

ENHANCING PUBLIC ACCESS TO PESTICIDE USE INFORMATION

An Opportunity for the Agricultural Commissioner's Office

SUMMARY

The agricultural industry in Monterey County is a critical driver of economic activity and provides healthy food to consumers around the globe. In support of that activity, the Monterey County Agricultural Commissioner's website has posted a vast array of information about the use of pesticides, including links to State Agencies and other relevant sources for the use of agricultural pesticides in Monterey County. This information is extensive, but it is currently targeted toward, and most useful to, growers, agricultural workers, pesticide applicators, and other agricultural professionals. Corresponding levels of information on agricultural pesticides that would be useful to County residents, who are not agriculture professionals, is limited. There is an opportunity for the Agricultural Commissioner's Office to enhance its role as a community resource that presents unbiased, scientifically based facts about pesticides.

GLOSSARY

MCACO: Monterey County Agricultural Commissioner's Office

NGO: non-governmental organizations

AI: Active Ingredient

BACKGROUND

A fundamental pillar of Monterey County's economy is agriculture. As one of the nation's top agriculture producers, Monterey County agriculture contributes over \$4 billion per year to the County's direct economic output and has a total estimated impact of over \$8.1 billion on the local economy, including generating 73,429 jobs.¹ Unlike most

¹ See Langholz & DePaolis. Economic Contributions of Monterey County Agriculture 2014. Pp. 2,3

crops grown across the United States that are machine harvested, the crops grown in Monterey County are dependent upon a skilled labor force.² Part of this skilled work force is responsible for the application of crop pesticides.

Pesticides are an important part of commercial agriculture in California. The scope of pesticide use is reflected in the *2017 Pesticide Use Report Highlights* by the California Department of Pesticide Regulation. Page two of that report stated that pesticide use for California in 2017 totaled 204.7 million pounds of Active Ingredients (AIs) and 104.3 million cumulative acres treated.³ These figures vary yearly, and vary by county as well. For example, the State-wide total pounds of AIs reported in 2017, represented a 2.0 percent decrease from the 2016 figure. Conversely, the 2017 report's total acres treated figure was an increase, year-on-year, by 3.3 percent.⁴ Pesticide use figures for Monterey County, on the other hand, declined for both pounds and acres treated between 2016 and 2017.⁵

Any investigation about pesticides is complicated. In addition to traditional pesticides like sulfur, 1,3-dichloropropene, glyphosate, and metam-potassium, growers today consider and use items like biopesticides⁶, petroleum and mineral oils, and highly refined petroleum-based oils, some for newer uses by organic growers.⁷ For Monterey County, the top five pesticides used by pounds in 2017 are listed in Table 1.

² From Board of Supervisors. *About Monterey*. Monterey County Legislative Program. Page 4

³ CA Dept of Pesticide Regulation. 2017 Pesticide Use Report Highlights
https://www.cdpr.ca.gov/docs/pur/pur17rep/pur_highlights_2017.pdf

⁴ Ibid.

⁵ See CA Dept of Pesticide Regulation. Pesticide Use Reporting -2017 Summary Data Text files for all 2017 Annual Report tables and figures files for Monterey County (2016, 2017)
<ftp://transfer.cdpr.ca.gov/pub/outgoing/pur/data/>

⁶ Biopesticides is an EPA term for certain types of natural products used to control pests, plant diseases and weeds. (Note: not all-natural products are biopesticides). Marrone, P. (2008)
<https://www.cdph.ca.gov/Programs/CCDCPHP/DEODC/OHB/OIIPP/CDPH%20Document%20Library/PeStConf-Marrone1.pdf>

⁷ CA Dept of Pesticide Regulation. 2017 Pesticide Use Report Highlights
https://www.cdpr.ca.gov/docs/pur/pur17rep/pur_highlights_2017.pdf

