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## Assessing Effectiveness of the Monterey County Agricultural Commissioner Safety Procedures Education

Ernesto Verduzco  
*California State University, Monterey Bay*

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Assessing Effectiveness of the Monterey County Agricultural

Commissioner Safety Procedures Education

Ernesto Verduzco

Safe Ag Safe Schools; Sarait Martinez, (M.A.)

Collaborative Health & Human Services

Department of Health Human Services and Public Policy

California State University Monterey Bay

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Author Note:

Ernesto Verduzco, Department of Health Human Services and Public Policy, California State University Monterey Bay. This research was supported by Safe Ag Safe Schools.

Correspondence concerning this report should be addressed to Ernesto Verduzco, California State University Monterey Bay, 100 Campus Center, Seaside, CA, 93955. Contact: [erverduzco@csumb.edu](mailto:erverduzco@csumb.edu).

### **Abstract**

Safe Ag Safe Schools (SASS) is a local pesticide reform organization with members at the state and local levels aiming towards sustainable agricultural practices. SASS focuses on serving agriculturally working families and community members who reside near agricultural areas. The problem addressed by the capstone is that too many marginalized, low-income communities are facing environmental injustices produced by large corporation's methods of generating revenue. These injustices include high risk of pesticide exposure due to inadequate training and access to equipment. The project focused on assessing farm workers' knowledge regarding pesticide safety and decontamination procedures. The Office of the Monterey Agricultural Commissioner has the obligation to provide regular training and safety procedures. The project was implemented directly with SASS lead staff member(s). The findings suggest that the Office of the Monterey County Agricultural commissioner must provide effective training and safety procedures to agricultural laborers. Data collected from the assessment will benefit SASS by addressing the cause and hopefully campaign for effective training from Agricultural Commissioners statewide.

Keywords: *agricultural laborer, safety protocol, marginalization, environmental injustice, pesticide exposure*

## I. AGENCY AND COMMUNITY SERVED

Safe Ag Safe Schools (SASS) is a local pesticide coalition designed to reduce the threat of pesticide exposure in schools and neighboring communities, and influence growers towards a more sustainable agriculture industry. According to the Department of Public Health (2014), in Monterey County, roughly 74.1% (or 54,764) students who identify as Hispanic [Latinx] are enrolled in a public institution, within that percentage, about 67.7% (or 80,742) students are in schools that are placed in the highest quartile of pesticide use, which ranges from 319-28,979 lbs per year. As an advocacy community-based organization, SASS partakes in grassroots lobbying and encourages the Latinx communities within Monterey County to get involved and create consciousness of the issue. SASS seeks change with the correlation between agriculture and the public's health, therefore it does not offer services, as it abides to the status quo. SASS's intentions with the community are directly tied to its mission statement, as it states that it is, "a coalition of over 50 organizations and individuals working together to reduce the threat of pesticide exposure in the Monterey bay area" (Safe Ag Safe Schools, n.d.).

Commonly known as "The Silent Death" due to its non-physical appearance to the naked eye, but a strong smell when applied, and created during World War II to be used as a weapon during chemical warfare, pesticides have always been considered a deadly threat to humanity. In Monterey County, common pesticides used by agricultural growers that possess a threat to the community include, but are not limited to: Carcinogens, Fumigants, and/or

Reproductive and Development Toxicants. If not treated adequately, these chemicals can cause the development of cancerous diseases, cardiovascular health issues, infertility/miscarriages, and even death (California Environmental Health Track, 2016).

SASS is part of a statewide coalition to influence state policies, in order to serve the target population effectively. Partnering coalitions include the Californians for Pesticide Reform (CPR), the United Farm Workers (UFW), the Monterey Bay Central Labor Council (MBCLC), and many more organizations driven to protect workers'/union members' rights.

Since SASS is an established coalition between community members, it does not rely on government type funding for its actions. SASS receives its funding through a set of sponsorships from a variety of existing organizations, such as CPR and the Pesticide Action Network (PAN).

## **II. PROBLEM DESCRIPTION**

The problem being addressed throughout the implementation of the questionnaire, is the high risk of pesticide exposure agricultural laborers within the Monterey County face. In a macro-based perspective, the problem converts to many underrepresented and low-income communities facing environmental injustices, where they are prone to the dangers, such as pesticide exposure, that the agricultural industry has.

### **Causes**

#### Language Barriers and Lack of Awareness

The County of Monterey is home for many residents within California's Central Coast. With an estimated population of 435, 594 residents as of July 1<sup>st</sup>, 2018 (U.S. Census Bureau,

2018a), and 59.1% of them coming from Hispanic or Latino [Latinx] descent (U.S. Census Bureau, 2018b). Within the Latinx population in Salinas, and Monterey County, the employees who work with private companies relating to agriculture, forestry, and other intense based labor consist of 76.9%, whereas the self-employed is merely at 1.4% of the population (U.S. Census Bureau, 2017a). As a result of the high rate of Latinx agricultural laborers, misinterpretation of safety protocol towards pesticide exposure, knowledge of symptoms regarding exposure, and worker rights, increases, due to the linguistic barriers they are prone to face.

