, and says that women are changing the traditional ways of farming and farming more sustainably. “If more women farmed, the agribusiness and food industry would entail more holism, more organic, more cooperatives,” Hill said.

Michelle Armstrong, who owns a 325 acre farm in Spencer County, sits on her local FarmService Agency committee. Armstrong grew up farming the then-425 acres with her father and inherited the farm when he died. They raised hogs from feeders, Angus cattle, hay, corn, soybeans, and tobacco. As vice chair of the male-dominated Kentucky Farm Bureau Women’s Advisory Committee and vice president of the women-exclusive Kentucky Women in Agriculture organization, Armstrong is an advocate of large-scale farms, not the small-scale, sustainable farms like Hill’s. “I know I think differently than most women in my area because I ran a farming operation and I was taught by a man,” she said. “I elected to run in a man’s world and still do to this day.”
The 2010 published book *Farmer Jane* by Temra Costa addresses “Women Changing the Way We Eat.” It profiles 26 women in the sustainable food industry who are working toward a more holistic food system in America. The book states that “Of the top 15 national nonprofits focusing on sustainable agriculture issues, women comprise 61.5% of the employees and 60% of the executive directors. On the farm, women are one of the fastest growing demographics to own and operate farms in the U.S. and they are tending toward diversified, direct marketed foods that create a relationship with eaters.”

CONCLUSION

Although the women farmers interviewed represented a range of farm sizes and crops, most of them agreed that agriculture was being affected and changed by women. Many said that they did believe women were farming more sustainably. *Farmer Jane* states, “Since 2002, we have started to see an increase in the number of farms in the country, the number of farmers markets and community supported agriculture programs, and the number of people who are concerned about where their food is coming from.

In Kentucky, trends for women farmers are similar to the trends on a national scale. A growing minority of primary operators are women and they own less acreage than men. It appears that the crops being farmed by women farmers in Kentucky tend to be the crops farmed most by women on a national scale- vegetables, fruit, poultry, eggs, sheep, horses and goats. Therefore, Kentucky is a suitable microcosm of the national trends of women in agriculture. Similar to the national scale, Kentucky counties vary in the amount of women principal operators. Kentucky, compared to the rest of the nation has fewer female operators than most states. Data further supports evidence that women are farming more sustainably and small-scale on the coasts, is tied to their geographical aptitude for growing those crops in their areas. Kentucky women tend to farm what is regionally appropriate, but also that which is typically done on a smaller scale. Women statewide and nationwide are becoming increasingly relevant to agriculture culture and are arguably shifting the country’s paradigm to more small scale and sustainable farms. Further research could explore the sustainable aspect of women farming. If women farmer trends increase, what impact would it have on the environment? What impact does large scale, distance export agriculture have on the environment? How would more women farmers affect the economy nationwide and in Kentucky? Are women being encouraged early in school to pursue certain veins of agriculture? Why are they farming the way they do… out of practicality or out of conscience?
APPENDIX 1: survey prototype and survey responses from Kentucky women farmers
Demographics/basics-Name, sex, age, hometown, primary occupation, marital status, phone number/email address

-Where do you farm?

-Are you the principal owner operator of your farm?

-What do you farm?

-Why do you farm?

-How many acres do you farm?

-Did you grow up farming?

-Did you inherit your farm?

-How do women farm differently than men?

-Do you think women farm more "sustainably" or "unconventionally" than men?

-Do you feel like women are discriminated against in the farm industry?

-Do you receive subsidies or loans?

-Are women given a fair opportunity for loans and subsidies?

-What advantages do women farmers have? What disadvantages?

-Why do you think more women farming each year?

-If more women farmed, how might it change agribusiness/ the food industry?

-Please leave any other comments or questions.

____________________________________________________________________

1. MICHELLE ARMSTRONG
Demographics/basics-Name, sex, age, hometown, primary occupation, marital status, phone number/email address:
Michelle Johnson Armstrong Female 50 years old Taylorsville, KY Retired farmer Married to a wonderful husband, Kevin 502 477 2363 home Makarmstrong@gmail.com

-Where do you farm?
We own a 325 acre farm in Spencer County. It is bottom land with Salt River surrounding 2 sides of the farm.

-Are you the principal owner operator of your farm?
I am the deeded owner because it was my family farm. I am the third generation farm owner in the family and the first generation female farmer. My grandfather, Derice Johnson left the farm to my father, J.T. and he left it to me as I was an only child. I do not have children myself and my husband’s daughter is not interested in farming at all. She was never around it. We have leased the farm to my neighbor now, Scott Travis. He has been here starting three years in January.

-What do you farm?
When we farmed, we raised fat hogs from feeders, Angus cattle, hay, corn, soybeans, and tobacco.

-Why do you farm?
We had a very successful auto repair shop in Mt. Washington and my father’s farm worker left for a better job in Louisville. My husband and I were trying to work the shop and farm at the same time and it was just too much to do. We decided to come to the farm full time and help my father. It was enough then to support two families. Not the same now. Once farming is in your blood, it is hard to give it up. I just sold 100 acres off and it just hurt like the dickens. Best thing for me to do but it still hurts.

-How many acres do you farm?
Back then we had 425 acres. Now we have 325 acres.

-Did you grow up farming?
Yes I did. I did the college thing, worked in a bank, married but came back to the farm. I was in the hay field at 4 years old holding the steering wheel of the truck while Dad loaded. I advanced to baler and then unloaded wagons. I worked with my father every day for 5 years until his death in 1992. It was so hard not to see him there helping us. I miss him to this day. He was proud of me and I keep his light burning by keeping the farm going.

-Did you inherit your farm?
Yes I did. My father inherited it from his father. My grandfather had 5 different farms when he died and left 4 of them to his children and one sold to his granddaughter. The farm the granddaughter bought is still in her name and I have mine. The rest of the farms have been sold. I know I am lucky but I feel AG is lucky to have me and my support.

-How do women farm differently than men?
That is a loaded question. I feel as though it depends on what kind of farming you are doing. Grain farming is so much different than farmer’s market farming. I farmed based on what operation we were involved in at the time. I bought and sold cattle, planted, sprayed and harvested grain. I sold hay, baled hay, etc. I did as I was taught by my father and what I learned from reading, attending classes, farming events, etc. You have to change with the times some but basic knowledge never leaves you.

-Do you think women farm more "sustainably" or "unconventionally" than men?
I think women farm to put money in their pocket and food on the table. We have good practices, moral obligations but in the end, it is all about taking care of her family. We do think differently if it is a smaller operation. Whatever the niche calls for. I think about larger farming practices than a woman who just raises a garden to sell on weekends. There are differences there to dictate the outcome. Some think small, I think larger. I was raised that way. I had an advantage.

-Do you feel like women are discriminated against in the farm industry?
Yes all the time. The retail sides forgets that it is the woman who signs most of the checks, puts up material and has to deal with rude men on the counters. I have been around long enough, the men accept me for more than one reason. I know what I am talking about and what I need. Education is so important. Two, I don’t let men run over me and if they do well it is a long story but John Deere’s Vice President called me to discuss a problem I had with a dealer many years ago. He is no longer a John Deere Dealer. Some of the men have been taught well by their mothers to respect ladies and they get a gold star. I spend money where they treat me right, price is right and I like them. You have to think like a man at times and I was taught by my father how to think to get what I wanted. I have a great working relationship with my John Deere dealer, my International dealer, my seed dealers, etc. I don’t mind telling them when I heard that a woman was upset about her treatment in a retail outlet. I am here to help other farmers wither they be female or male. I sell myself as a farmer first, woman second. It is all in the mind set.

-Do you receive subsidies or loans?
Yes I use to receive subsidies but not due to being female, just being a farmer.

-Are women given a fair opportunity for loans and subsidies?
Yes they are given equal opportunity. I sit on my local Farm Service Agency committee for Spencer County as the female member. They are offered extra at times in different income businesses. Beginning farmers is one loan offered that they can apply for and minority loans.

-What advantages do women farmers have?
Advantages, well maybe we are book read and educated and will listen to others. I guess I would say more open minded. Using a smile will go a long way.

What disadvantages?
We have more than one role as a female. We usually are mother, wife, business lady, car pool driver and all around whatever needs to be done person. The male is just a farmer and husband. God dealt us this hand and we hand it with grace.

-Why do you think more women farming each year?
It is getting harder to make a clear dollar. A woman can add to the purse by doing something she is good at and has a mind for. She can think outside of the lines and do what needs to be done. The men are taking public jobs now for insurance and the ladies can stay at home, take care of the house, children, etc. but still add money to the pocket. Where there is a will there is a way.

-If more women farmed, how might it change agribusiness/ the food industry?
I think the marketing of farms, food and women would change with a good twist. Farmers grow the crops, women do the meals. What better advertising is there if the women raise the food and cook the food? We trust each other because our families trust us. It is proven that the congressmen believe a farm wife/farmer more than a male farmer/ male. Farm Bureau knows that and uses it to advance their stand in agriculture. We have to change our way of thinking because a back yard garden is not feeding the world. We have to think outside the garden fences.

-Please leave any other comments or questions.
I know I think differently than most women in my area because I ran a farming operation and I was taught by a man. I feel there is a difference in just farming one acre and 100 plus acres. Farmer’s market farming will not pay the bills. It is like being in the
Homemakers group or the Ky Soybean Association. I elected to run in a man’s world and still do to this day. I am vice chair of the Kentucky Farm Bureau Women’s Advisory Committee and that is a man’s world. I am vice president of KWIA and it is so much different there. We want to learn but we also want to have an enjoyable time together. We can mix business with pleasure. It is just how we are made. I also feel that if our elected congressmen and ladies have not been on a farm, they don’t know dirt!!!

