



Opening Markets:
Identifying barriers and developing
guidance for GAP certification

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OPENING MARKETS
EXPLORING AND COMMUNICATING FOOD SAFETY BARRIERS

Home About The Project Opening Markets Participants Project Generated Materials

“We don’t have an unsafe food supply... but we have gone overboard with this food safety business... we become preoccupied with things that don’t generate any product, takes people’s time,money,....energy and it saps their enthusiasm.... so I am very frustrated in that sense.”

<http://gapsmallfarmsnc.wordpress.com/>

Objective

To observe current on-farm practices and cost of GAP implementation to better understand barriers, and direct strategies and resources to better enable market access

Farm to School Program

- Sourcing local produce
- Requires USDA Good Agricultural Practices (GAP) certification



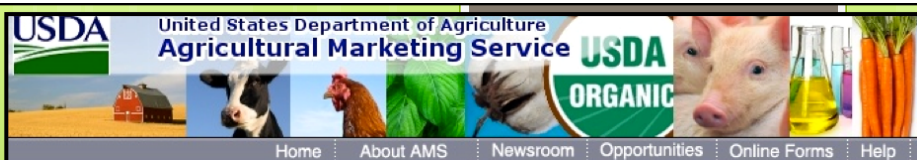
Methods



- Quantitative and qualitative data
- Case study
 - 12 NC farms (≤ 30 acres)
- One hour visits
 - Onsite evaluation
 - Risk score survey
- Self diaries
 - Flip cam
- Open source research
- Determining the economic impact and benefit
 - Tracking activities

Yin, 1997; Hamel, 1993

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The process

- The USDA GAP audit consists of 7 sections
 - PART 1 & 2
 - PART 3 & 4
- Cost (\$92/hour)
 - Conducting the audit, travel time and prep time
- Scoring
 - 80% to pass

Part 3 - HOUSE PACKING FACILITY		Receiving					
Questions		Points	Yes	NO	N/A	Doc.	
Part 4 - STORAGE AND TRANSPORTATION							
Product, Containers & Pallets							
Questions							
4-1	The storage facility is cleaned and maintained in an orderly manner.	5					
4-2	Bulk storage facilities are inspected for foreign materials prior to use and records are maintained.	5				R	Doc.
4-3	Storage rooms, buildings, and/or facilities are maintained and sufficiently washed or isolated and are protected from external contamination.	10					D
4-4	Storage grounds are reasonably free of litter and debris.	5					D
4-5	Floors in storage areas are reasonably free of standing water.	5					D
4-6	Visible wastewater spillage is prevented from contaminating any food handling area by barriers, drains, or sufficient distance.	10					D
4-7	There is a policy describing procedures which specify handling/disposition of finished product which is opened, spilled, or comes into contact with the floor.	15				P	D
4-8	Packing containers are properly stored and sufficiently washed, to be protected from contamination (birds, rodents, pests, and other contaminants).	10					D
4-9	Pallets, pallet boxes, tote bags, and portable bins, etc. are clean, in good condition and do not contribute foreign material to the product.	5					R
4-10	Product stored outside in totes, trucks, bins, other containers or on the ground in bulk is covered and protected from contamination.	10					R
4-11	Non-food grade substances such as paints, lubricants, pesticides, etc. are not stored in close proximity to the product.	10					
4-12	Mechanical equipment used during the storage process is clean and maintained to prevent contamination of the product.	5					D
2-70	Light bulbs and pest control harvesting equipment are protected so as not to contaminate produce or debris in the case of breakage.	10					

Farm characteristics

Farm	Organic certification	House bathroom	Dog on property	Livestock on property	Employees	Well water	No fencing	Risk score
A	•		•		•		•	45%
B		•	•	•	•	•		23%
C	•	•	•	•	•			33%
D	•	•	•			•		41%
E	•	•	•					31%
F	•	•	•		•			45%
G	•			•	•	•	•	30%
H					•			37%
I		•		•		•	•	33%
J	•		•	•	•			36%
K				•	•			49%
L					•			48%
Total	7	6	7	6	9	4	3	

Results

Risk score



- Preliminary onsite surveys were conducted to compare current practices to USDA GAP guidelines resulting in a risk practice score
 - Focusing on risk reduction practices

- 81 questions selected from General section and
 - Part 1 - Farm review
 - Part 2 - Field harvest and field packing activities
 - Part 3 - House packing facility
 - Part 4 - Storage and transportation

Risk score

A toilet facility is readily available for all workers in the field

A previous land use assessment has been performed

Water applied to harvested product is as safe as possible

Crop production areas are monitored for the presence or signs of wild and/or domestic animals entering the land

Farm	20-29%	30-39%	40-49%
A			•
B	•		
C		•	
D			•
E		•	
F			•
G		•	
H		•	
I		•	
J		•	
K			•
L			•
Total	1	6	5

Barriers from the literature

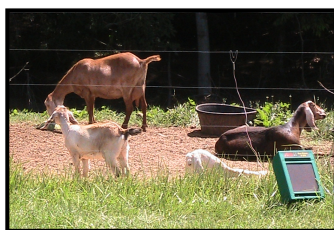
- Interpretation of GAP questions
- Education
- Time
- Documentation
- Water
 - Testing and treatment



Violaris et al., 2008; Da Cruz et al., 2006; Yapp & Fairman, 2006; Taylor, 2001

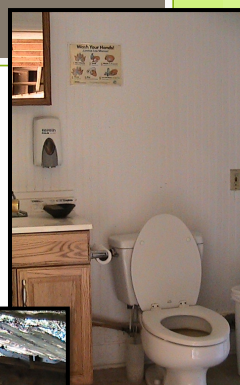
Barriers

- Livestock with produce (50%)
- Animals used for weed/pest/wildlife control (58%)
 - How do you mitigate feces?



Barriers

- House bathrooms (50%)
 - Signs or cleaning schedule



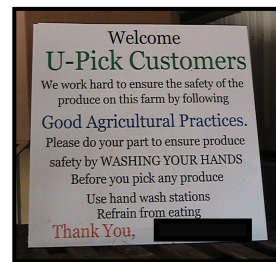
Barriers

- Manure application
 - Raw manure (58%)
 - Composted manure (16%)
 - No manure (25%)
- National organic program guidelines



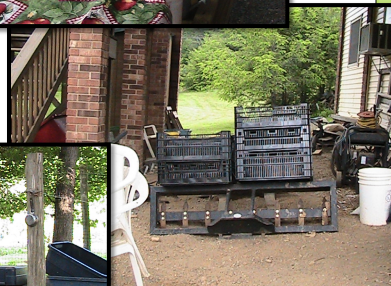
Barriers

- Traceability
 - Farmer's markets (83%)
 - Community supported agriculture (75%)
 - Wholesale (33%)
 - Restaurants (25%)



Barriers

- Facilities
 - Open (75%)
 - Enclosed (25%)



Barriers

- Storage
- Cleaning/sanitizing packaging (50%)
 - Reusing wax boxes



Limitations

- Farm selection and size
- Documentation
- Time of season

Conclusions

- Good Agricultural Practices certification can be attained
- Ultimately reducing risks on the farm regardless of GAP implementation is important

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carolina farm 
stewardship association

Thank You

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<http://gapsmallfarmsnc.wordpress.com/>

<http://producecrisismanagement.wordpress.com/>

<http://ncgoodfarmersmarketpractices.com/>