



LABEL MANDATED TRAINING WHITE PAPER

November 29, 2023

Background

The United States Environmental Protection Agency (EPA) oversees the registration, sale, distribution, and use of pesticides throughout the United States, Tribes, and Territories. One of the agency's primary tasks is ensuring every registered product label contains clear, accurate, and detailed instructions on proper use to guide pesticide users. The labels are intended to ensure that proper use is defined, and by following instructions pesticides will not pose an unreasonable risk of harm to people or the environment. Use instructions include information on where and how the product can be used; the pests it manages; how to correctly mix, load, and apply the pesticide; measures to protect people and the environment from pesticide contamination; and post application procedures, such as posting requirements and pre-harvest and reentry intervals.

Clearly written label instructions are particularly important when utilizing restricted use pesticides (RUP). The EPA the RUP classification for products that have the potential to harm the environment, pesticides users, and the public if proper instructions or protections are not followed. Due to this concern, there is general support for formal pesticide safety training and competency tools to measure an individual's knowledge and comprehension of how to safely use RUPs.

The Certification and Training requirement developed by the EPA, and enforced by the states, tribes, and territories is the primary mechanism used to accomplish these goals. Many know this as the process required to obtain either an applicator certification or the "pesticide license" needed to purchase or use RUPs. Many states will require this process to be utilized for general use products (GUP) as well as RUPs, particularly for commercial enterprises utilizing pesticides.

As additional issues arise with the use of certain RUPs deemed particularly hazardous to people or the environment, it has become increasingly common for the EPA and some states to require additional label-specific training, referred to on product labels as label mandated training (LMT). These supplemental training requirements go above and beyond those required for initial certification. The intent of this document is to provide an outline of the status of LMT, summarize feedback from various stakeholders involved in pesticide safety and regulation, and provide recommendations for the future of LMT programs.

Pesticides Currently Requiring Label Mandated Training

Soil Fumigants

One of the first examples of label mandated training was designed for individuals who work with soil fumigants. Soil fumigants pose a significant risk to people applying the pesticide, other agricultural



employees assisting with fumigation-related tasks such as removing tarps following the application, and bystanders. Soil fumigant certification and training requirements varied from state to state. In some states a Private Applicator certification allowed the individual to purchase and use all RUP products without additional training or category specific examinations on the unique hazards posed by soil fumigant products.

Due to the unique aspects of each state's Certification and Training plan, it was not feasible for EPA to require that all applicators be licensed in soil fumigation. However, the need for a mechanism to ensure every soil fumigant user was aware of the unique risks posed by their use was recognized. To ensure uniformity in hazard and risk communication, soil fumigant labels required individuals to meet a minimum threshold of competency before purchasing or using these products. Some states' current certification processes met these standards, and no additional training was required to comply with the label demands. Other states had no mechanism in place. To address this, registrants of soil fumigants developed EPA-approved training to ensure all competency standards were met.

For a complete list of states' requirements, discussion about soil fumigants, and access to the EPA-approved training materials and programs, see the [EPA Soil Fumigant Training for Certified Applicators](#) page.

Paraquat

EPA continues to document cases of paraquat poisoning due to ingestion and, the concern about its acute toxicity has led to increased safety measures. These include enhanced packaging and design that requires closed loop systems. Rule changes, such as limiting use to certified applicators and eliminating allowances for direct supervision, offer further protections.

In addition, all individuals using paraquat are required to be certified applicators and must successfully complete label mandated training. There is no provision for direct supervision, or even handling of this product without being certified AND having completed the training. While similar in concept, this required training is significantly different from the model used for the soil fumigants in that only EPA-approved training can be used. The EPA-approved label mandated paraquat training is accessible on a central location on the internet. It was developed for the registrants by a third-party vendor, the National Pesticide Safety Education Center (NPSEC).

As per label directions, individuals must receive a certificate upon successful completion of the training. Once completed, the certification is valid for three years. To satisfy these requirements, the registrants also arranged with NPSEC to house and administer the training, maintain the training records, and issue certificates.

Due to feedback from applicators about accessibility issues associated with the internet, an in-person training component was also developed and is administered by NPSEC. Training materials and further information about paraquat can be found on the [Paraquat Dichloride Page](#) hosted by the EPA.

Over-the-Top Dicamba

Over-the-top dicamba products designed for use with dicamba tolerant cotton and soybeans were the next group of products requiring applicators to obtain additional training. This training was required as



part of the registration of two new over-the-top products and the reregistration decision of a third product in 2018.

Whereas the soil fumigants and paraquat training modules focused on applicator safety due to the concerns about their inherent acute toxicity, dicamba training was created to educate users about the potential for these products to damage non-target plants from spray and/or vapor drift. Additionally, although soil fumigants and paraquat trainings are active-ingredient specific, the dicamba training requirements apply only to the three products registered for use on dicamba resistant crops as an over-the-top application.

Like paraquat requirements, all dicamba handlers and applicators must be certified; there are no provisions for direct supervision. The training requirements for dicamba differ greatly from those of soil fumigants and paraquat. First, dicamba training must be completed annually. Additionally, there is no requirement that EPA approved training be used, merely that the new label requirements and restrictions be covered as listed on product labels. In addition, there are no set forms or certificates of completion. The EPA only states that a certificate *should* be issued so that those purchasing and using products containing dicamba have proof of completion of the training to satisfy the record keeping requirements for these products. Finally, EPA has left it up to each state/tribe/territory to decide what type of training they will require. States, tribes, and territories can opt to develop their own training program, use a combination of their training and the training developed by industry, or use the industry training. For further information about these training requirements, see the page on the [EPA website](#).

Alternate Examples

Structural Fumigants

Structural fumigants provide yet another example of products requiring a label specific training program. Structural fumigant label training differs significantly from the other LMT programs because it is not mandated by EPA. Instead, it is part of a voluntary training and stewardship program offered by the registrants.

In some cases, the registrant achieves this at the point of sale and by internal mechanisms; while other registrants list the training requirement directly on the label. Since these programs are controlled by the registrants, there is no set timeline for training frequency, no standard measure to certify or verify completion of the training requirement, and no standardized content for the training itself. The availability of the structural fumigant label training is strictly at the discretion of the registrant.