2. TABITHA STAGNER
Demographics/basics-Name, sex, age, hometown, primary occupation, marital status, phone number/email address: Tabitha Stagner, female, 19, Hopkinsville, KY, Receptionist at H&R Agri-Power in Hopkinsville, single, 270-498-4246, fourhchick@hotmail.com
-Where do you farm? Outside of Hopkinsville KY in an area called Fearsville KY
-Are you the principal owner operator of your farm? No
-What do you farm? Boer Goats, Angus-Gelbvieh Cross cattle, and we rent tillable acres to a local farmer who grows tobacco, soybeans, and corn.-Why do you farm? Because I love it.
-How many acres do you farm? 170
-Did you grow up farming? Yes
-Did you inherit your farm?
-How do women farm differently than men? I think women are more open to new ideas and technology in farming.
-Do you think women farm more "sustainably" or "unconventionally" than men? Not sure.
-Do you feel like women are discriminated against in the farm industry? Sometimes yes.
-Do you receive subsidies or loans? No
-Are women given a fair opportunity for loans and subsidies? Most of the time but not always.
-What advantages do women farmers have? What disadvantages?
-WHY do you think more women farming each year? I think a lot of women grow up (like myself) farming with their dad, grandpa, uncle and as the industry opens up to women they are more willing to get involved in it.
-If more women farmed, how might it change agribusiness/ the food industry? Not really sure? Women seem to be better at keeping up with data such as cattle records, crop yields ect. so maybe more documentation?

3. CATHERINE RILEY
Catherine Riley Female 20 Student Single 2709858114 cmrile4@gmail.com
-Where do you farm? Christian County
-Are you the principal owner operator of your farm? No, my mother is
-What do you farm? Club Goats
-Why do you farm?
Pride in raising my own project animals
-How many acres do you farm?
5 acres (not enough)
-Did you grow up farming?
Yes
-Did you inherit your farm?
No, but I will
-How do women farm differently than men?
Smarter more efficiently (work smarter not harder)
-Do you think women farm more "sustainably" or "unconventionally" than men?
I do not think that gender is a basis for sustainability but how they were brought up. On the whole though I have noticed that women are more concerned with sustainability than men so I would lean that women would farm more unconventionally than men.
-Do you feel like women are discriminated against in the farm industry?
No
-Do you receive subsidies or loans?
Start up loan
-Are women given a fair opportunity for loans and subsidies?
Yes
-What advantages do women farmers have? What disadvantages?
Advantages
Women tend to be more compassionate, caring, and understanding just because we are more maternal so when it comes to animals women are better suited at caring for and connecting with them
Disadvantages
more to do if they have a family
-Why do you think more women farming each year?
More fun than a regular 9-5 job. The number of women in the agriculture sector has increased because the discrimination/social norms of the society have decreased and become more lenient for women. When my mother was in high school in 1970 she was the only female in FFA (then known as Future Farmers of America) when I joined FFA in 2004 my whole officer team were female, and over half of all members were female. This trend is even shown in college where the number of male to female ratio in Introduction to Animal Science has change from 4:1 in 1980 to 1:2 in 2007
-If more women farmed, how might it change agribusiness/ the food industry?
The changes that we are seeing now such as sustainability, free range, more organically based industry will be larger

4. CYNTHIA ELDER
Cynthia Elder Female/52 Louisville, KY Marketing Manager Married 270 705 3460
elderfarm@wk.net
-Where do you farm?
Fancy Farm, KY
-Are you the principal owner operator of your farm?
No, my husband is the farmer. I support him.
-What do you farm?
Tobacco

- Why do you farm?
My husband has farmed his entire life. He was raised on our farm. I farm because I love living where I do and that’s what we do.

- How many acres do you farm?
We grow almost 20 acres of dark & air cured tobacco. We own almost 150 acres. We used to milk but now just grow tobacco.

- Did you grow up farming?
No, I grew up in the suburbs of Louisville.

- Did you inherit your farm?
My husband inherited the farm but had to buy his brothers & sisters out.

- How do women farm differently than men?
My husband lives to farm. This is what he does, what he knows to do. If he didn’t live here I don’t know what he would do with himself day in and day out. I farm because it’s our life.

- Do you think women farm more "sustainably" or "unconventionally" than men?

- Do you feel like women are discriminated against in the farm industry?
I don’t see that.

- Do you receive subsidies or loans?
We do.

- Are women given a fair opportunity for loans and subsidies?
I think so.

- What advantages do women farmers have? What disadvantages?
I think women farmers are more creative. They are looking always for a niche. Men seem to do what they have always done.

- Why do you think more women farming each year?
I think women look for a simpler life. I don’t think I was looking for that but was so very glad that I found it.

- If more women farmed, how might it change agribusiness/ the food industry?

- Please leave any other comments or questions.

5. DEBORAH HILL
Deborah B. Hill female, 68, Lexington, KY, university professor, single, 859-271-9499, dbhill@uky.edu

- Where do you farm? Franklin County, KY
- Are you the principal owner operator of your farm? Yes
- What do you farm? Fruit crops and shiitake mushrooms
- Why do you farm? Concerns about care of the land and growing some of my own food
- How many acres do you farm? About 2

- Did you grow up farming? no
- Did you inherit your farm? no

- How do women farm differently than men? I think they pay more attention to inputs, particularly chemicals, and how those might affect the land and the plants/animals

- Do you think women farm more "sustainably" or "unconventionally" than men? yes
-Do you feel like women are discriminated against in the farm industry? To some extent
-Do you receive subsidies or loans? no
-Are women given a fair opportunity for loans and subsidies? Not necessarily in my experience
-What advantages do women farmers have? Ability to see "the big picture", patience, ability to work with others What disadvantages? Physical strength...
-Why do you think more women farming each year? In some cases, the men have died; in others, women want to control food production and care for the land
-If more women farmed, how might it change agribusiness/ the food industry? More holism, more organic, more cooperatives...

6. JOY GRAHAM
Joy Graham, female, 58, Winchester, farming, married, joygtoworld@yahoo.com
-Where do you farm? Clark and Bourbon counties
-Are you the principal owner operator of your farm? yes (I have 3 siblings who are co owners, but I am the one involved in day to day operations
-What do you farm? mainly beef cattle
-Why do you farm? It's in my blood.
-How many acres do you farm? 673 acres (4 locations)
-Did you grow up farming? yes
-Did you inherit your farm? yes
-How do women farm differently than men? I can't say I've studied that question.
-Do you think women farm more "sustainably" or "unconventionally" than men? I can't say.
-Do you feel like women are discriminated against in the farm industry? I don't think so.
-Do you receive subsidies or loans? We have received tobacco buy out money. No loans in recent years
-Are women given a fair opportunity for loans and subsidies? I don't know. I haven't sought any.
-What advantages do women farmers have? What disadvantages? Advantages/disadvantages may be more attributable to an individual's situation rather than to gender.
-Why do you think more women farming each year? Perhaps men feel the need to hold off farm jobs leaving women as primary operators?
-If more women farmed, how might it change agribusiness/ the food industry? I don't know.

7. DANIELLE HARMON
Demographics/basics-Name, sex, age, hometown, primary occupation, marital status, phone number/email address
My name is Danielle Harmon
Female
19
Flemingsburg, KY
Student/ Work Study at the College of Pharmacy
Single
Danielle.harmon@uky.edu

Where do you farm?
Sharpsburg, KY

Are you the principal owner operator of your farm?
No

What do you farm?
Angus Beef Cattle

Why do you farm?
For the money, for the love of it, and because I want to provide for others.

How many acres do you farm?
300+

Did you grow up farming?
Yes

Did you inherit your farm?
No

How do women farm differently than men?
I think that women put a lot more organizational techniques and planning into their work.

Do you think women farm more "sustainably" or "unconventionally" than men?
sustainably

Do you feel like women are discriminated against in the farm industry?
yes to an extent. I get the "look" from people a lot when I am in muck boots and dirty jeans.

Do you receive subsidies or loans?
no

Are women given a fair opportunity for loans and subsidies?
yes

What advantages do women farmers have? What disadvantages?
Advantages: Not a lot of us so more possibilities
Disadvantages: Looked down upon sometimes

Why do you think more women farming each year?
Because of the potential that their is for women in the industry now

If more women farmed, how might it change agribusiness/ the food industry?
I think a lot would change, women are the people who want to show people how their food is grown and want people to come look at how well we treat our animals compared to men who would be more likely to say I dont have to show them I do it my way and its a good way!

Danielle Harmon
University of Kentucky

8. DORIS HAMILTON
Demographics/basics-Name, sex, age, hometown, primary occupation, marital status, phone number/email address:
Doris Hamilton, Female, 40, Loretto, Ky, now in Harrodsburg, KY, Married, primary occupation: program administrator (some years farming is my primary occupation)
doris.hamilton@kyfb.com
-Where do you farm? Harrodsburg, KY
-Are you the principal owner operator of your farm? Yes
-What do you farm? Beef Cattle
-Why do you farm? As a way of life, supplemental income, and to provide learning and work opportunities for my children
-How many acres do you farm? 175
-Did you grow up farming? Yes
-Did you inherit your farm? No
-How do women farm differently than men? I don't know. I farm like a farmer, not a man or a woman.
-Do you think women farm more "sustainably" or "unconventionally" than men? If you are trying to indicate that sustainable is synonymous with unconventional, I disagree with that assumption. Some women farm on a smaller scale and tend to seek out niche markets because they aren't capable of farming in the traditional way with large equipment and demanding workloads.
-Do you feel like women are discriminated against in the farm industry? No
-Do you receive subsidies or loans? If I apply for them.
-Are women given a fair opportunity for loans and subsidies? Yes
-What advantages do women farmers have? None
-What disadvantages? Some older people don't take women farmers seriously. But that's rare and is more a function of age.
-Why do you think more women farming each year? It's an honorable profession and a way to work while spending time with family.
-If more women farmed, how might it change agribusiness/the food industry? Men vs. Women is NOT the issue. It's old vs. young. Traditional vs. non-traditional. Those who are trying to raise food vs. those who are trying to sell propaganda.
-Please leave any other comments or questions.

