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Alabama's Women in Agriculture: The Road to GAPs Harmonization and Global Addendum - Tuskegee's Walmart Initiative

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**ALABAMA’S WOMEN IN AGRICULTURE: THE ROAD TO GAPS
HARMONIZATION AND GLOBAL ADDENDUM – TUSKEGEE’S
WALMART INITIATIVE**

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Abstract

This paper shares challenges faced and overcome by four African American women on their 2013 journey to secure USDA’s Produce Good Agricultural Practices (GAPs) Harmonized Food Safety Standards with the Global Addendum (Global Markets Primary Production Assessments: GMPPA). Collaboration, consistent training, and technical support from the Tuskegee University Extension and Research staff, and the Small Farmers Agricultural Cooperative undergirded the preparation of the farms for GAPs Certification. The timely sharing of staff expertise and experience from commercial partners (Walmart, Purivida, C.H. Robinson, W.P. Rawls), and support from the USDA (Strike Force Initiative) were important contributors to the positive outcomes described. The outcomes elucidate the adaptability, accountability, and professionalism each participant displayed to prepare her farm for audits; maintain food safety records, and achieve GAPs certification in marketable crops.

Key Words: Socially Disadvantaged Women Farmers, Food Safety, GAPs certification

Introduction

In 2011, small farmers in Alabama responded to an opportunity to grow produce for commercial markets through a partnership with Tuskegee University and Walmart (Hill et al., 2014; NRF, 2014). This opportunity required each farm involved to undergo an audit and receive the good agricultural practices (GAPs) certification with the Global Addendum (Global Markets Primary Production Assessments: GMPPA), a requirement of retailer and commercial partners. This Addendum consists of a set of standards regarding the international Global Food Safety Initiative. Based on this, Tuskegee University Research and Extension staff assisted socially and historically disadvantaged farmers (SHDFs) to build food safety plans and qualify for marketing produce to commercial markets. Devising a strategic plan to certify farmers created unforeseen challenges for SHDFs selected for this initiative. The economic downturn of 2007 through 2009 imposed financial hardships on many limited resource farm families. Statistics from the U.S. Department of Labor, Women’s Bureau, show that women make up 58% of the U.S. labor force (USDL, 2010).

Research collected from the Agricultural Census reported over 341,538 women operated farms in 2007; of those numbers, 9,148 were Black Farmers, which shows an increase from 2002’s report of 6,739 (USDA/NAL, 2007). The Fresh Fruits and Vegetable Program of the Agricultural Marketing Service reported 31 Alabama farms met USDA GAP acceptance criteria in 2013, four Alabama women farmers are listed as certified growers (GAP/GHPAVP, 2013). The journey to

GAPs certification empowered the Tuskegee Walmart Initiative women farmers to emerge as stronger competitors in today's agricultural market by improving their farms' produce marketability.

GAP Framework

Formulating a strategy to undertake this Initiative required a team effort. In 2013, an administrative decision to combine Tuskegee University's Cooperative Extension Program and Small Farm Agriculture Research staff into one team to focus on the Walmart Marketing Initiative increased the number of resource personnel on the ground. In 2012, two farmers obtained GAP certification; both were limited resource male farmers who farmed 95 acres of land and sold produce to Walmart. There were also two socially and historically disadvantaged women farmers who were growers for the initiative; one owned an 876-acre family farm in Barbour County, and the second owned a 91-acre farm in Wilcox County. These farmers had not been successful in their first audit attempt. Another female farmer who had purchased a 200-acre farm in Lowndes County joined the group in 2012. With the assistance of Tuskegee University's integrated Extension-Research team an action plan was developed. The team included Cooperative Extension agents in each county, small farm specialists, soil scientists, an irrigation and solar specialist, and an integrated pest management specialist. Additionally, Extension and Research staff were assigned to work with specific farmers. Training and sharing of information occurred on a weekly basis in different locations to facilitate easy access for all partners in the Initiative. Conference calls were held every Monday at 7 am. This allowed farmers and resource professionals to share challenges and opportunities.