Rodenticides

An alternate form of label training has been proposed as part of the reregistration discussions of the rodenticides. The training would not be mandated but would be referenced on product labels as optional training. This makes the information and training readily available to all who use the products, but does not make the label training required, nor enforceable.



Feedback

Prior to the 2021 Pesticide Applicator Certification and Training Meeting (PACT), a collaboration team was assembled to create a scoping document and ultimately bring a diverse group of stakeholders together in Denver to discuss the issue of label mandated training. As part of this discussion, all interested groups including pesticide safety educators, state and federal regulators, private industry, and other interested parties were able to voice their opinions and ask questions about this issue. Following that meeting, a smaller more formal group was established that met monthly to determine the next steps to be taken for addressing the issue.

A key objective identified by the group was to obtain formal feedback from pesticide safety educators and state regulators about their understanding of label mandated training, and their opinions about its use going forward. The collaboration team was able to get this feedback through the Association of American Pesticide Control Officials (AAPCO) and the American Association of Pesticide Safety Educators (AAPSE) using a questionnaire that was sent to their respective groups' members. The full results of the feedback can be found in Appendices A and B for AAPCO and AAPSE respectively.

Below are key take aways identified by these two groups:

- Only 20% and 7% of State Lead Agencies (SLAs) and Pesticide Safety Education Programs (PSEPs), respectively, knew all the products requiring label mandated training (LMT) and felt adequate resources were in place.
- Over 90% of regulators believed label mandated training can or sometimes meets EPA's goal of informing applicators of risk. Only 60% of PSEPs thought it did.
- A majority of both groups did NOT believe there should be LMT for additional products.
- A majority of both groups believed the training was not consistently accessible and available to applicators.
- A majority of both groups had not developed materials or performed regulatory inspections related to LMT.
- Over 80% of SLAs and PSEPs believed either the EPA or registrants should be tasked with developing LMT training materials. None of the respondents believed it should be the responsibility of SLAs.
- Both groups agreed that training materials should be made available in multiple formats, online, and in person.
- Feedback from both groups included multiple comments regarding how applicators find LMT confusing and struggle with finding training materials.

Notably missing from this feedback are responses from the applicators themselves. One author, in discussing LMT with several applicators in their state, found the applicators were unaware of these requirements and found it confusing to have training listed on a label. Applicators expressed an interest in learning more about training but felt it should be part of the certification process or emphasized in continuing education courses, but not required. It was "one more checkbox" applicators must keep up with. If it is simply an item to check off, they said they would be less likely to pay attention.

Thoughts of the Authors

One of the primary questions the authors have been unable to answer is how effectively label mandated training is at reducing the risks associated with each product. In pursuing an answer to that question, it is unclear if there is any data being collected to determine the effectiveness of LMT or even if such data can be produced at all.

For instance, one might be able to compare the number of paraquat deaths due to ingestion prior to training versus those that occurred after training was implemented. If deaths are reduced, one might conclude the training worked. However, the paraquat training was not done as a standalone mitigation measure, as extensive product packaging changes were made that also could have reduced deaths due to ingestion. Likewise, the dicamba measures are not done as standalone requirements. Presumably the goal of the training is to reduce drift and off target damage. If less damage was reported, is that a result of effective training, or are more farmers adopting dicamba tolerant crops to avoid potential damage issues? Without a robust and deliberate method of tracking training efficacy, it will remain unknown if the training is effective at reducing harm, and thus necessary.

As highlighted earlier in this document, there is no consistency in how label mandated training is developed, delivered, and tracked; and who is responsible for its provision. This makes assessing the effectiveness of LMT difficult and makes it challenging for pesticide users, regulators, and trainers alike to focus on effective efforts. An ever-changing model for label mandated training makes it difficult for educators, regulators, manufacturers, and ultimately pesticide users to know what is required to use these products.

Of all the feedback gained from the questionnaire, the clearest agreement was related to who should be vetting and producing label mandated training. Both regulators and educators clearly favored either the EPA or manufacturers overseeing the training. In follow-up discussions and comments, it was clear having training that is vetted, EPA-approved, and consistent across the country, was desired by both groups.

Additionally, regulators and educators desired training developed by the manufacturers as part of their registration requirements. This would most commonly resemble the current paraquat model, with the caveat that the training must be available in formats other than online-only training modules and be of sufficient quality and merit.

A majority of both educators and regulators did not favor the implementation of more label mandated training. In the survey comments and follow up discussions, many educators suggested training “recommendations” could be prioritized and included in states’ training materials when applicable. For instance, a list of concerns or key points related to safety could be provided to pesticide safety education programs, which they could include during recertification trainings or distribute through bulletins to industry members. This would place the focus on safety, not a label mandated requirement.



A concern with the increasing amounts of training and compliance being done separately from the traditional certification process and the label itself, is that it discounts both of those mechanisms. The more users must bounce around to different websites or seek out additional training, the more likely they will wind up confused, making it harder for them to comply with the training requirements. All of this can create “compliance fatigue,” in which users feel so overwhelmed they simply stop attempting to comply with regulations.

Conversations with pesticide users revealed they do not anticipate being caught out of compliance. The lack of enforcement in this area, as indicated by many of the SLAs’ survey responses, supports this. Additionally, there were SLA responses that indicated they themselves may be unclear on all the regulations, making compliance near impossible.

There is also the challenge of finding the training in the first place. For example, the training link listed for dimethyl disulfide (DMDS) on the EPA’s website and referenced on the product labels does not take you to an actual training. It simply takes you to the homepage of the manufacturer which might create confusion, frustration, and a lack of compliance.

Training that is part of regular recertification or PSEP training programs and highlights the safety concerns and methods for reducing risk might be a better approach. This would result in training that is valued and is not viewed as overburdensome or just another box to check. If, however, additional label mandated training will be utilized, it is paramount that there is consistency in the requirements and delivery methods to ensure proper communication, distribution, and expectation to and by pesticide users.