Table 1 - Monterey County, 2017: Top Five Pesticides by Pounds & Sites of Use⁸

Chemical	Commodity	Pounds	# Apps	Acres
CHLOROPICRIN (1)	STRAWBERRY	2247331	524	8748
CHLOROPICRIN	RASPBERRY	44749	11	162
CHLOROPICRIN	N-OUTDR FLOWER	4966	4	17
CHLOROPICRIN	BLACKBERRY	4022	1	14
SULFUR (2)	GRAPE, WINE	607273	4633	135964
SULFUR	STRAWBERRY	206040	2066	49360
SULFUR	PEAS	23665	393	4503
SULFUR	BRUSSELS SPROUT	18791	258	3091
SULFUR	CARROT	18749	153	2005
1,3-DICHLOROPROPENE (3)	STRAWBERRY	498974	365	7252
1,3-DICHLOROPROPENE	GRAPE, WINE	198963	15	628
1,3-DICHLOROPROPENE	BRUSSELS SPROUT	63514	49	981
1,3-DICHLOROPROPENE	CARROT	16218	10	234
1,3-DICHLOROPROPENE	BROCCOLI	15499	3	87
PETROLEUM DISTILLATES, REFINED (4)	GRAPE, WINE	739995	3467	126233
PETROLEUM DISTILLATES, REFINED	HEMP/CANNABIS	254	29	23
PETROLEUM DISTILLATES, REFINED	APPLE	246	2	17
PETROLEUM DISTILLATES, REFINED	LANDSCAPE MAINTENANCE	102	0	0
PETROLEUM DISTILLATES, REFINED	N-GRNHS FLOWER	7	1	0.689
POTASSIUM PHOSPHITE (5)	LETTUCE, LEAF	168115	4060	51039
POTASSIUM PHOSPHITE	LETTUCE, HEAD	130358	3234	40131
POTASSIUM PHOSPHITE	SPINACH	88106	2727	32603
POTASSIUM PHOSPHITE	PEAS	19094	505	5859
POTASSIUM PHOSPHITE	STRAWBERRY	8930	48	1862

⁸ Source: CA Dept Pesticide Reg. 2017 Summary Data by County
https://www.cdpr.ca.gov/docs/pur/pur17rep/top_5_ais_sites_lbs_2017.htm

It is important to note that the laws and policies governing pesticide use are promulgated by Federal and State agencies. Monterey County is tasked with enforcing those laws and policies, and the Monterey County Agricultural Commissioner's Office (MCACO) is its enforcement arm.

MCACO has Federal, State, and Monterey County program funding. Its County budget is approximately \$11 million per year⁹ and about \$3 million of that amount is used to oversee pesticide use.¹⁰ This oversight includes ensuring local compliance with Federal and State mandates for inspections, disclosures of pesticide use, pesticide application monitoring, worker safety, and public safety programs. As part of this effort, MCACO monitors, collects, and reports all data on commercial pesticide use for Monterey County.

This work makes MCACO a key source for unbiased, scientifically based data about pesticide use in Monterey County. In addition to County-based MCACO-generated data, the MCACO website provides links to federal, state, academic, and research materials concerning most aspects of pesticide use in agriculture. This combination of local data and linked resources are focused on, and primarily used by, the agriculture industry.

These data are not currently distributed or made available in a consumer-friendly form to the local community. Today, Monterey County residents and consumers can register complaints about any pesticide-related incident¹¹ on the MCACO website, but they would be challenged to find useful, consumer-focused tips about the pesticides used on their local produce on that same website.

⁹ County of Monterey Recommended Budget FY2019-2020. pg. 45:
<https://www.co.monterey.ca.us/home/showdocument?id=77798>

¹⁰ Office of the Agricultural Commissioner. (2020). Pesticide Use & Enforcement, accessed:
<https://www.co.monterey.ca.us/government/departments-a-h/agricultural-commissioner/agricultural-resource-programs/pesticide-use-enforcement#ag>

¹¹ See MCACO website <https://www.co.monterey.ca.us/government/departments-a-h/agricultural-commissioner/agricultural-resource-programs/pesticide-use-enforcement/file-a-complaint#ag>

METHODOLOGY

The Civil Grand Jury investigated the nature and scope of public information available using the following methodology:

- By reviewing relevant Federal and State official websites with a focus on pesticide use in Monterey County, and then cross referencing these data with information available on the MCACO website.
- By examining commercial, third-party NGO/agriculture action groups, and other stakeholder organization websites relating to pesticide use in Monterey County.
- By identifying and reviewing relevant information from commercial and scientific journals published by academic and research organizations.
- By interviews with MCACO.

DISCUSSION

The Civil Grand Jury's investigation focused on MCACO's ability to provide relevant information that promotes general public awareness regarding pesticides and their use in the County.

As noted above, MCACO's current pesticide efforts are largely concentrated on commercial farming and crops. MCACO's outreach is essential for local agriculture stakeholders and has a heavy focus on policies that affect how crops are raised, while also ensuring adequate workplace safety protocols are known and followed for all aspects of pesticide use.