9. PAM MILES
Pam Miles, 53 Hometown is Carrollton, right now I am in Elizabethown on the farm and I babysit my grandgirls, but farmed with my husband and drove a school bus as well as taught elementary school for several years. Married. pamgramsmiles@gmail.com
Demographics/basics-Name, sex, age, hometown, primary occupation, marital status, phone number/email address:
-Where do you farm? Hardin County, KY
-Are you the principal owner operator of your farm? My husband and myself.
-What do you farm? Market items...vegies
-Why do you farm? Husband's dad did...and it was a life dream to live on and farm...
-How many acres do you farm? 200
-Did you grow up farming? Husband did...I lived near a farm.
-Did you inherit your farm? Yes
-How do women farm differently than men? Somewhat I would think...depends on how they learned about farming...
-Do you think women farm more "sustainably" or "unconventionally" than men? Different women different ways...depends on how they were raised.
-Do you feel like women are discriminated against in the farm industry? I believe it still is a problem, however, believe the women who have farmed in the past have brought further and further into our rights to be able to farm w/o as much discrimination...I believe that a woman farmer will have to prove herself first...
-Do you receive subsidies or loans? subsidies--think...
-Are women given a fair opportunity for loans and subsidies? the banks have really changed their rules for borrowing...proof of income is very important and also difficult for a farmer...man or woman.
-What advantages do women farmers have? hummm maybe they are able to adjust better to change
What disadvantages? the part about proving themselves...being taken serious...maybe some physical jobs
-Why do you think more women farming each year? Farming is one of the best jobs to have...why not? lol I believe the growth in markets have brought more women into the business?
-If more women farmed, how might it change agribusiness/the food industry?
seems like there would be opportunity for them to inject a women's point of view and ideas for solving some of the problems we are facing in farming now...seems that the men are running things...it would be great to see what the women can accomplish...maybe the men are ready for the help at last...lol

10. PAMLA WOOD
Pamla Wood, female, 58, originally from Arlington Virginia, currently of Harrodsburg/Mercer County.
Retired from state govt; part-time consultant in natural resources and organizational development; dancer
Living with domestic partner
859-351-3142
pamlaw@iglou.com
-Where do you farm?
Mercer County
-Are you the principal owner operator of your farm?
Owner but the operation is a partnership with my domestic partner. I am primary farmer of livestock; he is primary farmer of hay.
-What do you farm?
Boer (meat) goats, Wool/meat sheep, Hay
-Why do you farm?
To interact with the land, to produce food and fiber, to be outside, to learn
-How many acres do you farm?
The farm is 40 acres; we use about 15 for livestock and about 15 for hay.
-Did you grow up farming?
No
-Did you inherit your farm?
No
-How do women farm differently than men?
Women are more likely to be open to new ideas, innovations, especially in marketing and
new endeavors. They are willing to consider smaller scale operations and make them productive.
-Do you think women farm more "sustainably" or "unconventionally" than men?
  Yes, in gross generalization
-Do you feel like women are discriminated against in the farm industry?
I don't know. It certainly isn't like it used to be, say in the 1970's. I was in Ag school in 1974, and there were only two women in Agronomy. I was the only woman in several classes and the boys simply didn't know what to think, so they pretty much ignored me.
-Do you receive subsidies or loans?
No, although I have used Wildlife Habitat Incentive Program funds to create more native vegetation and wildlife habitat.
-Are women given a fair opportunity for loans and subsidies?
I don't know.
-What advantages do women farmers have? What disadvantages?
Advantages related to brains and women's ingenuity; disadvantages of smaller frames.
-Why do you think more women farming each year?
Because the times are right for innovative, new-market approaches, more small scale, high quality operations.
-If more women farmed, how might it change agribusiness/ the food industry?
It is changing, and women have provided leadership in the change. More local food distribution, more personal networks.
-Please leave any other comments or questions.

References


ADILABAD, INDIA – Bojanna came home one day after farming his 10-acre field of cotton, had chai on the front step of his two-room house, and drank a bottle of the pesticide that failed to save his crops, throwing the bottle against the house. “It’s burning inside, burning inside,” his wife, Rajamma Mani Elishetti, recalled him saying. Neighbors tried to revive him, feeding him curd, salt and water. He was dead in five minutes.

A month later, Rajamma sat with women from her village, her two sons standing behind her. Her tears watered the parched red dirt floors of her house. “I have no idea what we will do,” she sobbed in Telegu. Her husband’s death had left her and her two sons with a crippling debt.
In the past decade 180,000 have committed suicide in India, many in the cotton industry according to the Ministry of Home Affair’s National Crime Records Bureau. Since hybrid seed technology, industrial machinery and chemical fertilizers and pesticides were introduced in India, farmers have been taking loans from private lenders and putting faith in their fields. With nothing to fall back on, they are one failed season away from incurring perilous debt. In so many cases, the farmers who are feeding and clothing the world, are barely able to feed and clothe themselves. Woven into cheap t-shirts, sold around the world, is the plight of these struggling farmers.

COTTON
Bodike Devbai said her son, a cotton farmer, was supposed to take care of her in old age. Now, with whitening hair, she lives with a family in her village, no kin still alive. Her son hung himself from a tree. “He selfishly spoiled everything,” she wailed.

The narrow dirt roads of the Adilabad district are strewn with cotton, trodden by ox-pulled cotton carts, rickshaws and trucks, beds brimming with the plush white bolls. The district is the fifth largest in the state of Andhra Pradesh and 73 percent of its population is dependent on agriculture.
Cotton is planted in twenty-seven percent of the district, making up sixteen percent of cotton planted in the entire state. However, the yields are not in accordance with the amount of cotton planted. The district produces only about 5 percent of the state’s total cotton, meaning more than half of the cotton fields fail, according to statistics from The government of Andhra Pradesh Adilabad District site.

The rate of suicides is still increasing, according to Dr. G.V. Ramanjaneyulu at the Centre for Sustainable Agriculture in Hyderabad, an organization that works with small and marginal farmers in India to provide sustainable technologies. In three days there were 17 suicides in the Hyderabad District, which includes the Adilabad district. Sixty-eight deaths were reported from July to November, he said.

“Every half an hour there is a death happening.” -Ramanjaneyulu

Mountains of cotton amass in 20-foot mounds outside of a cotton processing plant in the Adilabad District. Men, women and children collect cotton from the loud-clanking gins, emitting cloudy debris into the air. Cotton remnants collect between their toes, on men’s beards, on dresses and slacks.

Muhammed Wahuddeen is a “fitter” at the factory, fixing the cotton ginning machinery. Cotton seed is made into fodder for animals, and oil, while the bolls are exported to be turned into fabric. The cotton comes from local villages, The cotton comes from local villages, 165,000- 175,000 pounds each year. “It is a profitable business,” he said. While factory jobs are somewhat secure, farming is entirely subjective to the success of crops. Since high-yield seed technology was introduced in the 60s, more cotton crops have been failing in southern India.
GREEN REVOLUTION

In the early 60s, former Indian prime minister Lal Bahadur Shastri called upon India’s population of 480 million to skip a meal a week in order to alleviate food crisis in the nation. In the late sixties, India was transformed by the Green Revolution, focusing on the role of technology in agricultural as a means to support their growing population. They imported specialized seed hybrids and high-yield varieties for various crops in the country.

Agricultural growth, measured as the annual rate of growth in net domestic product, increased from 1.9 percent annually before the Green Revolution period to 2.3 percent during the first phase of the Green Revolution and accelerated further to 3.1 percent during the second phase of the Green Revolution according to statistics from the government of India.
The Green Revolution enabled India to become self-sufficient in agriculture, ensuring a basic level of food security through adoption of new technologies such as plant breeding, irrigation development and financing of agrochemicals were encouraged.

“The Green Revolution has been one of the greatest technology models of anywhere in the world,” said N.H. Rao, joint director of the National Academy for Agricultural Research Management in Hyderabad, India. “Before it, we were importing shiploads of food from the U.S,” Rao said. “What is fascinating about the Green Revolution is the whole transformation took place in a period of three to five years.”

Scientist Norman Borlaug, known as the “father of the Green Revolution,” developed the high-yield, disease-resistant seed varieties, heavily distributed in Mexico, Pakistan, and India. C. Subramaniam, the Indian Minister of Agriculture, sanctioned the import of 23,000 tons of these seeds for distribution in the 1965-66 crop season.

“The Green revolution changed our destiny. Everything at that time revolved around that seed,” said P.K. Joshi, Director, National Centre for Agricultural Economics and Policy Research.

While some people perceive the Green Revolution as a positive progression, others see it as the initial exploitation of farmers and the land. The Indian government initiated the Green Revolution as a package, including new high-yield seeds, irrigation facilities, subsidized provision of water, power and fertilizers and support prices in the final market, said Ramanjaneyulu, a critic of the movement.
“During the Green Revolution, the government chose the best soils and provided the best public support. But the government has withdrawn that support,” Ramanjaneyulu said. “Today, everything has to be dependent on the farmer’s pockets.”

BT COTTON
Most farmer suicides have happened in the cotton industry, according to Rao. “Cotton is a risky crop, but it is a profitable crop,” he said. “If there is a drought or pest attack, the farmer is likely to suffer.”

In 1989, American scientists developed the Bt (Bacillus thuringiensis) cotton seed, a genetically modified seed designed to grow cotton that resists the bollworm. Monsanto, one of the world’s largest producers of genetically modified or transgenic seeds, holds the patent on Bt cotton seeds.