Links Cited in Document

<https://www.epa.gov/ingredients-used-pesticide-products/dicamba-training-requirements-frequently-asked-questions>

<https://www.epa.gov/ingredients-used-pesticide-products/paraquat-dichloride>

<https://www.epa.gov/soil-fumigants/soil-fumigant-training-certified-applicators>

Collaboration Team Members

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Amanda Couture – Maine Department of Agriculture, Conservation & Forestry

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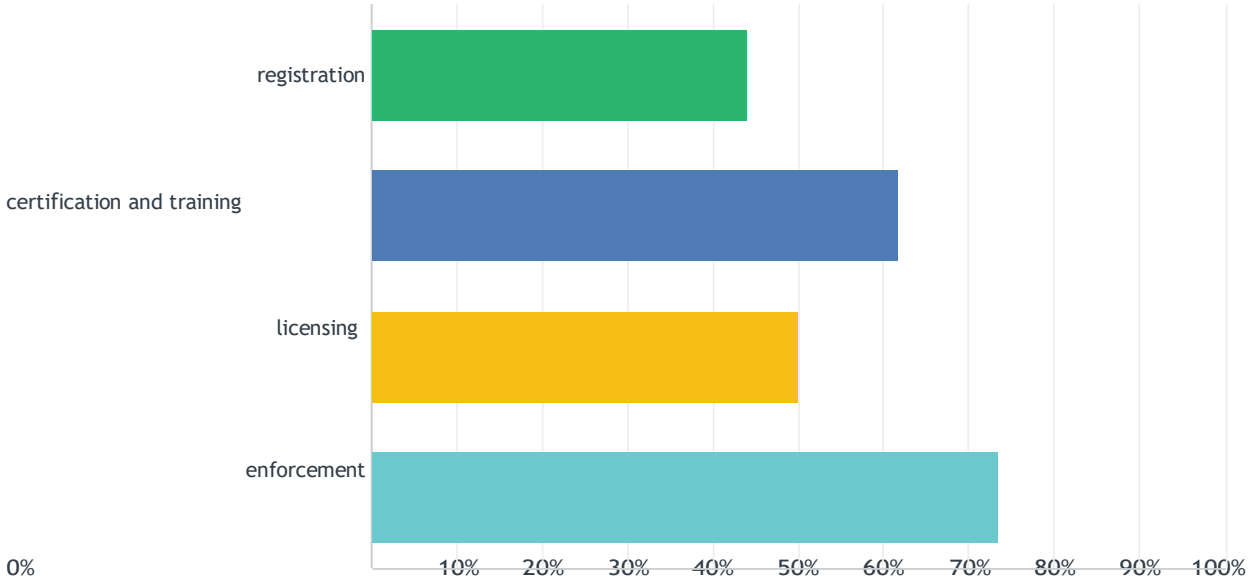
Linda Johns – University of Minnesota Pesticide Safety and Environmental Education

Pat Farquhar – North Carolina Department of Agriculture and Consumer Services

Appendix A – AAPCO Questionnaire

Q2 What program area do you work in? Please encourage other program area staff to answer if applicable.

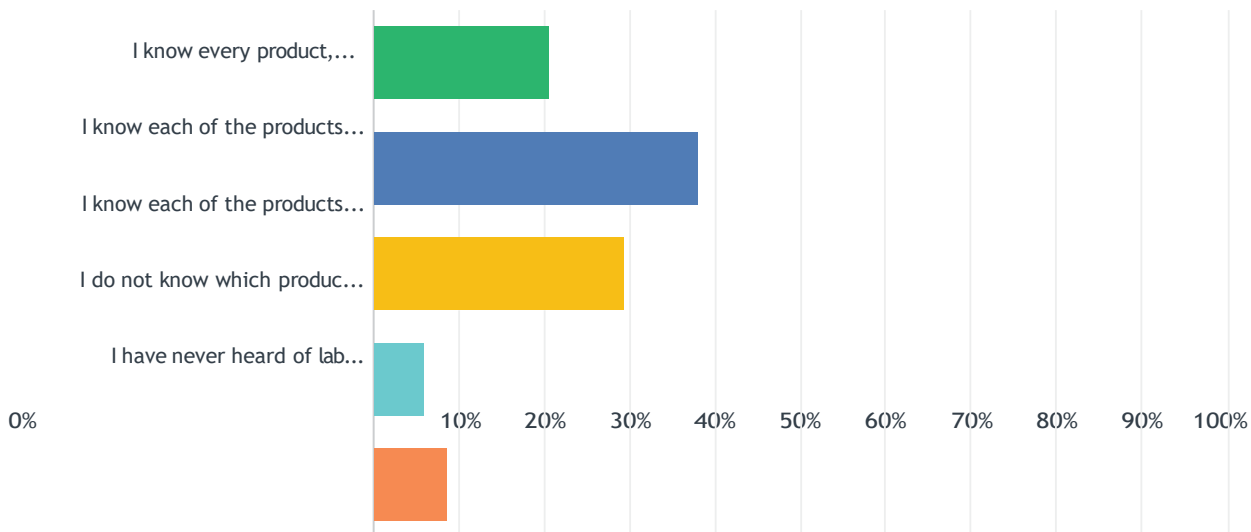
Answered: 34 Skipped: 0



ANSWER CHOICES	RESPONSES	
registration	44.12%	15
certification and training	61.76%	21
licensing	50.00%	17
enforcement	73.53%	25
Total Respondents: 34		

Q3 How would you rate your knowledge of label mandated training?