### Poverty

This also represents the many individuals within the county that rely on agriculture as their main source of income. Having to depend on a full-time equivalent (FTE) income of an estimated \$37,000 in vegetable crops, or an FTE income of \$30,000 in fruit crops (Bureau of Labor Statistics, 2017b), makes it difficult for residents within the county to accommodate for their daily needs for themselves, and/or their families. Residents have no choice but to find low-income housing options that best suits them, which is frequently described as areas that experience poverty, homelessness, gang activity/crime, and exposure of hazardous material.

### Non-effective County Agricultural Commissioner

In Salinas, pesticide exposure has reached an all-time high. The exposure has sickened the many lives of innocent, low-income community members. This is a result of the Office of the Monterey County Agricultural Commissioner not playing an effective role. In a recent case of pesticide exposure caused by produce growers Tanimura and Antle, Goldberg (2018) states that a reported 17 celery workers were caught in a pesticide drift incident after nine different pesticides

were applied six hours before workers began harvesting (para. 9). In efforts to aid the contaminated workers, Tanimura and Antle took some workers to the Salinas Valley Memorial Hospital, but failed to fully give all workers medical treatment, as they did not have enough vehicles for transportation (Goldberg, 2018, para. 10), which is a violation the Office of the Agricultural Commissioner's Office have to consider. Alongside the hazard violation, the Office of the Commissioner stated that Tanimura and Antle were issued a fine of up to \$5,000, whereas areas such as Santa Cruz county and Kern county issued fines of up to \$50,000-\$56,000 (Goldberg, 2018, para. 30-31) for similar incidents. This clearly demonstrates that the current Office of the Agricultural Commissioner is failing in protecting the lives of agricultural laborers, as they are not imposing high enough fines for the lives of the community. \$5,000 for an incident that caused symptoms such as fatigueness, severe headaches, vision impairment and vomiting, is just not enough to compensate for the trauma the laborers faced. As for the agricultural laborers, not having the adequate care that the grower must provide, by law under the Department of Pesticide Regulation (DPR), California Environmental Protection Agency (CalEPA) and the Workers Protection Standard (WPS), demonstrates that these workers of low-income, poverty based backgrounds are not being respectfully represented in the community.

## **Consequences**

### Pesticide Exposure

Failure in providing equitable resources to agricultural laborers, in regards to worker safety, can result in many consequences, both for the laborers themselves, as well as the community. Having a high risk of pesticide exposure can result in on-the-job exposure. This can

deteriorate the lifestyle the laborer is accustomed to. In a study designed to examine the health related differences between exposed and non-exposed farmers to organophosphates (carcinogens), Taghavian et al., (2016), observed, “a significant decrease in AChE (acetylcholinesterase) activity in farmers exposed to organophosphorus pesticides...on the other hand, the extent of DNA damage, IL10 and CSP significantly increased”. (para. 15). Having a decrease in AChE activity damages the nervous system, and causes muscle groups to move uncontrollably, which is one of the leading symptoms in the development of Parkinson’s Disease.

#### Regulatory Violations and Lawsuits

High risk of pesticide exposure also creates a multitude of lawsuits, and promotion to lobby, to the Department of Pesticide Regulation (DPR) and the California Environmental Protection Agency (CalEPA). As SASS, the goal of creating consciousness to the issue is completed through these lobbying events held at DPR’s Office in Sacramento, CA.

Also, as pesticide exposure violates the laborer, it also violates the regulations presented in the Occupational Safety and Health Act (OSHA). OSHA (2019) states the rights of the worker to be, “the right for working conditions that do not pose serious harm, receive training in language the worker understands, access to worker-related injury records, and to file confidential complaints” (para. 1). Agricultural laborers being exposed to pesticides, as mentioned previously in the Tanimura & Antle incident, have the right, under OSHA, to not work in treated fields, as it poses a harm to their health.



At last, the high risk of pesticide exposure can lead to high levels of pesticide usage in nearby schools, neighboring communities, and areas of low-income, poverty based housing.

Figure 1 presents the problem model discussed in this section.

**Figure 1: Problem Model**

<b>Causes/Contributing Factors</b>	<b>Problem statement</b>	<b>Consequences</b>
Confusion of attaining information due to language barriers	Too many migrant agricultural laborers in Monterey County are at risk of pesticide exposure.	On-the-job pesticide exposure
Non-effective County Agricultural Commissioner		Lawsuits/lobbying costs to the Department of Pesticide Regulation (DPR) and the California Environmental Protection Agency (Cal EPA)
Lack of knowledge of emergency pesticide exposure safety protocol		Violation of the Occupational Safety and Health Act (OSHA)
Living under poverty based conditions/environments		Chemical exposure in neighboring communities and schools
Lack of awareness towards pesticide exposure symptoms		System of oppression within agriculturally working communities

**Project connection to problem**

The implementation of a survey in order to evaluate the effectiveness of the Office of the CAC’s commitment towards agricultural laborer safety demonstrates that what the project will focus on is the cause of having a non-effective Office of the County Agricultural Commissioner. A non-effective Office of the CAC in Monterey County could cause too many agricultural laborers to be at risk of pesticide exposure. This was experienced previously in the Tanimura &

Antle incident. Pesticide exposure, as mentioned earlier, can lead to many consequences that can harm the community and violate the laborer.