However, in order to make informed choices for their families, Monterey County consumers also must have access to accurate and useful information about the pesticides used in our crops. Finally, concerned NGO's or even third-party agriculture action groups could better serve the public if they had access to consumer-focused factual and unbiased pesticide information when they seek to promote initiatives with the public.

On this point, the Civil Grand Jury concluded that there is a prevalent and genuine need for residents of Monterey County and other interest groups to have access to unbiased, scientifically reviewed information about pesticides.

The Civil Grand Jury acknowledged that MCACO already conducts certain initiatives or action related to educating the general public. However, it also noted that the MCACO website does not leverage its resources or its MCACO data in webpages that present a straightforward platform for the general public. Expanding the MCACO website to be more consumer friendly in presenting MCACO pesticide information would be a major step to meet this need.

The Civil Grand Jury also concluded that another type of information gap exists. The MCACO website has professional links and pesticide resources (alluded to above) for agricultural professionals. However, it lacks an equivalent breadth of connections to government, industry, or scholarly pesticide resources that are tailored toward the public's need for pesticide-relevant information.

To meet this need, equivalent pesticide resources that target general public pesticide topics could be included on a MCACO consumer-focused webpage. These resources do exist. The Civil Grand Jury investigation found sources such as: the National Center for Biotechnology Information (*Pesticide Residues in Food: Attitudes, Beliefs, and Misconceptions among Conventional and Organic Consumers*)¹², the U.S. Environmental Protection Agency (*Is food grown using pesticides safe to eat?*)¹³, and even California's own Department of Pesticide Regulation (*Pesticides and Food: How We Test for Safety*)¹⁴ as examples of consumer-focused pesticide related links that could benefit the County's residents.

The Civil Grand Jury noted and agreed with an article posted by the U.S. National Library of Medicine that stated: "...the ability of consumers to obtain and understand

¹² See NCBI <https://www.ncbi.nlm.nih.gov/pubmed/29154718>

¹³ See EPA <https://www.epa.gov/safepestcontrol/food-and-pesticides>

¹⁴ See CDPR <https://www.cdpr.ca.gov/docs/dept/factshts/residu2.pdf>

state-of-the-science information about how pesticides are regulated and how dietary exposure limits are set can be limited by the complicated nature of the regulations coupled with an abundance of sources seeking to cast doubt on the reliability of those regulations.”¹⁵ This is why a MCACO resident-focused website or portal is needed.

The combination of MCACO-generated local pesticide data, plus appropriate external consumer-focused pesticide-related links that are centralized on an MCACO portal for the general public would be a new level of outreach. Based on mission, location, and professional knowledge, MCACO is the best local authority for residents’ questions on pesticides. In sum, the Civil Grand Jury determined that MCACO can play a central role in providing an online and an in-person forum for the distribution of useful pesticide-related information needed by the public today.

This is not only important for the routine considerations of daily life, it is also important in times when accidents or crises develop. MCACO is part of the Monterey County Hazardous Materials Incident Response Organization. The County’s Hazardous Materials Incident Response Plan calls for MCACO to inform and assist responders if “Pesticide Drift Exposure” incidents were to occur as well as agricultural chemical wholesalers and applicators were to experience spills or other incidents.¹⁶ The MCACO could use the proposed public-focused website, and other MCACO social media tools to notify, guide, and inform the public of these events in a real-time or near-real time manner. This could promote public safety and enhance public confidence in MCACO’s responsible oversight of pesticides in our County.

However, the Civil Grand Jury realizes that many Monterey County residents do not have the resources, or the opportunity to use the internet and social media to research this knowledge. U.S. Census data suggest that 80.8 percent of Monterey County households have broadband access at home, but that also means more than 24,000

¹⁵ See Reeves, McGuire, Stokes, & Vicini (2019) doi: 10.1093/advances/nmy061

¹⁶ Monterey County (MC). (2016). MC Operational Area Hazardous Materials Incident Response MC Hazardous Materials Incident Response Plan. <http://www.mcftoa.org/wp-content/uploads/2011/05/Monterey-County-Haz-Mat-Area-Plan-Final-January-2016.pdf>

households – or more than 79,200 people, are not connected.¹⁷ County news reports also highlight the challenges faced by many County residents, who are “not connected.”¹⁸ This segment of our community, possibly 18 percent of the County, also needs accurate, reliable and unbiased information on pesticides.