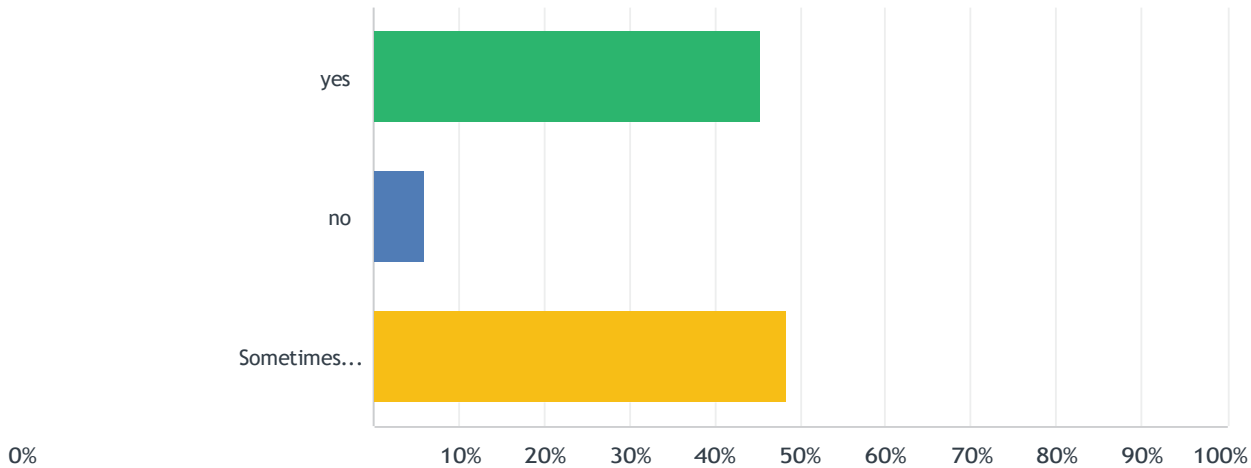
Answered: 34 Skipped: 0



ANSWER CHOICES	RESPONSES	
I know every product, requirement, and currently have a program in place for training and enforcement.	20.59%	7
I know each of the products that require training, but don't feel a robust program is in place.	38.24%	13
I know each of the products that require training, but don't have any program in place currently.	29.41%	10
I do not know which products require training, nor is a plan in place.	5.88%	2
I have never heard of label mandated training and I assumed our certification and licensing program was all that was needed.	8.82%	3
Total Respondents: 34		

Q4 Does label mandated training serve EPA's purpose for informing applicators about the potential hazards and safety measures associated with a specific product?

Answered: 33 Skipped: 1



ANSWER CHOICES	RESPONSES	
yes	45.45%	15
no	6.06%	2
Sometimes...	48.48%	16
TOTAL		33

#	SOMETIMES...	DATE
1	Label mandated training can vary on who provides the training and where it is located (e.g. registrant vs say SLA). Thus is important for the applicator to know where to find it and when to take it with potentially different state rules or different labels in marketplace.	8/16/2022 8:36 PM
2	As long as the approved training includes the content that EPA wants the applicators to be informed of, then LMT would serve to expose them to the information. Without the mandated training they may not be aware of those specific hazards or safety measures.	8/15/2022 3:01 PM
3	NCSU has always felt that state specific training was necessary for dicamba products, and yes that training has helped us in NC. However, for paraquat, we did go with the national training option. We also completed our own training for the Soil fumigants back in the day.	8/15/2022 10:47 AM
4	Sometimes label-mandated training is not enough to adequately ensure compliance.	8/15/2022 12:02 AM
5	when the labels are complex, and EPA wants to have additional training to improve/check the competency of commercial and private applicators so that they can make safe applications and better understand the label language because sometime label language can be ambiguous. These trainings serve the purpose ONLY if applicators IDENTITY is confirmed and secondly, applicator KNOWLEDGE is checked during the training. Otherwise, these trainings are of NO value! Please keep in mind these applicators have already been tested for their competency when they got their licensure or certification.	8/12/2022 8:40 AM

6 Much of this depends on the applicator. Individuals wanting to learn will take something away from the course. We've seen that annual training leads to complacency in some individuals. 8/11/2022 6:09 PM

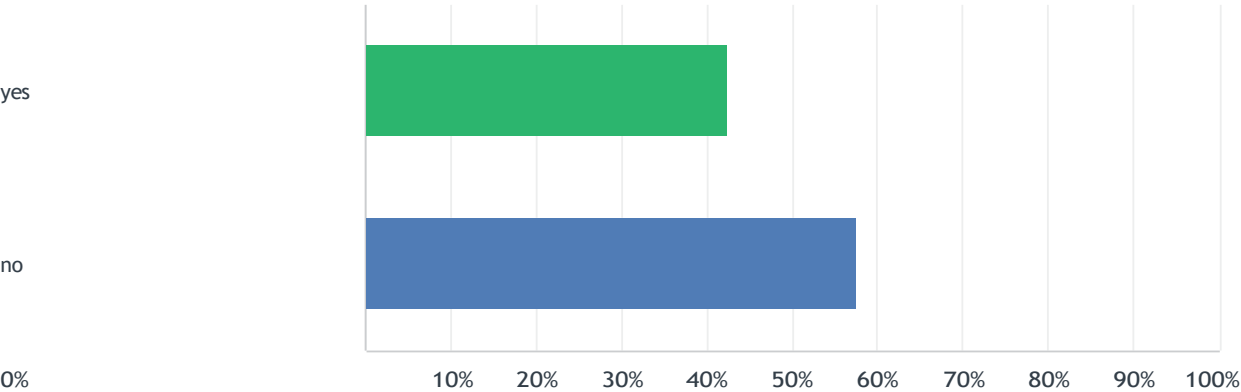
Must strike a balance on how much training is too much.

7	The required annual dicamba training has dropped considerably since it was first implemented. We have issued several settlement agreements because applicator did not take dicamba specific training. The companies have been doing the training.	8/11/2022 2:21 PM
8	While the main applicators will take the trainings, they are not always sharing the proper information with all Handlers involved nor are they ensuring that the Handlers are following the requirements and safety measures.	8/11/2022 1:28 PM
9	While it is effective for certain products, requiring it on many different products becomes overwhelming for applicators.	8/11/2022 11:15 AM
10	Maybe. Since I'm not aware of all the products which require training, I can't provide an opinion. If using paraquat as an example, then I would answer "yes".	8/2/2022 4:58 PM
11	Where I do believe additional instruction can provide additional information and some applicators will find value, I do believe that LMT also creates additional confusion to the end user and in some cases makes the label difficult to comply with.	8/2/2022 3:50 PM
12	we have very few products registered in Alaska that have label mandated training requirements, so it is difficult for us to gauge.	8/2/2022 2:40 PM
13	As more trainings become required it becomes difficult for the end-user and enforcement agents to keep track of them.	8/2/2022 11:56 AM
14	There are instances when someone can complete the training only to allow purchase of the product that will be used by someone else, "quick-clicking" through the training that results in little educational impact by the learner, or taking training on behalf of someone else who actually uses the product.	8/1/2022 4:48 PM
15	I believe it does but I have not taken the training.	8/1/2022 4:45 PM
16	In terms of content, I believe the training is adequate when the training is EPA approved.	8/1/2022 3:58 PM

Q5 Do you believe label mandated training should be used for more products?