### **III. CAPSTONE PROJECT DESCRIPTION**

The capstone project that was implemented with SASS consisted of administering a survey to identify whether or not the Office of the County Agricultural Commissioner's (CACs) in Monterey County were following procedure in regards to safety for agricultural laborers who work with treated crops, and if laborers were understanding the safety protocol.

Each of the 58 counties in the state of California are entitled to a County Agricultural Commissioner. CACs serve as the primary local enforcement agent for State laws and regulations presented from the Department of Pesticide Regulation (DPR) (County of Monterey, n.d.). The commissioner is appointed by the Board of Supervisors, and must promote the role of agriculture, farm worker health and safety, protect sustainable resources, and ensure a fair marketplace (Office of The Agricultural Commissioner, 2019). In the field of pesticides, the CAC must assess the area in which the pesticide will be applied and identify if it is near any sensitive areas, including: wetlands, residential neighborhoods, schools, and organic fields (Office of The Agricultural Commissioner, 2019). Also, CACs have the privilege of administering pesticide application permits to public and/or private growers. The permit must specify the method of application, time and day of application, weather conditions, and any buffer zones (Office of The Agricultural Commissioner, 2019).

Initiation of implementation of the project consisted of creating a data collection form, in order to administer the survey to agricultural laborers, or family of laborers. The survey

contained questions that assessed knowledge of what is expected in safety trainings provided by DPR, under the CACs. Along with the information from CACs, the survey contained questions regarding knowledge of rights and procedures from the laborers (i.e. exposure protocol, safety equipment, legal rights, emergency contact information, etc.).

Under the requirements of the CACs, a qualified trainer must either be a California certified applicator, have possession of a County Biologist License in Pesticide Regulation or Investigations & Environmental Monitoring issued by CDFA [California Department of Food and Agriculture], completion of the “Train the Trainer” program given by the UC Extension IPM [Integrated Pest Management], or be an Agricultural Pest Control Advisor (Luna, 2017).

Trainings provided must inform growers where pesticides are encountered, hazard pesticides, routes in which pesticides enter the body, signs and symptoms, decontamination procedures, first aid, Restricted Entry Intervals (REIs), and information as to how to report pesticide use violation. Growers must then provide the information to agricultural laborers, and provide the resources needed to have a safe and equitable working environment that must fall under Workers Protection Standards (WPS) (Luna, 2017).

WPS was created in 1992, under the Environmental Protection Agency (EPA), as a federal regulation designed to reduce the risk of accidental pesticide poisoning for agricultural workers and pesticide handlers (Garcia, 2017. para. 1). WPA’s fundamental practices are to provide information to the population served, provide protection for on-the-job hazards, and to provide mitigation procedures regarding sanitation (Garcia, 2017, para. 2-3). The population in which WPS is centralized is the general public, which includes: pesticide handlers, laborers,

customers, government officials, and/or any bystander within the perimeter of the treated field(s).

The purpose of the project was to identify the knowledge agricultural laborers held regarding their rights when working with fields that have been treated with pesticides prior. Success of this project will support SASS with advocacy for agricultural laborer rights and safety in the near future. Members within the organization will be able to use the data collected during recruitment, public meetings, lobbying, and workshop related activities. As a whole, the project identified if agriculturally based families had an adequate understanding of their rights on the job, how to detect pesticide exposure, and who/where to contact during an emergency. All of which created a more sustainable work environment, and increased the well-being of the community.

#### IV. PROJECT IMPLEMENTATION

Project implementation is best illustrated through Table 1. As Table 1 shows, the primary method for collecting the data was through surveys administered to individuals working in agriculture. The data collection occurred in populated areas in Monterey County, near Salinas, CA, such as: supermarket parking lots, schools (Salinas High School [SHS] & North Monterey County High School [NMCHS]), and areas of work. The evaluation will support SASS when analyzing policy in regards to agricultural laborer safety in future campaigns.

**Table 1. Project Type, Purpose/Outcomes, and Implementation Methods**

<b>Project Title</b>	Effectiveness on Safety Procedure Provided By Office of The Monterey County Agricultural Commissioner
<b>Purpose of Project</b>	Identifying knowledge from agricultural laborers regarding workers' rights and safety protocols

<b>Implementation Methods</b>	<ol style="list-style-type: none"> <li>I. Identify description and role of CACs</li> <li>II. Identify desired outcomes &amp; expected obstacles</li> <li>III. Identify alternatives if barriers impede assessment</li> <li>IV. Identify supportive staff/organizations</li> <li>V. Identify participants</li> <li>VI. Data collection</li> <li>VII. Data analysis</li> <li>VIII. Asses success &amp; areas of improvement</li> </ol>
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The participants involved in the evaluation process were the intern, the field mentor, Collaborate Health and Human Services (CHHS) current students and alumni, as well as coalitions SASS has established, such as MBCLC, Teamsters Local 890 and staff from the Early Academic Outreach Program (EAOP) at NMCHS. Individuals listed assisted with reviewing the content of the evaluation, administering the evaluation and recruiting new members by referring them to SASS. Current students from the CHHS program and EAOP staff at NMCHS were given instruction to successfully administer the survey to family members who are agricultural laborers in Monterey County. A presentation was held with SHS parents in a English Learner Advisory Committee (ELAC) meeting about pesticides, its threat to their health, and current laws, and administered the survey to participants. Prior to such work, an established agreement was created, in order to collaborate both effectively and efficiently to successfully administer the survey. Communication with participants was readily available throughout the implementation of the project.