After being accused of contributing to the farmer suicide trend Monsanto released a public statement in 2008 stating: “Farmers are Monsanto’s customers, and we are successful only if our customers are successful. Farmers in India have found success with Bollgard. We have many repeat customers and many new ones there every year.”

Bojanna’s ten acres of cotton were Bt. His land was void of irrigation. The soil was veined with cracks, evidence of drought. “The average land holding in India is very small.” Ramanjaneyulu said. What can be done on your small farms with your own resources, is not encouraged. We are bringing in technology that does not fit our economy.”
Stalks of cotton were stunted, dark and wilting. India plants more cotton than any other country, claiming 30 percent of the world’s cotton acreage in 2008-09, compared with 20.5% for China and 9.9% for the United States, according to the International Cotton Advisory Committee. Yet India’s cotton yield falls short, producing 17.8 million bales to China’s 33.5, grown from, according to United States Department of Agriculture. India is planting more cotton than the rest of the world but still yielding less than China.

Nearly all of India’s rainfall comes from the yearly monsoon, subjecting crops to weather variations. Bt cotton grows better in irrigated areas than it does in rain-fed areas, but only a small percent of India’s cotton crops are irrigated according to a report done by The International Food Policy Research Institute. The dry year of 2008-2009 contributed to the first decline in yield since GMO seeds were introduced.

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<th>Year</th>
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<th>Production (million bales)</th>
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Notes: Each bale weighs 170 kilograms; N/A stands for “not available”.

“Agriculture is still dependent on monsoon weather. Weather is good – good harvest. So one crop failure means two or three seasons are gone for the family if they borrowed money from the bank,” said Joshi.

Ironically, the recent surge of farmer suicides comes at a time when India is the second largest producer of cotton in the world. The spike in yield was seen after the commercial planting of genetically modified seed was first permitted in 2002. Since then, use of GM seeds has expanded to cover nearly 80 percent of India’s cotton acreage, according to a 2009 report by Indian Directorate of Cotton Development.
But Bt is not an infallible technology as some farmers expect it to be. Many farmers are not educated on which seeds to buy and how to tend to them, Rao said.

Extension centers run by the local government have not been able to provide farmers with adequate information and training regarding growing new varieties of cotton. In turn, many farmers rely on information given by private seed companies. “Many private companies took advantage of farmers,” said Joshi.

LOANS AND DEBT
Bojanna, Rajamma Elishetti and their two sons, ages 8 and 17, incurred 400,000 rupees, about 8,000 U.S. dollars, of debt, an incomprehensible amount of money for a poor Indian family.

They moved to Adilabad 16 years ago and began farming on 10 acres of leased land. Bojanna farmed for six years before deciding to seek work in the middle eastern nation of Dubai as a laborer. After four years he returned to Adilabad to try his hand at farming again, investing in 15 bags of Bt cotton seed at 750 rupees each. Besides that, he spent about 8,000 rupees per acre on fertilizer, pesticide and labor charges. At the market, Bojanna made only 2,800 rupees per acre (62 U.S. dollars), acquiring 5,200 rupees (115 U.S. dollars) of debt per acre. In order to afford these costs, he took loans from a private lender in town at %3 interest rate per month, %36 annually.

His crops did poorly each year and the family sunk deeper in debt. “We were more in debt every year,” said Rajamma. “This year he was hopeful to get 12 quintals, 2,645 pounds, of cotton per acre, but he only ended up getting one,” she said.
Many farmers are willing to take the financial risk of investing in cotton, because the payoff of a perfect crop would be extremely lucrative. But cotton crops fail so often, especially in Adilabad. “The return from cotton is much higher than any other crop,” said Rao. “Farmers are willing to take that risk. And many have taken that risk. Some were not so lucky.”

On top of the debt acquired from farming costs, Bojanna and Rajamma took out 250,000 rupees (about 5,500 U.S. dollars) to build a house, expecting to get reimbursed through a government program that pays back farmers up to 100,000 rupees (about 2,200 U.S. dollars) to build a house. The grant was never sanctioned and their debt increased even more. “Even now that he is dead, I still have the debt,” Rajamma said. “I have no idea what we will do. There should be support from the government to get out of such situations,” she said.

Rajamma works in a beedi cigarette factory and helps her sons harvest the final four acres of emaciated cotton.

Access to government credit has become more difficult in India. The rural credit system is facing financial trouble, leading state banks to tighten lending requirements. Many farmers, like Bojanna, then resort to informal sources of credit—private money lenders, friends and relatives.

“Farming is not viable on its own. To keep industry happy you are keeping prices low. When you are keeping the prices artificially lower, you need to support people who are depending on farming. Today, that is not happening in India,” Ramanjaneyulu said. “Once you get into it, you have no option to get out.”
Rajamma Mani Elishetti and her two sons standing outside of their house. (Colleen Stewart/Farm to Fork)
BOWLING GREEN, KY (wkyu) - WKU journalism student Colleen Stewart recently spent a week in Hyderabad, India. She was there as part of a team of students and faculty that went to India to learn about international reporting. While in India, Colleen and her professor, Sara Shipley Hiles, focused their efforts on reporting the country's growing number of farmer suicides. In her own words, Colleen describes what she saw.

INTRO:
Last winter, a team of students and faculty from Western Kentucky University’s School of Journalism and Broadcasting spent a week in Hyderabad, India. Journalism student Colleen Stewart and her professor, Sara Shipley Hiles, focused their reporting on India’s vast agriculture system, in particular, the increasing number of farmer suicides. They traveled seven hours in a taxi overnight to reach a dusty, dry, cotton-growing region. There, they interviewed three women left alone and in debt when their sons or husbands took their own lives.

COLLEEN:
Her tears were the most potent and pure I had ever seen spilling from anyone's eyes. They were tears of complete desperation, an unstoppable force of catharsis coming from a woman who was utterly stoic and strong.

They began flowing from her eyes after I asked her what she was going to do without him. She paused and started sobbing. "I have no idea," she said.

(insert audio of her crying.)

Farmer suicides… I had researched the topic. According to statistics from the Indian government, more than 180,000 farmers in India have killed themselves in the past decade, pressured by failed crops and crushing debt. The deaths are concentrated
among growers of cash crops such as cotton, coffee and sugar cane.

As a journalist, I was prepared to report the story, but I could barely hold it together when she [INSERT HER FULL NAME HERE] spoke.

The village gathered outside Rajamma’s one-room house as we spoke to her through translators. The room was suffocating, drenched in tragedy, as she sat on the red dirt floor wearing a gold-embellished emerald sari.

She was the widow of a cotton farmer in the Adilabad district of India. Her husband had committed suicide a month prior to our conversation. He came home one day after working in fields, sat down outside of their house and drank the very pesticide that had failed to save his crops. In doing so, he left her and their two children with a huge debt.

Her two boys stood behind her, silent. The eldest son later showed us the devastated acres of cotton that his father had been renting. When his mother cried, he kept a straight face, as his little brother struggled to do the same.

In this remote, impoverished region of India, the family had few prospects for the future. Rajamma said she fears having to pull her sons from school to work; she fears a future of perpetual debt.

I often think of her to this day... still in India, still in debt, still desperate. She was one of three widows we talked to that day, and they are but three of thousands of cases in India each year.

How could it be that the farmers who are feeding and clothing the world, can barely feed and cloth themselves?

This is the plight woven into our cheap cotton t-shirts and into our everyday consumption.

This is the interview that will haunt me forever.

OUT-TRO:
That was Colleen Stewart, a journalism student at Western Kentucky University. Her trip to India was funded in part by the Fleichaker-Greene Scholars fund, which focuses on investigative reporting and First Amendment rights. You can see more from Colleen and other Fleischaker-Greene Scholars at fgscholars.com/farmtofork.

In addition, you can hear Colleen and her professor, Sara Shipley Hiles, speak about the farmer suicide problem at the Unitarian Universalist Church of Bowling Green, on Wednesday, April 28, at 6 p.m.
Colleen Stewart

Thesis proponent work in progress

GENDER DISCRIMINATION ON THE FARMFRONT
Cutting crisp green, pink and yellow stalks of chard from the cold ground, Lesley Heck is becoming, in college, the farmer her father never taught her to be.

Raised on a conventional tobacco farm in Rineyville, Ky., she watched her father, wanting to farm, but dissuaded against getting her hands dirty.

“Because I was a girl, they thought my fate wasn’t farming,” she said. “It’s an unspoken thing in our culture that men farm and women help.”

But approximately 300,000 women in the U.S. are primary farm operators of their family farm, according to the US Department of Agriculture, making up over 17 percent of the farmer population; women are the largest group of minority farmers in the country.

More than 30 percent of U.S. farm operators are women. Eleven percent of Kentucky farm operators are women. This data and graphic is from the 2007 Agricultural Census.
While the total number of farms has been declining for many years, the number owned and operated by women is increasing.

In Kentucky, nearly 11 percent of principal farm operators are women, one percent more than were five years ago.

Deborah Hill, a Forestry professor at the University of Kentucky, bought her 2 acres of land in Franklin County in 1997. Since then she has been singlehandedly producing shiitake mushrooms, strawberries, blueberries, raspberries, blackberries, plums, Pawpaws, and other fruit crops.

At the age of 68 she is the primary owner/operator and sole worker of her farm. She didn’t grow up on a farm and she didn’t inherit one.

“In some cases, women in Kentucky are farming more because the men have died; in others, women want to control food production and care for the land,” she said.

Hill, who farms organically, but isn’t certified, is on the Board for Organic Association of Kentucky, a board composed of half men, half women.

She sells her produce through Lexington Farmers market and to personal customers, and says that women are changing the traditional ways of farming and farming more sustainably.