Answered: 33

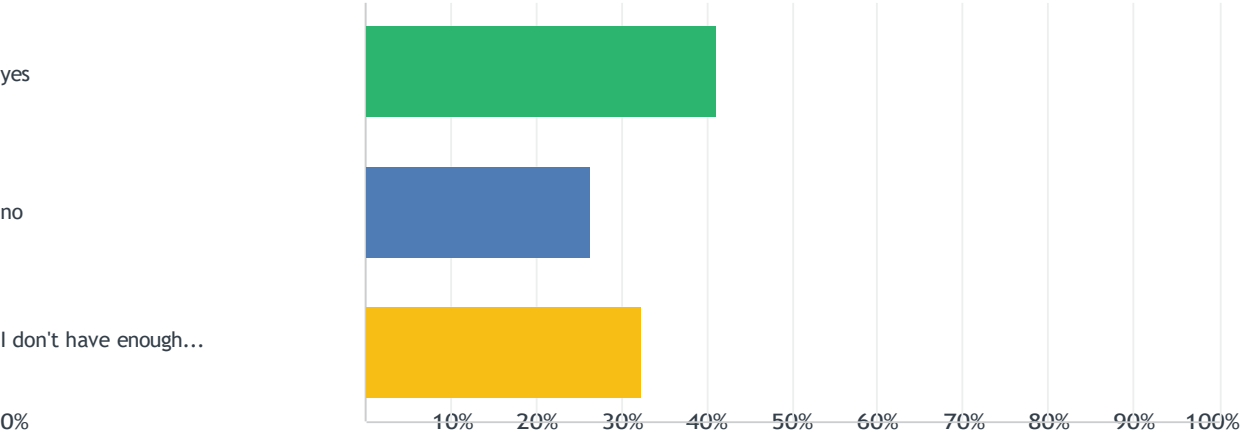
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ANSWER CHOICES	RESPONSES	
yes	42.42%	14
no	57.58%	19
TOTAL		33

Q6 Do you feel the current examples for label mandated training are consistent and accessible to pesticide applicators?

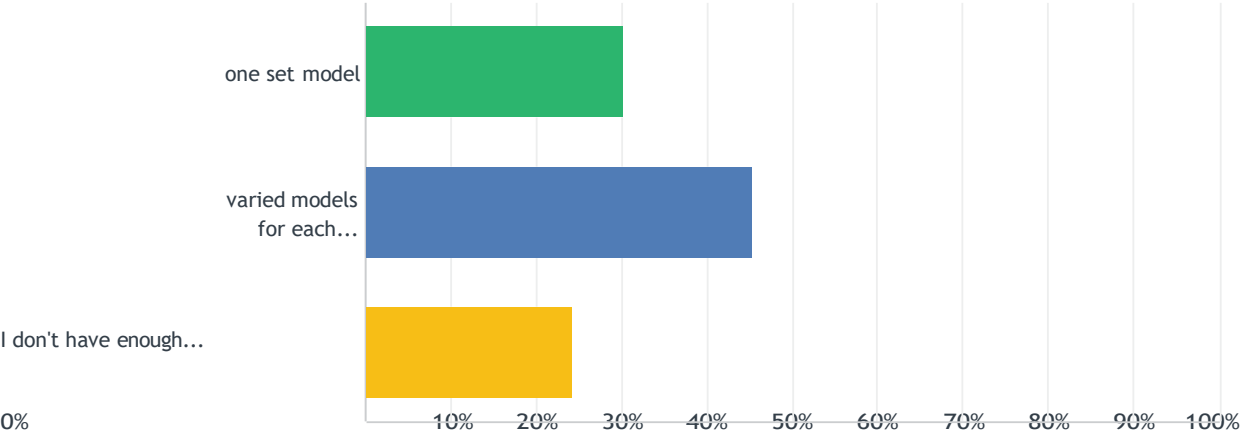
Answered: 34 Skipped: 0



ANSWER CHOICES	RESPONSES	
yes	41.18%	14
no	26.47%	9
I don't have enough information	32.35%	11
TOTAL		34

Q7 Do you feel there should be one model for label mandated training or should it vary depending on the product?

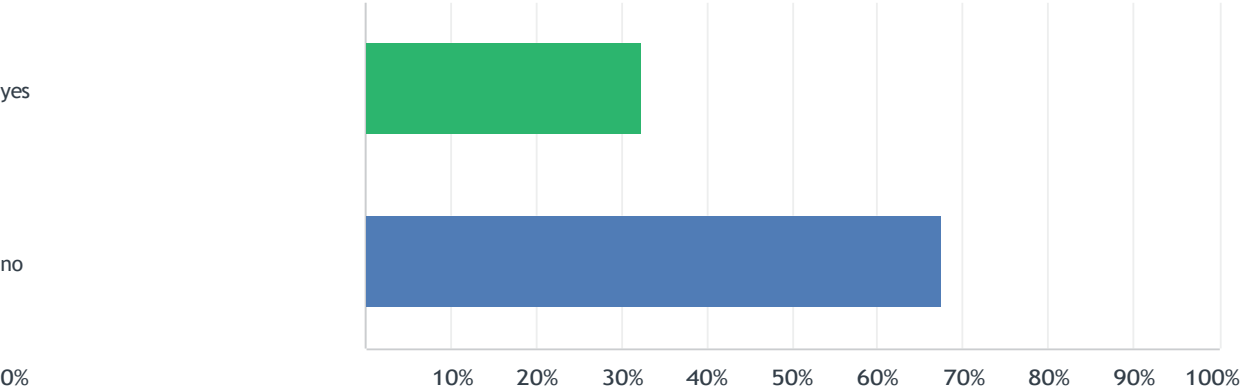
Answered: 33 Skipped: 1



ANSWER CHOICES	RESPONSES	
one set model	30.30%	10
varied models for each product	45.45%	15
I don't have enough information	24.24%	8
TOTAL		33

Q8 Have you performed any training record inspections specifically focused on label mandated training?