In this regard, the Civil Grand Jury noted that MCACO routinely conducts farm labor-contractor workshops, K-12 outreach activities, staff presentations to schools, and even engages in partnerships with local 4H clubs. These are ideal venues to provide or disseminate hard copy materials that would mirror the consumer-focused pesticide portal envisioned above. These initiatives would be a catalyst for informing that unplugged portion of our community. Such work could be augmented by mailings or material available at MCACO offices

In addition, the Civil Grand Jury noted that the Monterey County Board of Supervisors’ policy P-130 (page 1 of 4) cites US Census data on Monterey County as being “...home to more than 25% of people who cannot communicate in English, with close to 100,000 people who speak only Spanish.”¹⁹ Other sources reference US Census ACS data (2014-2018) to suggest similar language demographics.²⁰ This led the Civil Grand Jury to conclude that MCACO outreach would be more effective to the community and have a more extensive reach in the County by having information that is bilingual, written in both English and Spanish.²¹

Finally, the Civil Grand Jury recognizes the Agricultural Commissioner and MCACO for the work done so far both to keep our produce safe and plentiful, and to improve the process of disseminating information about pesticides. The Civil Grand Jury noted how MCACO has used different media including the Monterey County website, Facebook, a

¹⁷ US Census, American Community Survey (ACS), 2014-2018:
<https://www.census.gov/quickfacts/fact/table/montereycountycalifornia/HSD310218>

¹⁸ See: The Great Divide (3/1/2018). Marielle Argueza. *Monterey County Weekly*:
https://www.montereycountyweekly.com/news/cover/about-percent-of-monterey-county-doesn-t-have-high-speed/article_4d23b65a-1ce6-11e8-bcde-87000d561763.html

¹⁹ Monterey Board of Supervisors, Legistar File Number 17-1262, January 9, 2018:
<https://www.co.monterey.ca.us/home/showdocument?id=69250>

²⁰ See LiveStories.com: <https://www.livestories.com/statistics/california/monterey-county-language>

Quarterly Newsletter, the Monterey County Crop Report and certain other publications. Now is the time for the next level of MCACO outreach to the consumers.

FINDINGS

- F1. There is a prevalent and genuine need for residents of Monterey County, and other interest groups, to have access to unbiased, scientifically reviewed information about pesticides.
- F2. The scope of MCACO's mission, resources, and outreach capabilities mean that it can play a central role as a forum for fact-based and authoritative information to the public about pesticide-related facts and issues.
- F3. MCACO currently uses social media such as Facebook, but has not availed itself of the ever-expanding range of other outreach opportunities, including other social media outlets. Also underutilized are printed bilingual (English/Spanish) materials that could reach a wider range of the County's different communities.

RECOMMENDATIONS

When the 2019/20 Civil Grand Jury began our investigations, COVID-19 had not yet become a public health crisis. However, as we conclude our reports, we are tasked to specify a time frame within which to address our recommendations. We have done so, attempting to allow some extra time given the current situation. We ask the County Supervisors, Departments, Cities, and Special Districts responsible for enacting our recommendations to do their best to accomplish these goals as expeditiously as possible, given the effect of the current pandemic crisis on staffing availability.

- R1. Within budget limitations and personnel constraints, MCACO should create a simple, accessible forum on MCACO website that is general-public focused, and that publicizes relevant pesticide information directly to the Monterey County community. This website forum should be bilingual in content (English/Spanish).

This recommendation should be completed within one year of the publication of this report.

- R2. MCACO should expand its use of social media to a more varied range of portals, outlets, media and platforms. These outlets should link to the proposed general public pesticide forum, when active, and also publicize MCACO's rich resources of pesticide information throughout. This expanded outreach should include printed materials and bilingual (English/Spanish) content. This should be completed within one year of the publication of this report.
- R3. MCACO should prepare its current social media and all expanded outreach channels to support contingency planning and public notifications for any incidents under MCACO's purview that might develop or create public interest or concern. This should be operational within six months of the publication of this report.

REQUIRED RESPONSES

Pursuant to Penal Code sections 933 and 933.05, the Civil Grand Jury requests responses as follows:

From the following elected county officials within 90 days:

- Monterey County Board of Supervisors
Findings: F1 – F3
Recommendations: R1 – R3

INVITED RESPONSES

- Monterey County Agricultural Commissioner
Findings: F1 – F3
Recommendations: R1 – R3

Reports issued by the Civil Grand Jury do not identify individuals interviewed. Penal Code section 929 requires that reports of the Civil Grand Jury not contain the name of any person or facts leading to the identity of any person who provides information to the Civil Grand Jury.

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