“If more women farmed, the agribusiness and food industry would entail more holism, more organic, more cooperatives,” Hill said.

But it’s hard to get started with small-scale, holistic, organic, cooperatives without subsidies or loans.

The Commonwealth was deemed one of the top 20 states that have a “particularly high percentage of women farmers who have not received their proportionate share of USDA farm loans,” according to Love v. Johannes filed in 2001.

The court complaint has 10 plaintiffs listed, none of whom are from Kentucky, and was filed as a discrimination lawsuit against the USDA for gender discrimination in the administration of its farm loan programs.

“There were many Kentucky women who filed declarations in support of class certification with the district court,” said Kristine Dunne, a pro bono lawyer for the Love vs. Vilsack case.

Hill applied for and was denied loans from her local FSA office. She said she women are being discriminated against to some extent, in the agriculture industry.
“They said they ran out of money or they said ‘no we can’t support that,’” she said of the loan officers. “They were all very pleasant, but they wouldn’t offer me a loan whether it was because I am a woman or because of the nature of my farm.”

Congresswoman Rosa DeLauro, who introduced the Equality for Women Farmers Act last year, called it an issue of fundamental fairness during a press conference for the Act.

“All farmers, regardless of their gender or ethnicity, should be judged on the merit of their applications for their loans,” said DeLauro.

"Years of discrimination and unnecessary hardship for these women, and all minorities, cannot be allowed to continue."

LOVE VS. VILSACK
Rosemary Love, a third-generation farmer from Montana, said that during the farm crisis in 1981 she applied for and was initially denied a farm operating loan according to case files.

In 1983 she received a loan for half the requested amount. While she was undergoing cancer treatment, a county Farmers Home supervisor came to the hospital and demanded payment of the loan, she claimed in the gender discrimination case she filed in 1987 against the USDA.

In 1998, a government investigator found that Love had been subject to unfair treatment, but the case remains unresolved.

In 2001, Love v. Johannes, now referred to as Love v. Vilsack, was filed. The case has been pending for nearly a decade.

"This has been a decades-long struggle for me and my family," Love said at a news conference in December 2009. "This bill is important for future women farmers – for daughters and granddaughters who want to continue farming."

While the women farmers’ litigation has been stalled along with Hispanic farmers’ litigation, the government agreed to pay African American farmers $50,000 each if they had attempted to get USDA help but failed between 1983 and 1997 in the case of Pigford v. Glickman.

In October 2010, Native Americans were similarly awarded compensation for discrimination in the Marilyn Keepseagle et al., v. Vilsack case.

“For decades, the United States Department of Agriculture has had an unfortunate and checkered history with regards to civil rights,” reads the disclaimer on the website for USDA Office of the Assistant Secretary for Civil Rights, which handles civil rights complaints based on race and gender, for the USDA.
EQUALITY FOR WOMEN FARMERS ACT
In December 2009 Congresswomen Rosa DeLauro and Anna Eshoo introduced the Equality for Women Farmers Act that would provide compensation to female farmers who have been denied loans since 1981.

"It is time to do right by those that have been discriminated against in our past and present, to live up to our founding principles, and to legislate an end to this unfortunate and regrettable era,” DeLauro said in a press conference.

She was joined by six women farmers who shared their stories of gender discrimination by the USDA.

In 1984 Lind Weaver moved to Leesburg, Virginia to nurture Welsh ponies and Holly trees on a 16-acre plot, but was denied a loan application, and told “women can’t run farms.” Further attempts to procure a loan garnered sexual advances by a loan officer who called her “honey” and “cutie.”

“And I will never forget the loan officer threw both my application to farm and my business plan into a waste paper basket right in front of me,” she said in a press conference in December 2009.

Lind was amongst the six women testifying.

“Thousands of other women farmers all across the country faced similar discrimination for many years, she said. “And that is why we decided we had no choice but to band together and file a lawsuit.”

FARM LOANS IN KENTUCKY
The term “Socially Disadvantaged Applicants- gender” is what women file as when applying for FSA loans.

Kentucky was 4th in the Nation last year in making loans to SDA applicants, said state Farm Loan Chief Mitchell Whittle.

The following SDA loans were filed in 2010:
Disclaimer: the Direct and Guaranteed Operating loans both include SDA - Ethnic loan numbers as well as SDA- Gender loan numbers. Direct loan numbers are much higher that the Guarantee numbers as Direct loans have much better interest rates and loan terms.
Direct Operating loans– 106
Direct Operating Youth loans – 75
Direct Farm Ownership loans – 24
Guaranteed Operating loans – 7
Guaranteed Farm Ownership loans – 6
Two SDA gender applications were rejected in Kentucky this year, both due to a poor credit history, Whittle said.

In terms of existing SDA -Gender loan caseload, Kentucky currently distributes 754 Direct loans for Operating and Farm Ownership and 48 total Guarantees. (Some of the SDA –Ethnic borrowers are also female, thus again these figures could be slightly higher.)

Michelle Armstrong, who owns a 325 acre farm in Spencer County, sits on her local Farm Service Agency committee.

She received government subsidies and loans for her farm while she was still farming and said that women are given equal opportunity for aid.

“You have to think like a man at times and I was taught by my father how to get what I wanted,” she said. “I sell myself as a farmer first, woman second. It is all in the mind set.”

Armstrong grew up farming the then-425 acres with her father and inherited the farm when he died. They raised hogs from feeders, Angus cattle, hay, corn, soybeans, and tobacco.

“Women farmers are discriminated against all the time,” Armstrong said.

“The retail side forgets that it is the woman who signs most of the checks, puts up material and has to deal with rude men on the counters. I have been around long enough, the men accept me because I know what I am talking about and I know what I need.”

As vice chair of the male-dominated Kentucky Farm Bureau Women’s Advisory Committee and vice president of the women-exclusive Kentucky Women in Agriculture organization, Armstrong is an advocate of large-scale farms, not the small-scale, sustainable farms like Hill’s.

“I know I think differently than most women in my area because I ran a farming operation and I was taught by a man,” she said.

“I elected to run in a man’s world and still do to this day.”

SUBSIDIES AND SUSTAINABILITY

“The Kentucky female farmer operations fairly well cover the gamut from tobacco, grain crops, beef, dairy, swine, poultry, goats, horticultural crops, etc..” said Kentucky Farm Loan Chief Mitchell Whittle.
Statistics, nationwide and statewide show that women farm differently than men. Women typically farm on much smaller scales and tend to farm vegetables, fruits and nuts, alternative livestock like goats and sheep, poultry, eggs.

The most highly subsidized crops in the United States are corn, wheat and cotton, according to the Environmental Working Group’s subsidy data. In Kentucky, the highest subsidized crops are corn, soybean and tobacco.

Because women are not typically farming highly subsidized crops, they are often not high ranking on the list of subsidies given. On the list of highest subsidized farms In Kentucky, the first solely women-owned farm to rank comes in 82nd, preceded by jointly-owned farms, male-owned farms and farms that contain “sons” and “brothers.”

Heck began farming when she started living with her partner Donald.

“He would teach me to do all the things I grew up watching my dad do,” she said.

They bought a farm together under his name. “There is no doubt in my mind that a single male would get a farm loan over a single female,” she said. “From a farm workers perspective, there isn’t much discrimination, but farm managers are supposed to be men.”

Because of the position women farmers are in, Heck said she more and more women getting involved in sustainable practices.

She herself moved off of the conventional farm she owned with Donald in order to study sustainability and work during the summer and school year on different Kentucky farms.

“I can do the same work as any man,” she said, meaning it. At 5 foot 9 with a strong build and calloused hands, Heck is as physically capable of farming as most men.

Women are at the forefront of sustainable small-scale growing said Dr. Elmer Gray of the Agriculture Department at Western Kentucky University.

The department taught its first Sustainable Gardening class this fall, taught by two female teachers and taken by seven female students. Heck is one of them.

The class’s plot of land is on Western’s Ag farm off Nashville Road, 25 acres of blueberries, strawberries, chard, parsley, walnut trees and room to grow.

“We are learning to farm this earth right,” Heck said.
Seven-generation family of Washington County Dairy Women prepare for county fair
Published: Friday, July 23, 2010, 11:30 AM

Photo by MICHAEL LLOYD/The Oregonian

CORNELIUS -- Tin pail of milk-replacer in tow, Robin Baggenstos and her daughter walk down the dirt road past the cow barn and a field of Queen Anne's lace to feed the wobbly-legged calves.

"'Moo' is all she could say when she was little," Baggenstos said, as 3-year-old Danica points out her two cows, Cherry Moo and Dee.

Danica has milk in her blood. She's the seventh generation of a dairy-farming family at a time when "dairy farmers are disappearing," her grandmother, Judy Marsh, said.

Not only are the Marsh women dairy farmers; they're royalty. Baggenstos and her sisters, Amy Franck and Anna Marsh, are former dairy princesses and members of the Washington County Dairy Women and Oregon Dairy Women. Judy Marsh is president of the county group and former president of Oregon Dairy Women.
Dairy-farming is hard work, Judy Marsh said, but the family loves it. They will be busy next week, as the Dairy Women sell ice cream, organize 4H events and host contests at the Washington County Fair, which begins Thursday and runs through Sunday.

"When we were little," Anna Marsh said, "the county fair was better than Christmas."

Judy Marsh, 57, grew up a farm girl, milking cows in Banks. She married George Marsh in 1975 and moved to his family farm, which dates from 1852, on Cornelius-Schefflin Road.

"I don't know what it's like not to have cows," she said.

WASHINGTON COUNTY FAIR
When: Thursday through Aug. 1
Hours: 10 a.m. to 11 p.m.
Where: Fair Complex, 873 N.E. 34th Ave., Hillsboro
Admission: Free
Parking: $5. A free shuttle bus will run from MAX's Fair Complex Light Rail Station to the Fair entrance gate.