Beginning

The 2013 Food Safety training began in February. The Tuskegee University Auditing Team (TUAT) conducted three food safety training sessions; two in Central Alabama, and one in South Alabama. Fifty (50) farmers throughout the state attended. By March, the lead auditor was preparing individualized food safety plans based on each interviewed farmer's operation. The greatest challenge was getting the farmers to understand the requirements of GAPs. Keeping records on all farming activities was not normal activity for most SHDFs. Thus, the food safety plan was initially an intimidating hurdle for Small Farmers Agricultural Cooperative (SFAC) members partnered with Tuskegee University Extension-Research support team.

Soil scientists assessed each farm's soil test for the appropriate amount of chemicals needed for maximum yield. The Water Quality team checked water test results for coliform bacteria, pH, nitrates, and other volatile organic compounds (CDCP/WT, 2009). The irrigation and solar specialist suggested drilling deep wells as a precautionary measure against drought and loss of crop due to the lack of sufficient rainfall. Alabama weather is very unpredictable; in some summers there are droughts and in others, excessive rain.

By April 2013, four women farmers had joined the Initiative. This was the third year for the two original women farmers from Barbour and Wilcox Counties, and the second year for the beginning farmer in Lowndes County. The fourth woman farmer who joined the Initiative owned a 40-acre farm in Geneva County. Together, these women farmers cultivated 25 acres of purple hull peas, and 100 acres of watermelons.

Beginning Farmer in Lowndes County

The spring of 2013 brought excessive amounts of rainfall; therefore, many farmers delayed plowing and planting their fields. Watermelon was the first crop planted. In particular, the beginning farmer had difficulty getting the 200-acre farm land ready for planting because of the amount of rainfall. The original strategic plan was to use migrant crews to lay plastic mulches and drip irrigation to control weeds and increase crop production, but this proved difficult because the rain saturated the heavy clay soil and delayed planting. The crew tried laying the plastic and drip lines; however, since the field was unsuitable for laying plastic, the crew moved on to the next job leaving the farmer in a precarious position. The farmer and farm manager, short on farm hands, plowed day and night in an attempt to prepare the soil to lay the plastic.

By mid-May, the rains stopped and the weather was more favorable for planting. Several areas of the 200 acre farm were still unsuitable for plastic mulch. Determined to plant the crop, the beginning farmer was able to cover 25 acres of sandy loam soil in plastic. Earlier in March, the water quality team had erected a deep well pump on the farm. Due to the size of the farm, the farmer was instructed to purchase a holding tank for zone irrigation. Local small business contractors, and cement finisher were contacted to pour the foundation for the water tank. Within days the tank was erected, water lines connected, and the irrigation team had designed the system. The farmer and irrigation specialist worked for several weeks measuring zones and laying pipes. Each day the irrigation team worked with the farmer teaching her each phase of the process as the system was expanded. Based on the crop grown and farm acreage, the farmer was instructed by the soil and irrigation scientists to have truck rows next to each zone for harvesting purposes.

Transplants for seeded and unseeded melons had been ordered from Seedway Nursery for farmers growing watermelons. By the middle of April, the transplants were delivered to the farms. Knowing that her land was not ready for the young plants, the beginning farmer stored the transplants in 2 hoop-houses to properly nourish plants until the field was ready for planting. By the end of May, she hired laborers to plant the transplants; consequently, within three weeks 1,500 plants had been planted. The irrigation team returned to the farm on the day of planting to monitor the flow of water; check for breaks in the drip lines, and monitor the farmer's knowledge of cut-off valves within the irrigation operating system.

Farmer in Wilcox County

The female farmer in Wilcox County planted an earlier crop of peas in April in an attempt to meet the July shipping date for the produce. The excessive rainfall flooded fields and drowned the first fields of pink eye purple hull peas. The first farm visit from the resource support team revealed an extensive list of food/farm safety issues that required corrective actions before the farm's audit. The farmer accepted the constructive criticisms graciously and agreed to correct each action. After weeks of continued heavy rains, her field was declared a disaster zone by the Farm Service Agency staff in June 2013. Determined to produce a crop for market that year, the farmer with the aid of her assigned Extension and Research staff planted five acres of peas in July in between the rains. She was instructed to plant the pea seeds ½ inch deep to prevent seed rot and to speed up germination time. Her field was planted July 13 through 15; by Thursday, July 18 the seeds were sprouting.