Answered: 34 Skipped: 0



ANSWER CHOICES	RESPONSES	
yes	32.35%	11
no	67.65%	23
TOTAL		34

Q9 If yes.....how did you ensure compliance?

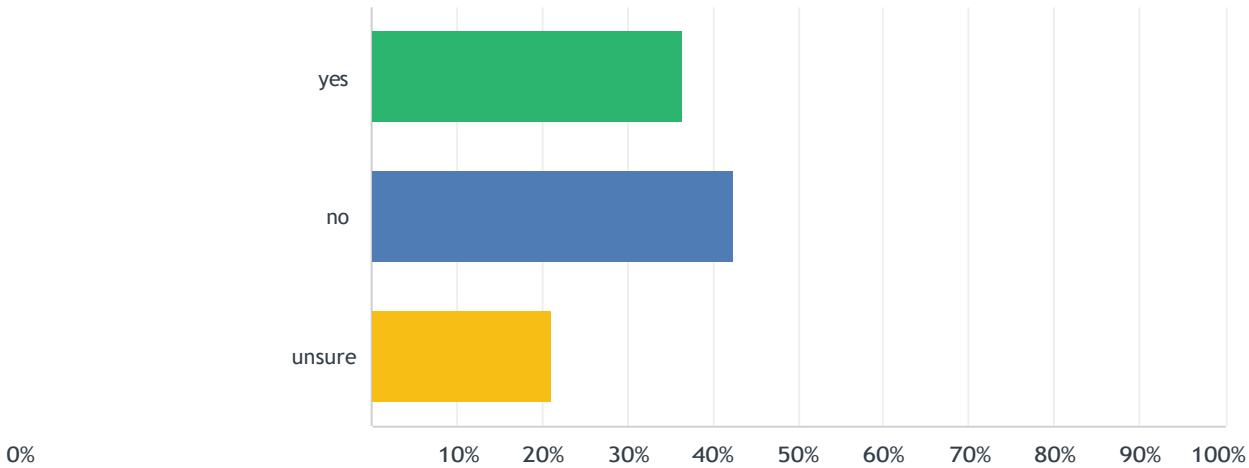
Answered: 15

Skipped: 19

#	RESPONSES	DATE
1	n/a	8/15/2022 3:01 PM
2	Not training records specifically, but during the season we routinely ask NPSEC for a list of attendees for NC to help with ag use inspections. .	8/15/2022 10:47 AM
3	We verified that training completion through the registrant.	8/15/2022 12:02 AM
4	Requested verification of said training.	8/11/2022 9:54 PM
5	Inspectors checked for certificates of completion.	8/11/2022 6:09 PM
6	requested the applicator to prove compliance	8/11/2022 3:36 PM
7	applicator would show inspector proof they took training or we look on the excel spreadsheet the companies provide on who took training.	8/11/2022 2:21 PM
8	Field inspections, distribution record reviews, verified if label mandated training were kept on field and documented.	8/11/2022 1:28 PM
9	The department requires a certificate be attained from training, that certificate is verified during the inspection process.	8/5/2022 1:19 PM
10	We've asked for training records as part of application record inspections.	8/2/2022 4:58 PM
11	proof of completion	8/2/2022 9:55 AM
12	verified the training was completed.	8/2/2022 8:36 AM
13	Requested evidence of training completion, as required by label-mandated record keeping.	8/1/2022 4:48 PM
14	Use inspections and result compare to the training requirements.	8/1/2022 3:54 PM
15	They must possess the credential proving they have successfully completed the training.	8/1/2022 3:38 PM

Q10 Is the completion of label mandated training currently counted towards continuing education/recertification credit in your state or territory? (If some sources are allowed but others aren't, answer yes. Only answer no if the training never counts towards recertification credit)

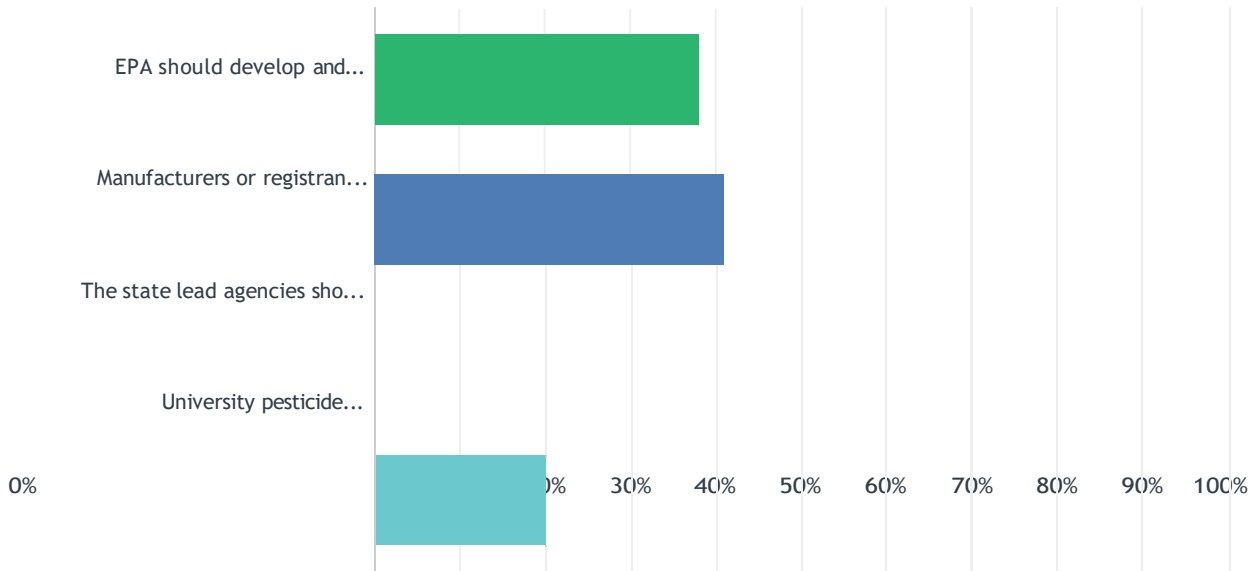
Answered: 33 Skipped: 1



ANSWER CHOICES	RESPONSES	
yes	36.36%	12
no	42.42%	14
unsure	21.21%	7
TOTAL		33

Q11 Who should be responsible for developing training materials related to label mandated training? Please only select one answer.