Arena events: $10 admission each. All begin at 7 p.m. Thursday, truck and tractor pull. Friday, Tuff Truck racing. Saturday, monster truck and mud drags. Sunday, demolition derby and freestyle motocross.

Entertainment headliners: 7:30 p.m. Thursday, Gallagher, melon-mashing comedian; free. 7 p.m. Friday, music by Warrant and Krotchrockit; $12 advance, $20 day of show. 7 p.m. July 31, music by Floater, $15 advance, $18 day of show. noon to 10 p.m. Aug. 1, La Pantera dia de la Familia, music, dance, clowns, more. $15 adults, free 10 years and under

Children followed: Brandi, 32; Robin, 30; Amy, 28; Anna, 26; and a son, Will, 25. All five were milking by the time they were 10, often taking shifts and getting $5 per milking.

Today, the Marsh farm has around 300 cows, mostly Holsteins, on 180 acres. About half of the cows are milking at any given time; when lactating, each cow produces 20 to 50 pounds per milking, twice a day. The milk goes into a 3,000-gallon tank, and Darigold picks it up every other day, around 12,000 to 14,000 pounds at a time.

George Marsh farms full-time, with one hired worker. Four of the five Marsh children work on the farm, while holding down outside jobs. Judy, too, had to get a full-time job three years ago, with Tualatin Soil and Water Conservation District.

Son Will, who works for Metro New Holland tractor in North Plains, helps his father maintain the fields of wheat, corn, oats, and alfalfa grown to sell and to feed the cattle.

Self-proclaimed "substitute dairy woman," Brandi Marsh is the nonfarmer and works at a Portland bank. The eldest daughter helps out at the county fair, though, manning the ice
"Growing up on the farm instilled values and work ethic in me. There's no laziness on the farm," she said, as she planted her high heels in the dirt road. "I just kind of grew away from it."

As she parades a group of cows into the dairy parlor for milking, Anna Marsh recalls watching a family video in which her young self declares: "I'll never be a dairy farmer. It's too much work."

She is finishing her second degree and plans to get a part-time job at the living assistance center where she is interning.

Franck and Anna Marsh milk the cows every day, with Baggenstos filling in when needed. "Wipe, strip, dip and rewipe each udder with iodine," Franck said, describing how the cows are cleaned before attaching milking hoses. She often juggles milking the cows with watching over her 2-year-old son, Kyle.

"I want to raise him on the farm like I was raised," she said, reminiscing about the times her dad would wake them up in the middle of the night to chase escaped cows.

"When you heard 'cows are out,' you didn't know how, but you would be standing outside with your boots on in a minute, running after them and keeping them from the road."

On top of mom duties and milking duties, Franck works as a milk tester for the Willamette Dairy Herd Information Association.

Baggenstos, too, has an outside dairy job. She's 4H dairy cattle superintendent for both the county and the Oregon State Fair, teaching kids about dairy and organizing contests and events.

Each of the Marshes remembers her first cow, bestowed by their parents for working around the barn. Every year as the fair approached, they would spend even longer hours in the barn, cleaning, shaving and training their cows for show.

"The county fair was our vacation when we were little," Baggenstos said.
Next week, as they have for 40-some years, the Dairy Women will serve ice cream from their fair booth. Originally known as the Dairy Wives, they began selling hard ice cream at the fair in the 1960s and switched to soft-serve in the 1980s.

Besides ice cream, the group dedicated to promoting dairy products hosts a 4H cheese identification contest and the annual dairy cake challenge at the fair. Bakers must follow the same recipe and prove they used three dairy items by submitting the wrappers. This year's recipe is for Lemon Buttermilk Cake with Strawberries.

Judy Marsh remembers the days when she would drink her milk straight from the tank. She said she always fed her kids dairy, but never prodded them to take over the farm.

"I wanted my children to choose what they wanted to do when they grew up," she said, noting that only 280 dairy farms remain in Oregon, 17 of them in Washington County.

Many farms are closing as the next generation moves to jobs off the farm, Baggenstos said.

"Dairy is not something easily entered into," she said. "You have to want to get up and do it. There are no days off, no long vacations. And with the price of milk fluctuating, we're just surviving."

Anna Marsh added, "But this is what we love. A day without cows is not a day."

Photo by MICHAEL LLOYD/The Oregonian

Urban Poultry Forum majority favors ordinance
Deborah Vandetta of Washington County came to the Urban Poultry Forum to support the ordinance. In her hair, she wore four feathers, one from each of her chickens.

BEAVERTON-- Around 100 people attended the Urban Poultry Forum last night at Beaverton City Hall.

Beaverton is looking at drafting an ordinance that would allow people to keep a limited number of chickens and ducks at their homes, said Beaverton Community Development Planner Ken Rencher.

Current regulations in Beaverton do not allow livestock or poultry within the City limits whereas Portland, Gresham, Tigard, Forest Grove, and Troutdale allow chickens, subject to a variety of restrictions.

Rencher said the purpose of the forum was to exchange information and that no decisions were to be made yet.

Forum attendees carried feather-coated signs that read Catch up Beaverton, most surrounding areas allow chickens and Chickens, healthy backyard protein and hilarious fun pets.
When polled, the audience was predominantly in favor of an Urban Poultry Ordinance, with only one person speaking in opposition.

Typical complaints from neighbors are noise from the birds, odor, and the potential to attract pests, vermin, and predators, said Washington County Code Compliance Officer Andre Bjornskov.

Beaverton Planning Commission will hold a public hearing on Wednesday, June 30 at 6:30 p.m. to consider the draft ordinance and will make a recommendation to the City Council. The first hearing by the City Council will occur in August.

--Colleen Stewart
Paul Wiediger, owner of Au Naturel Farm near Smiths Grove, Ky., works in one of his high tunnels that allow him to grow greens year-round. (Colleen Stewart/Farm to Fork)

Story and Photos by Colleen Stewart/Farm to Fork

A steaming plate of vegetarian strata—spinach, mushroom and artichoke hearts with cheese baked in homemade bread—is the special today.

The spinach was grown in Bowling Green soil and served at Greener Groundz Café—local food, from garden to plate.

It sprouted in November as one of the many crops grown throughout winter in high tunnels, a type of greenhouse, on Au Naturel farm in Smiths Grove, Ky. and at the O’Daniel farm, six miles outside of Bowling Green, on the Barren River.

“It’s easy to eat local in Bowling Green, even throughout winter,” said Paul Wiediger, who owns Au Naturel with his wife, Alison.

As the trees turned yellow and rusty-orange and the days got cooler and shorter, Paul, Alison and their seasonal intern, Emma Franklin, from Carrollton, Missouri, started waking up later.

“There is still work to be done, but it’s not as fast paced,” said Franklin.
The morning began at 7 a.m. with a breakfast of eggs, fresh from their chicken coop, as well as greens, potatoes and peppers from their own crops and cheese from a neighboring farm,

“For many, it is time to put their farms to sleep, but with our high tunnels we can grow year-round,” Paul Wiediger said.

The five plastic-covered tunnels totaling 10,000 square feet, house flourishing rows of greens, lettuce, spinach, kale, collards, beets and carrots planted for the winter months.

Heat from the sun is trapped beneath the plastic and heat the tunnels.

“They give us an element of control over the weather and allow us to have a steady cash flow throughout the winter months,” Paul Wiediger said.

Molly Kirby, co-owner of Greener Groundz Café, is dedicated to purchasing local cheese, wine, eggs, dairy and produce.

“We get the same amount of our food locally in the winter as we do in the summer,” she said. “And we buy it all from the O’Daniels or the Wiedigers.”

Greener Groundz adjusts its menu to the seasonal local produce being grown.

“We try to keep everything local,” she said. “The food is better for you and it tastes better. It’s good for the local economy.”

BG Green Partnership for a Sustainable Community hosted the second annual local dinner at Greener Groundz this year, a menu comprised of food grown within a 100-mile radius. Last year’s dinner was hosted at Verdi’s with food from a 50-mile radius.

BG Green is trying to educate on how to live sustainability and eat locally said Program Director Nancy Givens.

“Bowling Green has a terrific capacity for local produce and local producers,” she said. “There is so much being produced, but the consuming market has not supported it yet.”

October was the last month that the SKY Farmer’s Market at The Medical Center on the 31W bypass, to be open until spring.

When open, the market hosts 40 vendors during summer months but its attendance starts dwindling towards late October, down to 11 vendors and a few handfuls of customers. Most of the customers that do come out are there to pick up pre-orders from the Wiedigers or the O’Daniels, orders they call or email in.

Lexington senior Greg Capillo buys produce from the O’Daniels throughout the year.
“For one thing, I value eating local, and for another— it is so much easier and tastes so much better,” Capillo said.

“I have to be creative with what I’m cooking when I eat seasonally. It’s a more conscious way to eat and they care about me more than Krogers does.”

Each week, the O’Daniels send out an email listing products and prices. Capillo said he places an order and they deliver his order to his doorstep on Saturdays, leaving a self-addressed envelop for him to send payment.

Cauliflower, cabbage, radishes, mustard greens, spinach, arugula, turnips and Brussels sprouts are plants that thrive during winter months on the O’Daniel farm, Joe O’Daniel said.

He constructs about 7,700 square feet of high tunnels for each winter season. The plastic he can be used for up to five years and the tunnels pay for themselves in production.

“They are kind of labor intensive at first, but they give me a huge advantage because I can grow through winter and get an early start on spring growing,” O’Daniel said.

“With the tunnels, I can actually make a living farming. I can do what I love 12 months of every year.”

This winter will be the sixth winter that the O’Daniels have been growing in the high tunnels. Their food is grown naturally on their 116-acre farm located six miles outside of Bowling Green on the Barren River.