Satisfied with the progress of the field, the farmer began removing broken limbs left from the storms. Severe thunderstorms had plagued many farmers throughout the state. This farm had withstood several tornado strikes and the evidence left behind was visible. The clean-up proved to be more expensive than the farmer expected. The loss of the first pea crop created further hardship on the struggling SHDF. The profit from pea sales (i.e., from the second planting) was earmarked for planting another crop, and paying for debris removal. Based on the farmer's community involvement, her Mayor sent the city's heavy equipment workers to assist with the farm's clean-up. As the city's crew loaded the debris, the farmer's workers were also busy preparing the fields and setting up hand washing stations for the audit.

Audit Regime

The auditing team's leader had distributed a six page audit and field requirements check list to each farm growing for the Initiative as a guide to build the farm's food safety plan, which is a requirement for GAPs certification. Each farmer had been instructed to keep up with their records on all farming activities. Farmers were required to keep records on: (1) equipment calibration and cleanings; (2) produce planted and dates; (3) fertilizers and/or chemicals used for production; (4) cleaning of storage containers and harvesting bags; (5) workers and farmers GAPs safety training; (6) harvesting procedures; (7) traceability of seeds and transplants; (8) assessments of land and adjacent land; (9) maintenance of portable toilet facilities and cleanings; (10) water risk and water system assessments; (11) water testing (quarterly), soil tests on each crop; (12) animal activity and actions taken; (13) vehicles and equipment; (14) pre-harvest assessment; (15) chemical storage; (16) traceability on produce shipped; and (17) sign-in-sheets on farm visitors (GAP/GHPAVP, 2013).

Also required, were records on: (1) shipping unit cleanliness and maintenance; (2) field harvesting on produce, prevention measures on soil contact, discarding of rotten or damaged produce; (3) container, bins and packaging materials; (4) physical, chemical, or biological contamination of produce; (5) animal activity on and around production area; (6) blood and body fluid, and worker exhibiting illness; (7) designated lunch and break areas; (8) workers health/hygiene and toilet/hand washing; (9) recall and traceability procedure's on produce; (10) written food safety plan for overall operation; and (11) management structure and responsibilities (GAP/GHPAVP, 2013).

Other required documents consisted of: (1) field maps of farm; (2) pesticide certification; (3) approved suppliers list; and (4) a completed self-audit by the farmer. In addition, "The Global Addendum" required documented files on all food safety specifications, such as: (1) agronomic activity, (2) information on all approved suppliers, (3) in-depth risk assessment records and control methods for handling hazardous materials, (4) propagation materials, (5) bio-solids and coliform pathogen, (6) calibration rate records on equipment and amount of fertilizers distributed, (7) residue testing of produce, (8) waste management plan for crop, human and environmental, (9) nursery stocks- transplants- seeds, and (10) food defense records extended precautions against contamination of fields and water systems (GAP/GHPAVP, 2013).

Audits

First Woman Farmer Certified

The first female farmer scheduled for an audit was the farmer in Barbour County, alluded to earlier. She joined the Initiative in 2011 and is one of the original member farmers of the Initiative. She is also a USDA Certified Organic Grower, and the President of the National Women in Agriculture-Alabama, Barbour County Chapter, a member of Deep South Wealth Creation Network, and a board member of the Small Farmer's Agriculture Cooperative, Inc. She was a very meticulous farmer and knew she needed assistance with final steps to complete the food safety plan. Several training sessions had been conducted with the Barbour and Geneva County farmers by the lead food safety auditor and the team in South Alabama, and this farmer was present in all of them.

July 30, was the agreed date for the Barbour County audit. Two state auditors and three resource team members arrived at the farm 9:30 a.m. to begin the field audit. This limited resource female farmer was the first among the group of farmers to use plastic mulch and drip irrigation from a deep well for fertilization of her crops. The auditors expressed interest in the setup of the irrigation system. Questions were asked concerning how often the valves were checked to see if anti-blow back valves were in place to prevent well contamination, water tests, and the expanded assessment form on the water well safety.