The project required a minimal amount of aid. This evaluation required communicating with SASS staff/members and other participants, to assist in administering the evaluation. Supplies include items such as: office supplies (pens, paper, folders, clipboards). No funding for the supplies needed was required, as SASS has the resources available. The challenges

experienced throughout the process included, but was not limited to: language barriers, immigration status, involvement from individuals receiving the survey, and scheduling of survey administration. To prevent said obstacles in the project, adjustments to the implementation were made, in order to ensure the survey was fully understood and completed. This included: translating into Spanish, reminding individuals that the evaluation is anonymous and confidential, and targeting busy locations in Salinas, CA.

### **Scope of Work and Implementation Timeline**

Table 2 demonstrates a detailed scope of work activities and implementation timeline for the capstone project. As Table 2 shows, the project's goal was to identify if CACs were providing effective trainings in regards to agricultural laborer safety and emergency protocols. This was accomplished by creating a survey that focused on the laborer's knowledge of their rights and safety protocols used if they were exposed to hazardous pesticides during work.

The project required approval on Oct. 22nd, 2019. Then, extensive research on CACs responsibilities pertaining to agricultural laborer safety was conducted, as well as analyzing current safety policies aimed towards agriculture laborers, in order to have an understanding of the regulations used to create an effective questionnaire on Nov. 21st, 2019. The project then focused on collaborating with the field mentor to develop questions for the survey, which identified key areas where the survey would be implemented, on Dec. 3rd, 2019, in order to have an approved survey to administer. Once the survey was created, data collection continued from Dec. 15th, 2019- March 3rd, 2020, which was then analyzed. After administration of the survey was complete, data analysis was commenced from March 3rd, 2020- April 16th, and the key findings were identified on April 16th, which were presented during a staff meeting on April

23rd, 2020. After presentation of the data and key findings, the project was finalized, and the completion of the capstone report was achieved on May 8th, 2020. After completion of the capstone paper, the project was reviewed to follow the CHHS department requirements on May 8th, 2020 and the capstone project was presented at the Capstone Festival on May 14th, 2020.

**Table 2. Scope of Work for CAC's Evaluation**

<b>Project description: Implementation of survey to evaluate the effectiveness of CAC's commitment towards agricultural laborer safety.</b>			
<b>Goal: To identify if MCAC's are providing effective training in regards to agricultural laborer safety and emergency protocols.</b>			
<b>Primary objective of Project: To ensure agricultural laborers are understanding of their rights as well as safety protocol if exposed to pesticides.</b>			
<b>Activities</b>		<b>Deliverables</b>	<b>Timeline/deadlines</b>
1	Discuss capstone implementation with mentor.	Final capstone project idea approved.	Oct. 22nd, 2019
2	Research and analyze CAC's responsibilities and existing worker's rights/safety protocols.	Research concluded and the report completed.	Nov. 21st, 2019
3	Develop a survey to assess CAC's training effectiveness.	Final approved survey.	Dec. 3rd, 2019
4	Identify area/population within East Salinas to administer evaluation and collect data.	Evaluation conducted, data obtained and analyzed.	Dec. 15th, 2019- March. 3rd, 2020
5	Analyze data collected.	Organize data for agency to use.	March 3rd, 2020- April 16th, 2020
6	Discovery	Identify key issues regarding CAC's trainings and awareness towards agricultural laborer rights/safety	March 3rd, 2020- April 16th, 2020
7	Present information.	Present findings to SASS.	April 23rd, 2020



8	Complete reporting requirements.	Final capstone reports.	May 8th, 2020
9	Prepare capstone presentation in selected format.	Instructor approval, dress rehearsal of final capstone presentation format.	May 2020 (TBD)
10	Final preparation for Capstone Festival.	Final presentation at Capstone Festival	May 14th, 2020

**Findings**

Table 3.1 represents the respondents' answers when asked if they were aware of DPR's smartphone app to report pesticide exposure from work.

**Table 3.1: Are you familiar with the Department of Pesticide Regulation's (DPR) smartphone app for reporting pesticide exposure, known as CASPIR?**

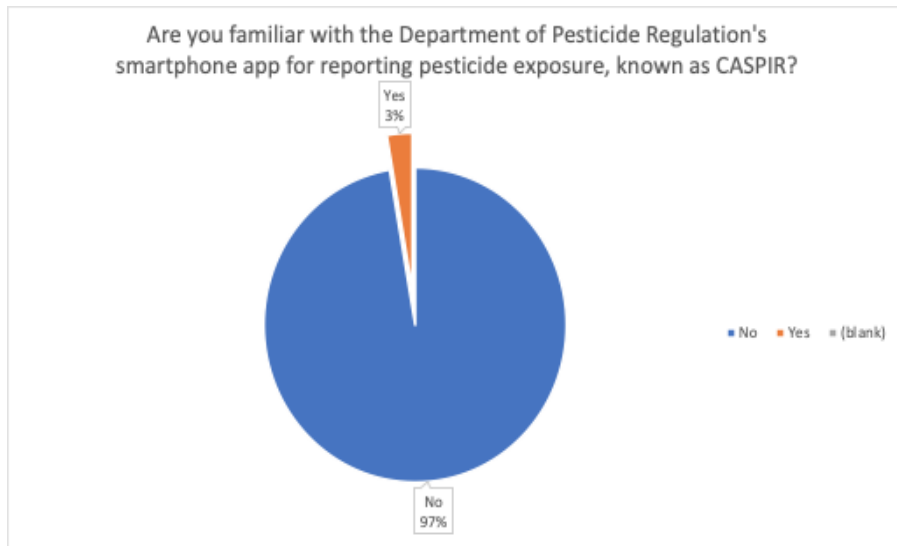


Table 3.2 represents the respondents' answers when asked if they were aware of decontamination procedures if exposure of pesticides were to happen at work.