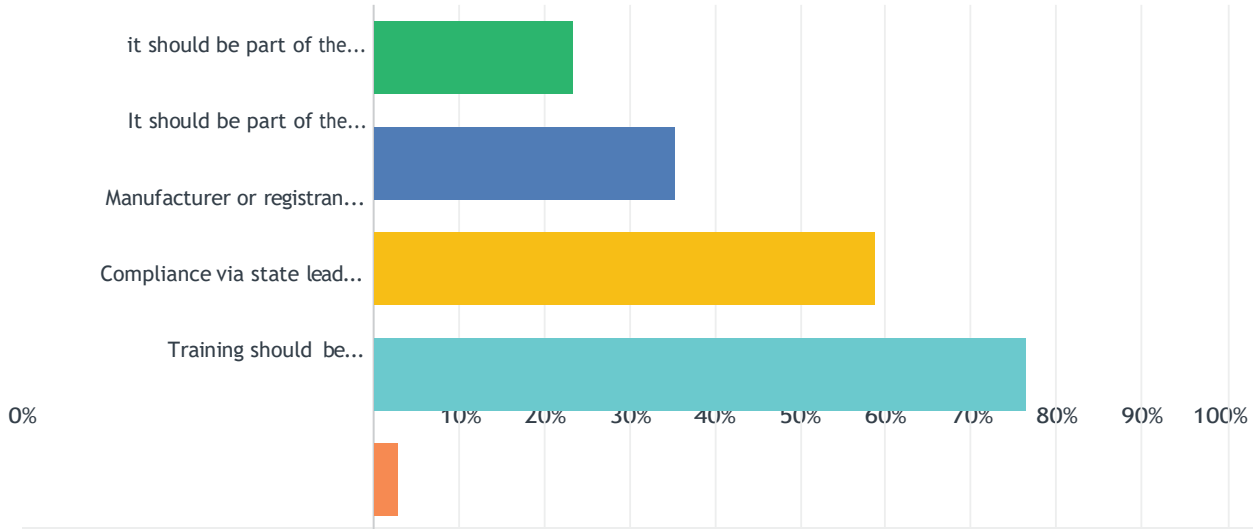
Answered: 34 Skipped: 0



ANSWER CHOICES	RESPONSES	
EPA should develop and distribute all standards and materials.	38.24%	13
Manufacturers or registrants should be required to create training materials for their products.	41.18%	14
The state lead agencies should develop all materials.	0.00%	0
University pesticide safety education programs should develop all materials.	20.59%	7
TOTAL		34

Q12 How should enforcement of the training requirements be handled (check all that apply)?

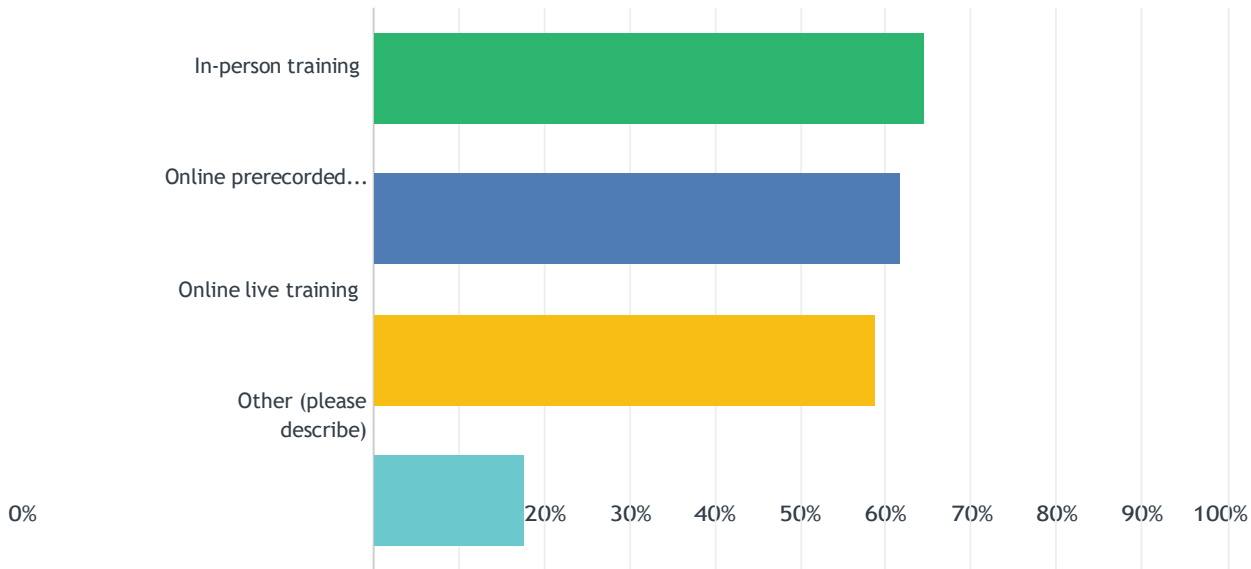
Answered: 34 Skipped: 0



ANSWER CHOICES	RESPONSES	
it should be part of the pesticide license certification process	23.53%	8
It should be part of the pesticide license re-recertification process	35.29%	12
Manufacturer or registrant enforcement before sale (stewardship plan)	58.82%	20
Compliance via state lead agency inspections	76.47%	26
Training should be readily available, but no enforcement or penalty for noncompliance.	2.94%	1
Total Respondents: 34		

Q13 How should the training be structured/formatted if the EPA requires specific training for additional products? (Please select all that should apply.)