Their attention then migrated toward the workers who were harvesting produce in the fields. The farmer prepared the transportation equipment under a tree across from the field for cooling the freshly harvested produce. The cooling process helped eliminate the field heat in freshly picked produce. The workers harvested the produce in cleaned, sanitized buckets. A sanitized vehicle transported the produce to the packing station where it is packaged and tagged with farm identification and lot number for traceability. The state auditors interviewed the workers on food safety practices; they observed everything. They watched each step of the harvesting and handling process, asking questions and taking notes. As the produce was being poured onto the tarp for cooling, the auditor asked the farmer what measures were established to protect produce from bird droppings. The auditor suggested a sanitized white sheet be used to protect produce cooled under trees. The farmer quickly complied with the auditor's suggestion and the inspection continued to the packing station. Peas were packed in sanitized opened weaved bags to prevent moisture accumulating before produce was stored in a cooler. The produce cooler had been delivered to the farm but not erected. The farmer stored her peas in an air conditioned room at the Cottage House, a non-profit resource center established for limited resource youth and families. As the packaging process continued, auditors questioned the farmer on her identification labels and the ability to track the produce lots back to the farm. The farmer explained that the first section of her labels identified the produce, the next line identified the farm's owner, the field number the produce was harvested from, and the last item provided the date the produce was picked, shipped, or sold.

Satisfied with the farmer's response, the auditors asked to see where her equipment and fertilizers were stored. The farmer explained that she was a certified organic grower who did not use fertilizers or chemicals as the auditing team entered the barn. Working with two State auditors means nothing was overlooked. The auditors followed the inspection by the book. They inspected the pesticide sprays, storage containers for harvesting, and pea bags. The farmer

explained that no propagation materials were stored on the farm. Once the results from her soil test were returned, she contracted out the lime application to a local company. The auditors asked the farmer if records on the calibration rate the lime was applied to the fields had been recorded in the food safety plan. The farmer replied and said: “yes,” and they moved to the next line item. State Auditors occasionally share the audit results with the farmer upon completion of each section. Upon completion of the audit, the lead state auditor informed the farmer she had successfully passed the field audit, but was informed that some aspects of her food safety plan were not being followed.

Prior to the actual audit, a copy of the farmer’s food safety was sent to the lead state auditor by the lead TU auditor, as an attempt to reduce the amount of time required to review each item. For instance, he referred to the policy on jewelry; it stated that only wedding bands were allowed to be worn by workers in the field. However, during the field audit, the auditor noticed a worker wearing jewelry while harvesting produce. The auditor, having prior knowledge of farmer’s food safety policies, informed the farmer of the corrective actions needed for the worker’s infraction. Her policy stated anyone out of compliance would be terminated. The farmer explained; the workers were new, but each had been trained on farm rules, regulations, and policies. The auditor asked the farmer to reprimand the employee with a warning for first offence, and to make changes to the farm’s food safety plan policy. He allowed the farmer 48 hours to submit the corrected information. The group adjourned for lunch, and returned at 1:00 p.m. for the food safety plan’s audit.

The Food Safety Plan audit began promptly at 1:00 p.m. The first question referred to the self-audit. After careful examination of the document, they proceeded with the farm plan. The auditor reminded the farmer of section 2.2.1.2 (jewelry infraction) in the policy. Additional reviewing of the farmer’s files revealed incomplete data in section 2.4.2.1 relating to the Water Well Risk Assessment. The farmer was told to expand the assessment form to entail biological threats to the well system, and documented appropriate actions that are taken in case of total contamination. This section was required to comply with the Global Market Addendum, but cover sections 2.4.2.1, 2.4.3.1, and 2.4.3.3, in the food safety plan. Sections 3 and 4 of the food safety plan had no corrections. When the auditors reached section 5 (Global Addendum), they asked, if guidelines were made available from commercial partners with specific details stating their requirements for marketability of farmers produce? The lead Tuskegee University auditor had previously sent a document to each farmer entitled, “Food Safety Audit Requirements.” The document addressed small supplier’s high risk items, and confirmed the intermediate level status of Tuskegee University famers. After careful discussion on the document, it was accepted by auditors and the review continued.