**Table 3.2: Are you aware of decontamination procedures if you are exposed to pesticides?**

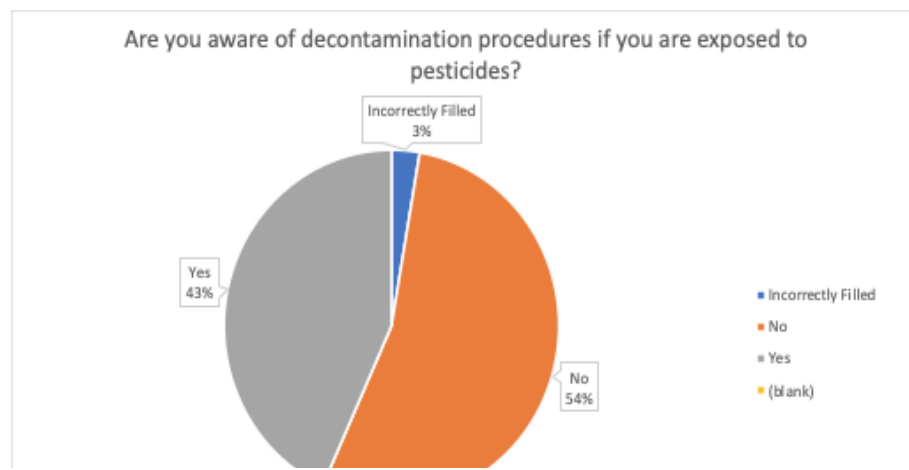
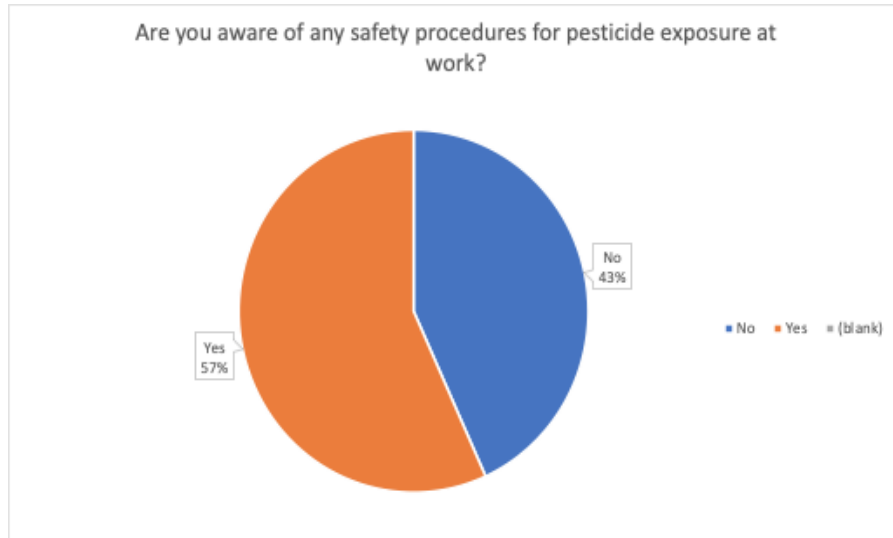


Table 3.3 represents the respondents' answers when asked if they were aware of any safety procedure(s) to follow in case of pesticide exposure becoming present at work.

**Table 3.3: Are you aware of any safety procedure for pesticide exposure at work?**



### Discussion

The results were clear, 97% of respondents were not familiar on how to report pesticide exposures, 54% did not know the procedures for decontamination, and 43% of respondents were not aware of safety procedures for pesticide exposure. The results show a stark lack of awareness of crucial safety information among farmworkers. Throughout implementation of the questionnaire, individuals asked for further clarification on terms that they weren't aware of in the questions. Clarification was needed on questions regarding the role of the Office of the Monterey County Agricultural Commissioner, importance of WPS, DPR's CASPIR smartphone app, and PSIS/MSDS information. Individuals were not aware of what the duties of the Office of the Monterey County Agricultural Commissioner were, and how it impacts their daily lives in and out of work. Individuals were also asked for knowledge of their rights as agricultural laborers, and very few were able to state their rights under WPS.

While implementing the evaluation, higher authorities were not comfortable in letting implementation occur. Dole Fresh Vegetables, Inc.'s Director Safety Rudy Amador for Monterey County was administering a New Employee Orientation at Local Teamsters 890 Hall on N. Sanborn on March 3rd, 2020 for agricultural workers of Royal Packing in Salinas. Representatives from Royal Packing and Teamsters were present as well. When Mr. Amador was asked if the evaluation can be administered at the end of the orientation, he stated, "It's best to come into my office and have a Human Resource representative review the survey. We don't want any "beef" with the Union, and the topic hasn't been fully covered with the new employees" (Rudy Amador, Personal Communication, 2020). While transparency must be present in the community, Dole failed to comply and did not let research for study purposes happen.