O’Daniel said each year he has been getting more customers during the winter. Last week he had 56 and this week, 48.

“There is a huge potential market here for fresh winter produce,” he said.

Their customer growth has been expanding mainly through word of mouth, O’Daniel said.

The O’Daniels and Wiedigers are, so far, the only farms in South Central Kentucky to grow with high tunnels.

“We’re the only ones with produce left in the winter,” said Wiediger.

“We have an advantage because we can grow all year and maintain our loyal customers,” said Wiediger.

The 84-acres of rolling hills on the Au Naturel farm contain, amongst the high tunnels and crops, are pastures for grass-fed cattle, sheep, chickens, turkeys and hogs.
Au Naturel also contacts their customers weekly to tell them what produce they offer at different times during the season.

“The average American is so removed from food production. They don’t understand why we don’t have watermelon in April,” Wiediger said.

Both farms operate solely by pre-order throughout winter, once the market closes.

Au Naturel aims to be as self-sustaining as possible, Wiedeger said. “Everything I’ve eaten today has been off of the farm or from local farmers… except for a piece of chocolate.”

Alison Wiediger, who bought the farm 20 years ago, said their customers tell them their organic produce and meat taste distinctly better than that found in grocery stores.

“The tomatoes are soft and juicy, the chickens are coarse and flavorful… this is real food. It takes patience,” she said.

Paul Wiedeger and intern Franklin feed the livestock their second meal of the day as the sun sets. They close up the open windows of the tunnels and they collect the year’s last round of chickens to be processed and distributed.

“This is our life. We live food and we live produce,” said Wiedeger. “It doesn’t stop when the weather gets cold.”

Alison Wiediger, owner of Au Naturel Farm, and intern Emma Franklin hold two of the seven turkeys the farm raised this winter.
Arbor School eighth-grader cooks up website and cookbook on healthy, low-cost eating for senior project
Stories and Photos by Colleen Stewart
Published: Friday, June 25, 2010, 4:00 AM

Natalie Lerner, 14, chops carrots, broccoli and green beans for her Pasta Primavera recipe. She said she has been cooking since her dad taught her to make french toast as a little kid.

Natalie Lerner, 14, flips through the green hardback cookbook she wrote and sets it on a stand, open to her Pasta Primavera recipe.

One serving costs just $2.66 and is a healthy, balanced meal that could be prepared by any eighth-grader.

Wearing a T-shirt she designed that reads "It's cookin'" on the back and "kidskitchencoach.com" -- the name of her website -- on the front, she begins to prepare a meal for her family.

Natalie is out to disprove some culinary misconceptions: the first being that kids can't cook, the second being that healthy food is expensive and difficult to make.
She turns on the stove in her Northeast Portland home, boils pasta and prepares vegetables, as her dad washes strawberries at the sink, not once looking over her shoulder to coach or critique.

"I love to cook and I wanted to do something that could benefit people locally, in Oregon," she said of her decision, a year ago, to create the Kid's Kitchen Coach website and cookbook as her senior project at Arbor School of Arts and Sciences. The private Tualatin school that emphasizes "intellect, character and creativity." Next year Natalie will attend Oregon Episcopal School.

In November, the USDA declared that Oregon's rate of "very low food security" had risen to 6.6 percent, making Oregon one of the five most "hungry" states in the country. "Food security" is when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life.

Natalie's recipes are healthy and economical, all costing under $3 per serving. She developed dishes similar to dinners her family cooks and tailored them to meet her criteria for price and nutrition. Each recipe lists nutritional data and approximate cost per serving.

She completed her project over the course of a year, posting 15 recipes on her website in three months. Kid's Kitchen Coach cookbooks and T-shirts are available on the site, along with all 15 recipes and basic tips on cooking.

"People keep asking for desserts," said Natalie, who said she may continue to post new recipes. "I don't know what kind of nutrition criteria we would need for desserts, though."

Natalie, a math and science enthusiast, calculated cost by averaging ingredient prices from Fred Meyer, Safeway and Albertsons, taking into account the weekly fluctuation of prices.

Nutrition was calculated with the help of Nancy Becker, a family friend who is a registered dietician. Becker said she and Natalie made sure the recipes met U.S. Dietary Guidelines.

"I think everyone should know how to cook for themselves, at least two or three meals," Becker said. "Given the current food climate of reliance on restaurant food and fast food, it is easy to get too much sodium and saturated fat, unless you cook for yourself."

All of the Kids Kitchen Coach recipes meet the following per-serving criteria: 500-700 calories, no more than 15 grams of fat, no more than 1,000 milligrams of sodium and low in saturated fat.

In the cast iron pan, diced carrots, broccoli, green beans and mushrooms sizzle, mixing with olive oil, onions and garlic.
"She knows how to cook," said her dad, Ken Lerner. "Once we trusted her around the stove, she demanded to do more."

Lerner said he learned to cook from his mother and felt it was important to pass on the skill to his children. "Cooking is a lot of fun for kids to learn, and it's a cheaper, healthier way of eating."

Natalie mixes the steaming vegetables into the giant bowl of pasta.

Voila! Pasta Primavera, economical, easy to make. And the final recipe criteria listed on her website: "Delicious."
Summer Food Service Program provides kids with free lunches
Published: Tuesday, July 13, 2010, 4:00 AM
The Oregonian:
Photos and story by Colleen Stewart

Khalleeh Lopez, 3 (left), and Bianca Lopez, 2, enjoy lunch in Beaverton City Park through the Summer Food program. The two play in the park or read in the nearby library after eating.

BEAVERTON -- The ice cream truck drives by children playing in the fountain at Beaverton City Park. But instead of being rushed by dozens of sweet-toothed kids when it stops, the truck sits lonely in the lot as the kids play on complacently, stomachs satisfied, ears ignorant to its luring tunes.

The free Summer Food Service Program for Children is under way throughout Oregon.

The program is open to all children 18 and under. They do not have to come with a parent or provide proof of need to be fed. Lunches are served on weekdays at schools, churches, parks, mobile home communities and other venues around the state. A list of sites and times is available online.
Last summer, 220,017 meals were served to children 18 and younger in Washington County, more than any county in the state except Multnomah, according to Summer Food records.

Fifty-two programs will operate in Washington County this summer, up from 45 last year, according to Betty Merritt, program coordinator for Washington County Commission on Children and Families.

There is a huge range in need within the county, said Robyn Johnson of Partners for a Hunger-Free Oregon. "Over the past year in Oregon, we've seen the number of children eligible increase dramatically," she said. "More people need these because they are out of work. It's a story of recession."

The program, funded by the U.S. Department of Agriculture, operates in areas where 50 percent or more of the students qualify for free or reduced-price lunch during the school year.

Sponsors, including school districts, government agencies, camps and nonprofits, provide free meals and are reimbursed for their cost by the USDA.

About 81 percent of public schools in Oregon have seen an increase in children qualifying for reduced-price lunches in the past year, Johnson said.

Norma Lopez has been coming to Beaverton City Park's program for the past three years with her daughters Khalleeh, 3, and Bianca, 2.

"It helps us out each summer," said Lopez, who estimates that the program has saved her hundreds of dollars.

"My favorite is burritos," Bianca said, biting into one.

Summer Food meals must meet the same strict nutritional guidelines as food served in the school cafeteria, meaning they must include milk, grain, protein, fruit and vegetable, Johnson said.

"We want to reinforce what a good meal looks like," she said. "It's a way for families to stretch food dollars, provide nutritious meals. Oftentimes when a family is short on money, food is the first thing to go."

Recently, Summer Food sponsors have been making an effort to provide children with local food, fresh from the farm, Johnson said.

At Beaverton City Park, children can fulfill their fruit requirement with Oregon strawberries or an out-of-state orange.

Aside from a meal, most programs provide kids with a place to play.
"Food is important, but we're also getting kids outside of the house in a safe positive place," said Annie Kirschner of Partners for a Hunger-Free Oregon. "For a lot of kids, this is the closest they have to summer camp."

At City Park, children file down the line of portable coolers. They take a burrito or cereal or a chicken salad, carrots, an orange or strawberries and a carton of milk before sitting at tables in a roped off area.

They must take one food from each category. Though many do so reluctantly, little is wasted, said Val Bako, Beaverton School District nutrition service director.

"They're eating it all," she said, "which means they're needing it."

As kids eat their strawberries and carrots, the ice cream truck drives away without selling a cone.
PERSONAL REFLECTION
I felt every pair of eyes in the village on my back as I asked Rajamma Mani Elishetti what she would do without her husband who had killed himself to escape his wilted 10 acres of cotton.

Every facet of that moment is crystalline—the smell of beadie tobacco, Rajamma’s emerald-colored sari contrast against the red dirt floor, her sons’ watery and stoic eyes, oxen bells clanging, the cacophony of Telugu and English being exchanged, the comic relief provided by a wrinkled woman in the door wearing big yellow sunglasses.

I asked the big question.

As it left my mouth, a sense of culmination rushed over me, hitting me with the momentous realization of being in India reporting on farmer suicides. It was everything I had wanted and romanticized about, but I could only feel grief.

International investigative reporting had been my aspiration since watching Lisa Ling on TV and reading about Nellie Bly’s adventures and exposés. India had been my Xanadu since watching my high school teacher's slideshow of the Ganges River’s brilliant colors. Agricultural and environmental issues had been my penchant.

I was living my wildest dream, a summation of strife… late nights in the student publications office, an unpaid internship, the days of biking to all of my interviews before I had a car, the patience of filing F.O.I.A.s and combing through court documents, sitting through classes, attending workshops, reading news prolifically.

It all came into focus when Rajamma paused and began to cry.

Biting my lip, my fixation with being an international investigative journalist shattered with resounding clarity.