Section 5.3.3 related to fertilizer application and calibration. The TUAT developed forms, and added them to the original framework of the audit instrument to provide more detail information on fertilized application and calibration. This aspect prevented previous farmers from passing the Global Addendum section of the audit. After deliberation over the correct response to the rate of calibration, the farmer was instructed to obtain a letter from the company that applied the lime, indicating the rate of application. They asked the farmer to get that document from the supplier and submit it with the other corrected forms within 48 hours. The audit was completed; the farmer passed food safety plan audit review. This was TUAT’s first African American woman

farmer to become a GAPs certified purple hull pea grower in 2013. Her produce was market ready two weeks after the audit. However, the processing facility at the time had not yet received its USDA AMS approved GAPs certification to process fresh vegetables. So the farmer, in the mean-time found alternate markets to sell her produce.

Second Woman Farmer Certified

The second woman farmer's audit was scheduled for August 2013. She was the beginning farmer in Lowndes County growing watermelons referred to earlier. Several days were spent reviewing her files to assure audit success. Federal auditors had been requested (via the Strike Force Initiative) to oversee the auditing process in order to facilitate the process. One federal auditor from Pennsylvania was sent to observe the next audits. However, before the audit for the beginning farmer could begin, heavy thunderstorms released 3 to 6 inches of rain the week of the audit. Fields were flooded; access roads to the fields were almost inaccessible. The field audit was rescheduled for the following Friday, August 16. The three auditors, one from the federal level and two from the state level, proceeded with the farmer's food safety manual reviewing files. Records on sections 1 through 5 were evaluated with no corrective actions. Next on the agenda was the field audit.

The morning of the field audit, the auditors, Extension agent, and farmer proceeded to the farm at 10:00 a.m. Upon entering the back gate of the farm, it was realized that the grounds were too wet and muddy to travel on foot so another entrance was used. The farmer had prepared hand-washing station, portable-toilet facility for workers hygiene and food safety, waste cans for produce, and trash and hazardous chemical containers in the only area of the farm that was dry enough for the inspection. The workers began harvesting the melons from the field. Each harvested watermelon's underbelly was covered in mud, so the workers, in an attempt not to contaminate the sanitized trailer, wiped each melon off with a towel. The two state auditors in the group were not pleased with this; melons were not supposed to be cleaned on the farm. However, the lead TU auditor accompanying the group stepped in and argued that unique situations require unique approaches to achieve success. Cleaning the melons was the only way to prevent the spread of bacteria from the wet soil to the sanitized transportation equipment. The lead TU auditor emphasized that we were not harvesting the melons under normal conditions.

The auditors evaluated the farmer's water well's irrigation system. Once satisfied with documentation and visual observation of the well, the audit continued to the equipment cleaning and storage area. At the end of the food safety plan and field audit, this beginning woman farmer passed the audit and achieved GAPs certification with no corrective actions. Her produce was ready for market two weeks after the audit. However, the produce could not be shipped because of the time constraints regarding actual release of GAPs certificate to the farmer. The complete GAPs certification notification process has a projected 3-week cycle; state auditors are allocated 48 hours from time of audit to complete the file and send it to their supervisor for review. After re-evaluation of audit comments by the senior state auditor, the files are sent to the federal auditor for a third review and final analysis. Once completed, the certificate is returned to the state senior auditor's office where it is copied to the assigned auditor to mail or deliver to the farmer. There are only 250 auditors in the U.S.; 50 federal and 200 state auditors. This usually creates problems of getting complete certificates quickly to farmers.