Implementation was administered after the New Employee Orientation, however, participants seemed to be careful about their answers, as representatives were watching as evaluations were handed out. Data on the evaluation shall be available upon request to the email previously stated on the cover page of the report.

## **Conclusion**

Implementation of the project was deemed effective through the extensive amount of research done on the responsibilities of the CACs, as well as the material of the worker safety trainings and the frequency of these trainings. Not having adequate information on the roles and responsibilities of the CACs and agricultural laborer safety could have made it difficult to identify the effectiveness of the training to the laborers, as we would have not had the

information needed to formulate the appropriate questions. It was also important to consider the participants' role in the evaluation. If individuals were not fully engaged in the assessment, then the data might have been obscured and lead to an increase in the margin of error.

## **V. REFLECTION OF COVID-19 PANDEMIC'S IMPACT**

As a result of the outbreak of the novel Coronavirus (COVID-19), SASS had to put a halt to in-person lobbying/community events, organization monthly meetings, and internship positions, in order to restructure the activities the organization can implement while following Centers for Disease Control's health guidelines. After reorganizing in the organization, SASS was able to hold conference calls via online services such as ZOOM, Google Hangouts, etc., with state representatives. SASS is limited to continue on with its regular set of activities with its community, due to inaccessibility to resources for online meetings. SASS aims to become transparent with the situation, and is offering alternatives for community members to still become involved in pesticide reform. SASS members are encouraged to remain in contact with the organization via cell/house phone, email, social media pages, and physical mailing.

Due to the inaccessibility of resources to remain in contact through online phone call meetings, SASS has seen a slight decrease in involvement with its members. Technological resources are not accessible to some, due to its high prices, and small wages that are earned. SASS recognizes the obstacles many of its members face, and is producing alternatives to accommodate to others, as mentioned previously.

COVID-19 has created awareness as to which titles are deemed as essential worker(s). Before the outbreak, agricultural laborers were stigmatized and seen as "less than others" due

legalization status, socioeconomic status, etc., now government officials are deeming them as essential. What legislators are not aware of is the lack of safety protocol these workers have. Although mitigation can be taken to control the spread of COVID-19, there are no government mandated protocols to abide to. These workers already face unequal working conditions, minimum wage salaries, and safety hazards. Having no protection from COVID-19 adds to the injustice agricultural laborers face on a daily basis. Monterey County Agricultural Commissioner Henry Gonzalez, made a statement to the Monterey Herald, which he stated, "Farmworkers and other agricultural employees are indispensable. This has long been recognized and is evident in the myriad of government and agricultural company rules designed to protect the health and safety of farmworkers" (Cuevas, 2020). The Monterey Herald viewed Mr. Gozalez's statement solely focused on produce as they mentioned, "transmission of coronavirus does not seem to spread from fresh or packaged produce. But... advised consumers to take normal precautions of washing fruits and vegetables before eating them" (Cuevas, 2020). Clearly the Agricultural Commissioner has not been applying effective safety procedures for agricultural laborers. It seems as if the only focus is on the profits of the produce being harvested, and not the health and safety of the one harvesting the crop.

SASS has assessed the many changes COVID-19 has brought to our daily lives and has learned from it. SASS's purpose of environmental justice will not be changed despite the outbreak. On the contrary, COVID-19 has allowed SASS to grasp a hold of another issue that needs attention. This being the transparency the Office of the Agricultural Commissioner offers to its community. SASS is encouraged to continue advocating for our agricultural laborers, as it has been doing since involvement in the community.

## VI. RECOMMENDATIONS

The implementation of the project will assist SASS in presenting the demand for advocacy for effective safety training and decontamination procedures for agricultural laborers, both locally and statewide. With the data collected, SASS is encouraged to continue collecting more data, to build a bigger data pool. SASS is encouraged to share this information with statewide coalitions, to implement similar projects in their communities. Due to the unprecedented COVID-19 outbreak, agricultural laborer safety is a priority for most organizations aimed to serve the agricultural working population. Future projects are encouraged to focus on advocacy for agricultural worker safety, implementing youth advocacy, creating local campaigns regarding safety/decontamination, and/or the effects COVID-19 has brought to the working population.

The implementation of the project helped understand the macro-level issue of environmental injustice by identifying the lack of awareness the Office of the Monterey County Agricultural Commissioner has in regards to the safety of the agricultural workers. With the findings this project helped identify, the fight for safer working conditions presented in an understandable manner must be brought to the attention of those affected. SASS is undoubtedly a staple in the agricultural advocacy community. As mentioned previously, SASS is encouraged to focus more on the regulations presented by agricultural

companies to their workers, and ensure that these rules are attainable to any worker, and abide by federal agricultural regulation (such as WPS, OSHA, EPA, etc.).