It wasn’t about me living my dream of investigative reporting in India, going
abroad for the first time, building my resume, writing a Hearst-worthy story. It wasn’t about getting a good story or finding the most riveting character.

In that moment, it was about Rajamma’s story, the plight of Indian farmers and epidemic of farmer suicides. A plight that was as real as she was, standing before me.

In that moment Rajamma’s story was demystified, as was the novelty of being a journalist. And so I ceased concern for being one. In that moment I truly fell in love with journalism. I understood journalism. I started doing journalism.

This project, “We can grow it,” is one that encapsulates my interests in investigative reporting, environmental issues, women’s equality, agriculture and food. Slowly, I honed my focus on the issue of women farmers and how they have the potential to greatly affect the world through sustainable practices.

My interest in agriculture traces back to my childhood.

My grandma grew up on a dairy farm and built a house on that farm and watched suburbia and WALMART encroach on the land that once belonged to her family. Some of my cousins worked on a goat farm. My aunt and uncle owned a farm and my cousin Kyle grew “Kyle’s corn.” My first bite into a cob of it solidified my understanding of local food. It tasted better. It made more sense. Shucking the corn, minutes after it had been picked, was such a tangible and reverent action. As my interest in food production grew, my family started growing tomatoes in my backyard. We went to an orchard in autumn to pick apples.

In college, my friends and I simultaneously started increasing our awareness of food, for the first time thinking about chemical fertilizers and pesticides, genetically modified breeds of produce, the ubiquitous use of subsidized corn, the animal cruelty
behind many industrial meat production companies, giant seed companies like Monsanto, American obesity, high-fructose corn syrup and processed food. We read Michael Pollan’s *Omnivore’s Delimma*, Barbara Kingsolver’s *Animal Vegetable Miracle*, Novella Carpenter’s *Farm City*, Jonathan Safron’s *Eat Animals*. We watched documentaries such as “Food INC.” and “King Corn,” and we began getting our food from the SKY Farmer’s Market. We started a garden in

![Figure 8: WKU GROWS logo designed by Colleen Stewart. 2009](image)

fall 2009 on the W.K.U. Ag farm, growing heirloom tomatoes and selling them on campus under the name WKU GROWS. In the spring, we were granted 25 acres to grow a sustainable garden, using no chemicals and no fuel-power. Befitting to my thesis, the inaugural class was comprised of six women students and two women teachers. We planted blueberry bushes, chards, parsley, fruit trees that season. The tactile and visceral experience of growing things myself, having dirt under my fingernails, and eating greens off the farm, was a crucial element to researching women farmers. Learning to grow my own food has been an invaluable experience that has sustained my motivation for this project—Reporting on women in agriculture. I believe women innately have a nurturing nature that is apt for growing food and understanding the fertility of mother earth. Eve Ensler, author of the Vagina Monologues talks about “the girl cell” in her essay “*Embracing your inner girl.*” She wrote:
What I want to talk about today is this particular cell, or grouping of cells, that is in each and every one of us. And I want to call it the girl cell. And it's in men as well as in women. I want you to imagine that this particular grouping of cells is central to the evolution of our species and the continuation of the human race.

And I want you imagine that at some point in history a group of powerful people invested in owning and controlling the world understood that the suppression of this particular cell, the oppression of these cells, the reinterpretation of these cells, the undermining of these cells, getting us to believe in the weakness of these cells and the crushing, eradicating, destroying, reducing these cells, basically began the process of killing off the girl cell, which was, by the way, patriarchy.

And then let's think how compassion informs wisdom, and that vulnerability is our greatest strength, and that emotions have inherent logic, which lead to radical, appropriate, saving action. And then let's remember that we've been taught the exact opposite by the powers that be, that compassion clouds your thinking, that it gets in the way, that vulnerability is weakness, that emotions are not to be trusted, and you're not supposed to take things personally, which is one of my favorites.

The state of girls, the condition of girls, will, in my belief, and that's the girl inside us and the girl in the world, determine whether the species survives.

I have witnessed the “girl cell” in women farmers. In India, I saw the girl cell in a wife whose husband had committed suicide when his cotton crop failed. I have seen the cell in an Indian mother, whose son did the same thing, and an Indian schoolgirl whose father had also killed himself for failure of his crop. I saw the girl cell in the women farmers, picking cotton in the fields, in the women picking seeds out of cotton in the cotton mill. I have seen the girl cell in women farmers in Belize. Julia Gonzalez supports her family through farming. She was awarded solar panels and a greenhouse when she became “Woman farmer of the year.” Desalyn, a 25-year-old woman, took over her farm
after her father died, partially due to the pesticides he used to spray his crops. She farms without chemicals with the help of Sustainable Harvest.

I see the girl cell in the U.S. where I visited a nine-generation dairy farm run by women farmers in Oregon (Appendix 4.) I lived next to Columbia Eco Village (Appendix 5) in Portland, Or., where Lisa Weasel lives with her two adopted daughters, one from India, another from Africa. The girls feed chickens, help water the garden crops, and tend to the bees. Weasel, author of Food Fray, a book about genetically modified foods, takes them to the farmer’s market every week and teaches them how to cook.

In Kentucky, women are farming with their husbands and independently. Allison Wiediger of Au Natural farms and Debbie O’Daniel of O’Daniel farms, are critical participants on their respective farms. I have been getting my food from them for two years. Molly Kerby and Benita Bartley run the only café in Bowling Green dedicated to locally-sourced food, Greener Groundz.

My sophomore year, I enrolled in the Special Project Reporting class at Western, taught by Sara Shipley Hiles. The class focused on Immigrants and Refugees in Bowling Green. My story on Steven Kamara, a Liberian refugee awaiting deportation hearing for impregnating his underage girlfriend, also from Liberia, gave me my first taste of investigating an article. I rode my bike to his family’s house, speaking to his parents through the translation of his younger siblings. I combed through documents about and videos of Steven in the courthouse. After spending a semester researching and writing to Steven in jail, I was given a grant to witness his deportation hearing in Chicago. This story changed my journalistic aspirations. When Sara approached me about the second Special Project Reporting class, “Farm to fork,” focusing on agricultural issues, I signed
up and helped recruit students. Furthermore, Sara was able to take one student with her to India to report on agricultural issues. The experience in India was my first trip abroad and such a whirlwind. I was responsible for interviewing with the help of our translator, for collecting audio and photos, creating a multimedia piece, and writing an in-depth article. I spent the spring semester editing the pieces and writing shorter pieces for the class website. The FG Scholars class was a defining experience for my journalism path. The work I did for the class got me my summer internship at the Oregonian and the Overseas Press Club scholarship. Working with Sara, watching her interview and getting her feedback, was an invaluable experience. I learned a year’s worth that week in India.

For my capstone project in Harry Allen’s class, I worked on a story about women farmers in the U.S., focusing on the Love v. Vilsack litigation, initially filed in 2000 by a number of women farmers, which accused the U.S. Department of Agriculture of gender discrimination in the administration of the USDA's farm loan programs. Simultaneously, for Scott Dobler’s geography class, I worked on synthesizing Census data to compare the rate at which women are farming nationally in the U.S., to the rate at which women are farming in Kentucky. Scott Dobler helped me use Census data to create GIS graphics depicting the Kentucky Census information on women farmers.

During winter break 2011, I went to Belize to investigate the state of women farmers in the country. Belize was a “developing” country with rates of women farmers similar to the U.S. I thought this would make an interesting contrast to the piece about U.S. women farmers. The trip would also be my first solo investigative venture. Without Sara’s guidance, I arranged appointments with NGO organizations and found women farmers to illustrate the issue. Once in the country, I stayed the night on farms and
traveled from North tip to South for three weeks in order to get a thorough grasp of agriculture in the country. Because of Belize’s size and the fact that most people speak English there, it was a feasible place for my first solo-planned investigative experience.

From coast to coast in the U.S., to Central America, to Asia, I have investigated women in agriculture. Along the way, I have developed critical thinking skills, photography skills, production skills, in-depth writing skills, interviewing skills, and a better understanding of how to synthesize geographic and special data. This thesis is a culmination of my inspiration and motivation, and my passion for the issue of Women in Agriculture. The gradual journey has changed my life and my career path, while deepening my understanding in the origin and future possibilities of sustainable food production. Like the tomatoes and blueberries in my sustainable agriculture class, I have grown. I hope to gradually add to this thesis, vignettes about women farmers in other countries.
APPENDIX:

**Figure 1**
Female share of the agricultural labour force

By the Numbers
Women's Contributions to Agriculture vs. Investments in Women's Agricultural Productivity

- African women carry out 90 percent of the work of processing food crops and providing household water and wood, and 80 percent of the work of food storage and transport from farm to village.  
- In Southeast Asia, women provide up to 90 percent of labor for rice cultivation.  
- In Pakistan, rural women provide 50 percent of the labor to harvest wheat.  
- Women perform from 25 to 45 percent of agricultural field tasks in Colombia and Peru.  
- In Kenya, women provide approximately 75 percent of total agricultural labor.  
- Women receive only 5 percent of extension services worldwide.  
- Only 15 percent of agricultural extension agents are women.  
- A World Bank review found that 74 percent of 54 completed agricultural projects with gender-related action were rated satisfactory for overall outcome, compared with 65 percent for the 81 projects with no gender-related action.
Source: FAO 2010

Figure 7

Source: USDA 2007 Agricultural Census
Figure 1: More than 30 percent of U.S. farm operators are women. Eleven percent of Kentucky farm operators are women. This data and graphic is from the 2007 Agricultural Census.

Nationwide, women farmers are not typically farming large-scale agribusinesses. This information and graphic was provided by the 2007 Agricultural Census.
Figure 8: WKU GROWS logo
designed by Colleen Stewart. 2009

Photo by Betsy Wilson