Third Woman Farmer Certified

TUAT's next audit was scheduled with the female farmer in Wilcox County. This farmer had worked extremely hard preparing her farm food safety document. Her audit request was submitted for September 12, 2013 on her farm. One female state auditor arrived at the farm at 10:00 a.m., and she started with the field audit; workers were harvesting produce at the time. The auditor followed the identical format as the previous auditors. The farmer passed each stage of the harvesting process. She then, reviewed the records and policies of the farmer's plan. The farmer's food safety plan was impeccable; no corrective actions. Another female farmer obtained GAPs certification with the assistance of TUAT. The auditor delivered the GAPs certificate to the farmer in a week after the audit. Having the GAPs certificate created an opportunity for the farmer to sell produce through the Walmart Initiative in 2013. She was Tuskegee University's Walmart Initiative first female farmer to ship bushels of produce through the processing facility located in Shorter, Alabama.

Fourth Woman Farmer Certified

The last audit was conducted in Geneva County. This was the new member female farmer of the Initiative referred to earlier. She grew leafy greens, okra, and peas for local markets. This farmer had previous knowledge of the auditing process from prior experiences working with state auditors auditing peanut farmers. Five acres of her produce was declared a disaster crop in June 2013 due to unusual amount of rainfall, but she re-planted 4.7 acres in August. On October 15, 2013, four state auditors arrived at her farm for the last pea audit for the 2013 growing season. The farmer had everything in place; all signs were visible and fields were numbered. The farmer's food safety plan records were reviewed first. There were no corrective actions found in the farmers plan. The auditor proceeded to the field where workers were busy harvesting produce. The farmer had a cooling station for the peas under a tent next to the field. All harvested produce was brought to that area to be cooled, graded, and packed. The farm truck transported the produce to an air conditioned room for storage until it was sold. All workers were interviewed for their food safety knowledge. This farmer had planted her leafy greens prior to her audit, and was irrigating the green fields when the auditor arrived. The auditors checked the farmer's water well system for contamination and also checked her drip irrigation system. The auditors asked questions on flushing the system and vulnerable treats to the open field. The farmer explained the safety of her farm; it was located on a private road, it was surrounded by large peanut and soybean farms. The only way her fields could be sabotaged would be by an air strike. At this point in the audit, the head state auditor and his two fellow auditors were satisfied, congratulated the farmer, announced their departure, and left. This was TUAT's fourth female farmer to pass her audit and receive GAPs certification. She sold 34 bushels of peas through the Initiative.

Epilogue

Three of these women farmers (in Barbour, Wilcox, and Geneva Counties) scheduled second farm audits on leafy greens in December 2013. All three women farmers passed their leafy green audits, and are currently listed on USDS/AMS web-site for qualified growers, 2014. Farmers' GAPs certifications are valid for one year, with one month grace period. The farmers are preparing their farms and food safety plans for the 2014 auditing season.

Conclusion

Results described in this field work demonstrate the adaptability of Tuskegee University Walmart Initiative farmers, and their ability to contend in a market where many believe that socially and historically disadvantaged farmers (SHDFs) could not participate. The “expedition” these women farmers embarked on demonstrates the fortitude and aspiration required to be a competitive producer in a global economy. Utilizing their knowledge, skills, leadership abilities, and associations, they obtained the necessary equipment, resources, and laborers needed to get the job done. These four women, all members of the National Women in Agriculture Association, believe in the empowerment of disadvantaged women to gain resources from all available sources, networking to strengthen the struggle of women (NWAA, 2008). In addition, recognition is given to their spouses, partners, and families who stood by them every step of the way; for without them these achievements would not have been possible.

Accounts of this field work have been documented and transcribed as guidelines for institutions and agencies striving to facilitate successful GAPs audits. The methodology of a comprehensive team approach was the groundbreaking course for success in this Initiative. The Small Farmers Agricultural Cooperative did not produce or ship the estimated amount of produce agreed upon in 2013, but the farmers at least did ship some produce. A key lesson learned from this field work was developing a more structured planting schedule for growers as this would decrease the deficiency in poundage shipped commercially. Unforeseen environmental factors affected Alabama’s farm production in 2013. The keys to success are determination, hard work, and a willingness to accept change. Alabama’s women farmers usher in a new era of farmers where women not only grow food, but also undergo the certification process to assure food safety. This development will allow them to nurture and build their families with new hope, in addition, to nurturing and building better communities and a better world.

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