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**APPENDIX**

**Figure 1: Problem Model**

<b>Causes/Contributing Factors</b>	<b>Problem statement</b>	<b>Consequences</b>
Confusion of attaining information due to language barriers	Too many migrant agricultural laborers in Monterey County are at risk of pesticide exposure.	On-the-job pesticide exposure
Non-effective County Agricultural Commissioner		Lawsuits/lobbying costs to the Department of Pesticide Regulation (DPR) and the California Environmental Protection Agency (Cal EPA)
Lack of knowledge of emergency pesticide exposure safety protocol		Violation of the Occupational Safety and Health Act (OSHA)
Living under poverty based conditions/environments		Chemical exposure in neighboring communities and schools
Lack of awareness towards pesticide exposure symptoms		System of oppression within agriculturally working communities

**APPENDIX (cont.)****Table 2. Scope of Work for CAC's Evaluation**

<b>Project description: Implementation of survey to evaluate the effectiveness of CAC's commitment towards agricultural laborer safety.</b>			
<b>Goal: To identify if MCAC's are providing effective training in regards to agricultural laborer safety and emergency protocols.</b>			
<b>Primary objective of Project: To ensure agricultural laborers are understanding of their rights as well as safety protocol if exposed to pesticides.</b>			
<b>Activities</b>		<b>Deliverables</b>	<b>Timeline/deadlines</b>
1	Discuss capstone implementation with mentor.	Final capstone project idea approved.	Oct. 22nd, 2019
2	Research and analyze CAC's responsibilities and existing worker's rights/safety protocols.	Research concluded and the report completed.	Nov. 21st, 2019
3	Develop a survey to assess CAC's training effectiveness.	Final approved survey.	Dec. 3rd, 2019
4	Identify area/population within East Salinas to administer evaluation and collect data.	Evaluation conducted, data obtained and analyzed.	Dec. 15th, 2019- March. 3rd, 2020
5	Analyze data collected.	Organize data for agency to use.	March 3rd, 2020- April 16th, 2020
6	Discovery	Identify key issues regarding CAC's trainings and awareness towards agricultural laborer rights/safety	March 3rd, 2020- April 16th, 2020
7	Complete reporting requirements.	Final capstone reports.	May 8th, 2020
8	Prepare capstone presentation in selected format.	Instructor approval, dress rehearsal of final capstone presentation format.	May 8th, 2020
9	Final preparation for Capstone Festival.	Final presentation at Capstone Festival	May 15h, 2020

**APPENDIX (cont.)****Farmworker Safety Protocol Survey**

This capstone project, implemented with California State University, Monterey Bay, consists of an evaluation to identify whether or not the County Agricultural Commissioner (CAC) in Monterey County is following procedure in regards to safety for farm-workers who work with treated crops, and if farmworkers are understanding the safety protocol. The purpose of this project is to identify the knowledge farmworkers hold regarding their rights when working with fields that have been treated with pesticides, to ensure a safe work environment for the farm-worker.

This research is supported by the Department of Health Human Services & Public Policy at California State University, Monterey Bay. Correspondence concerning this survey should be addressed to Ernesto Verduzco, California State University, Monterey Bay, 100 Campus Center, Seaside, CA, 93955, or via email at [erverduzco@csumb.edu](mailto:erverduzco@csumb.edu).

1. Age:

\_\_\_\_\_

2. Gender:

\_\_\_\_\_

3. Ethnic Background:

Latinx/Chicanx (Latino/a; Chicano/a)

African-American

Native Hawaiian/Pacific Islander

White (non-Latinx/Chicanx)

Other

4. In the last two seasons, what crop(s) did you work in:

\_\_\_\_\_

5. Below, please list your responsibilities on the job.

\_\_\_\_\_

6. Do you believe you have been exposed to pesticides during work hours? (i.e. throat irritation, headaches, blurred vision, nausea/vomiting, etc.)

**APPENDIX (cont.)**

- Exposed
- Not Exposed
- Not Sure

7a. If you answered “Exposed”, what symptoms did you experience?

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7b. Have you observed a co-worker be exposed to pesticides during work hours?

- Yes
- No

7b. If you answered “Yes”, what did you observe?

---

7. Do you know what authority you should report incidents of pesticide exposure to? If yes, please name.

---

---

8. Have you ever reported an incident of pesticide exposure?

- Yes
- No

9a. If yes, who did you report to?

---

9b. Are you familiar with the Department of Pesticide Regulation’s smartphone app for reporting pesticide Exposure, known as CASPIR?

- Yes
- No

10. Please describe the responsibilities of the Monterey County Agricultural Commissioner to the best of your Ability below.

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**APPENDIX (cont.)**

11. Are you aware of any safety procedures for pesticide exposure at work?

Yes

No

12. Below, please list the safety procedure(s) you are aware of.

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13. Have you received a safety training at work regarding pesticide safety?

Yes

No

13a. If yes, when was the last training session you received at work regarding pesticide safety?

Month: \_\_\_\_\_ Year: \_\_\_\_\_

14. Who gives you the training on pesticide training, and how often? (State the job title of the trainer).

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15. Can you access Pesticide Safety Information Series A-9 (PSIS) and/or Material Safety Data Sheets (MSDS) at work? *Note: Employers must have these documents available for employees at all times, under state law.*

Yes

No

16. How well do you understand your rights under the Worker Protection Standard (WPS)? *Note: WPS was created in 1992, under the Environmental Protection Agency (EPA), to reduce the risk of accidental pesticide poisoning for agricultural workers and pesticide handlers.*

Not At All

Average

Very Knowledgeable

**APPENDIX (cont.)**

16a. Below, please list your rights to the best of your knowledge.

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17. Have you, or a co-worker, ever been ordered to enter a treated field in the course of your work? *Note: A "treated field" will be referred to a work site where a pesticide has been applied and an REI (Restricted Entry Interval) has been in effect within the last 30 days. A, "REI" refers as an amount of time established by the grower to pass for re-entry*

Yes

No

18. If so, did you see warning signs posted around the worksite? *Note: Warning signs shall have red printing on a white background, must include a skull and crossbones symbol, and must read: "DANGER, DO NOT ENTER".*

Yes

No

19. Are you aware of decontamination procedures if you are exposed to pesticides?

Yes

No

20. Below, please list the procedure to the best of your knowledge.

---

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21. Any questions/concerns

---

**Thank you for your time and consideration! We truly appreciate your input in our survey. Any questions/concerns can be addressed via email at: [erverduzco@csumb.edu](mailto:erverduzco@csumb.edu).**



**APPENDIX (cont.)****Encuesta de Protocolo de Seguridad de Campesino/a**

Esta encuesta es parte de mi proyecto final, implementado con la Universidad Estatal de California, Monterey Bay, y consiste en una evaluación para identificar si el Comisionado de Agricultura del Condado (CAC) de Monterey está siguiendo el procedimiento de seguridad para proteger a los campesinos que trabajan con cultivos tratados, y si los campesinos están entendiendo el protocolo de seguridad. El propósito de este proyecto es para identificar si los campesinos/as tienen conocimiento sobre sus derechos cuando trabajan en campos que han sido tratados con pesticidas, para garantizar un ambiente de trabajo seguro en los campos.

Esta investigación es apoyada por el Departamento de Salud, Servicios Humanos y Política Pública de la Universidad Estatal de California, Monterey Bay. La correspondencia sobre esta encuesta debe dirigirse a Ernesto Verduzco, Universidad Estatal de California, Monterey Bay, 100 Campus Center, Seaside, CA, 93955, o por correo electrónico a [erverduzco@csumb.edu](mailto:erverduzco@csumb.edu).

1. Edad:

\_\_\_\_\_

2. Género:

\_\_\_\_\_

3. Origen Étnico:

Latinx/Chicanx (Latino/a; Chicano/a)

Afro-Americano

Isleño Nativo Hawaiano/Pacífico

Anglo Saxon (no Latinx/Chicanx)

Otro

4. En las últimas dos temporadas, en qué cultivos trabajaste:

\_\_\_\_\_

5. A continuación, enumere sus responsabilidades en el trabajo:

\_\_\_\_\_

**APPENDIX (cont.)**

6. ¿Crees que has estado expuesto a pesticidas durante las horas de trabajo? (por ejemplo; irritación de garganta, dolores de cabeza, visión borrosa, náuseas / vómitos, etc.)

Si, he estado expuesto/a  
 No he estado expuesto/a  
 No estoy seguro/a

- 7a. Si respondió "Expuesto", ¿qué síntomas experimentó?

---

- 7b. ¿Has observado/a a un compañero/a de trabajo expuesto a pesticidas durante las horas de trabajo?

Si  
 No

- 7c. Si respondió "Sí", ¿qué observó?

---

7. ¿Sabe a qué autoridad debe informar los incidentes de exposición a pesticidas? En caso afirmativo, por favor nombre la autoridad.

---

8. ¿Alguna vez reportó un incidente de exposición a pesticidas?

Si  
 No

- 9a. En caso afirmativo, ¿a quién lo reportó?

---

- 9b. ¿Está familiarizado con la aplicación para teléfonos inteligentes del Departamento de Regulación de Pesticidas para reportar la exposición a pesticidas, conocida como CASPIR?

Si  
 No

**APPENDIX (cont.)**

9. A continuación describa las responsabilidades del Comisionado de Agricultura del Condado de Monterey lo mejor que pueda.

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10. ¿Conoce algún procedimiento de seguridad para la exposición a pesticidas en el trabajo?

Si  
 No

11. A continuación, enumere los procedimientos de seguridad que conoce.

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12. ¿A recibió un entrenamiento de seguridad en el trabajo con respecto a la seguridad de los pesticidas?

Si  
 No

13a. En caso afirmativo, ¿cuándo fue la última sesión de entrenamiento que recibió en el trabajo sobre seguridad con pesticidas?

Mes: \_\_\_\_\_ Año: \_\_\_\_\_

13. ¿En el trabajo, quién administra el entrenamiento sobre pesticidas y con qué frecuencia? (Indique el título del entrenador).

---

14. ¿Puede acceder a la Serie de información sobre seguridad de pesticidas A-9 (PSIS) y / o las Hojas de datos de seguridad de materiales (MSDS) en el trabajo?

*Nota: El empleador debe tener estos documentos disponibles para los empleados en todo momento, según la ley estatal.*

Si  
 No



**APPENDIX (cont.)**

¡Gracias por su tiempo y consideración! Realmente apreciamos su apoyo en nuestra encuesta. Cualquier pregunta / inquietud puede dirigirse por correo electrónico a: [erverdeuzco@csumb.edu](mailto:erverdeuzco@csumb.edu), o en la dirección mencionada.