Answered: 34 Skipped: 0



ANSWER CHOICES	RESPONSES
In-person training	64.71% 22
Online prerecorded training	61.76% 21
Online live training	58.82% 20
Other (please describe)	17.65% 6
Total Respondents: 34	

#	OTHER (PLEASE DESCRIBE)	DATE
1	Having In-Person trainings with the online option is what seems to accommodate the greatest number of applicators. There will always be a large number of people who will only go to in person classes and many states may not approve online classes for credit approval. From a Licensing standpoint, we get much less pushback when we can offer pesticide credit for a training that "we're" making them go to. Online is a convenient option for getting large numbers of applicators to complete a training without overwhelming the CES training locations. Unfortunately pre-recorded trainings, available on demand, may or may not be approved in every state for pesticide credit.	8/15/2022 3:01 PM
2	I think the training mode would depend on the information the label mandated training needed to provide. Sometimes, in person training is the proper forum and sometimes, online training can fulfill the job. I think reflection and follow up should be part of the process to ensure that training decisions are based on evidence of efficacy.	8/12/2022 10:53 AM

3 any platform (in person, online live or self-paced), these programs must have strong verification and accountability, otherwise, providing these trainings won't determine the 8/12/2022 8:40 AM

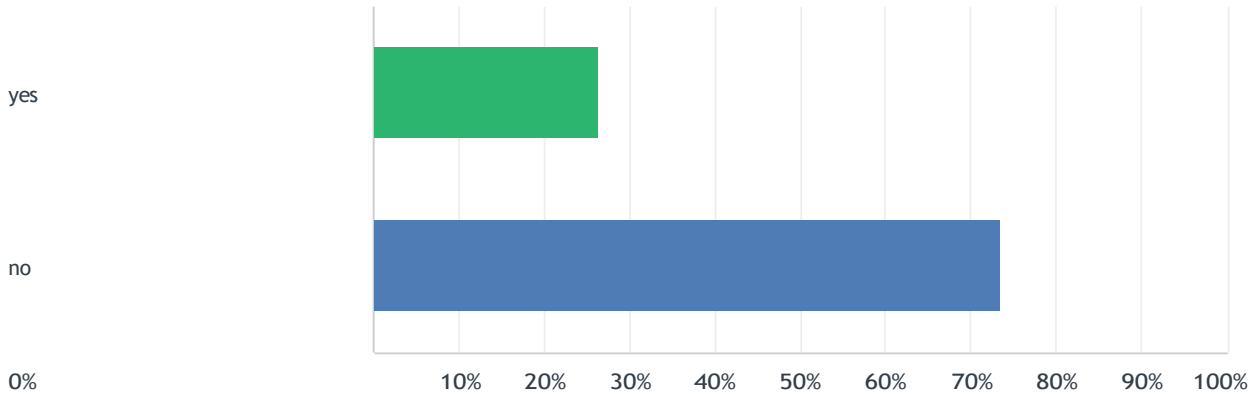
competencies of the individuals who will be using these products. The foundation of these trainings must be based on the checking the applicator's COMPETENCY!!

4	A variety of training options will allow access to a wider range of applicators.	8/11/2022 6:09 PM
5	Have customer support for any questions that may be brought during pre-recorded trainings, have email support mechanism to answer those questions.	8/5/2022 1:19 PM
6	"Online" training should be formatted in a way that requires periodic quizzes to test comprehension before the learner can move on, a minimum passing score to pass the training, and a certificate generated at the end to prove compliance.	8/1/2022 4:48 PM

Q14 Have you received feedback from employers and/or pesticide applicators about label mandated training?

Answered: 34

Skipped: 0



ANSWER CHOICES	RESPONSES
yes	26.47% 9
no	73.53% 25
TOTAL	34

#	IF YOU ANSWERED YES, WHAT FEEDBACK HAVE YOU RECEIVED?	DATE
1	I've only heard of the difficulties with the paraquat training so far. It is difficult to pass the test and make a 100%.	8/15/2022 10:47 AM
2	Applicators have inquired about the difference in requirements regarding annual vs. multi year training.	8/11/2022 6:09 PM
3	Needs to be in multiple languages. Duplicates what the state requires.	8/11/2022 3:36 PM
4	They take the training in January, but don't make the application until June. Label review is an issue.	8/11/2022 2:21 PM
5	Sometimes difficult to access on line. Language barriers for some demographics. May not actually test the competency and take away knowledge of the person taking the training.	8/11/2022 1:28 PM
6	There is no database to check the training making an encumbrance on both applicator and enforcer.	8/2/2022 11:56 AM
7	Comments run the range from "training is excellent" to "training is inadequate" or "meaningless". Most farmers see it as government overreach, commercial applicators see it as a necessary evil. Anyone who has been harmed by the pesticide that requires label - mandated training will tell you it is inadequate.	8/1/2022 4:48 PM
8	The training was very basic, but the persons taking the training understood the goal of the training. A few people stated the training was a waste of time as it didn't cover anything they had not received previously in applicator training sessions.	8/1/2022 3:58 PM
9	Additional costs and burden to applicators.	8/1/2022 3:38 PM

Q15 If yes, what feedback have you received?

Answered: 3

Skipped: 31

#	RESPONSES	DATE
1	n/a	8/15/2022 3:01 PM
2	This was answered in #14.	8/11/2022 1:28 PM
3	Isn't this the same question as he second block under #14?	8/1/2022 4:48 PM

Q16 If you have additional suggestions on how to improve label mandated training, or general thoughts on the topic, please include them in the space below.

Answered: 18 Skipped: 16

#	RESPONSES	DATE
1	1. Having a system to track who completed the training and clearly articulate who needs to track it (e.g. employer, employee, SLA, other) to try to make it consistent between SLA trainings and Federal/EPA trainings would help for clarity to regulated public. 2. Along the same lines of tracking the information indicate what a person (again who retains the record, employer, employee?) should retain to prove (e.g. certificate) completion (required record) and for how long, would help for compliance monitoring. 3. Having lots of outreach on where to find label mandated training, what products required it (e.g. some SLAs may also require it) is important.	8/16/2022 8:36 PM
2	Could not answer, for I am not familiar with Label Mandated Training	8/15/2022 3:10 PM
3	If these training are going to continue being the trend, there should be a document created from EPA stating what information they want covered on the mandated training agenda for it to be acceptable. This would allow states to collaborate (SLA & PSEP) and get input from EPA and Registrants if needed to develop trainings specific to a particular state and using state specific crops, pests or locations and hopefully make a training that would be engaging to the applicator. NC did this with the Auxin trainings. The Auxin trainings were a collaboration, and the outcome was excellent.	8/15/2022 3:01 PM
4	I really think training should be a corroborative effort with SLA, PSEP, registrants and EPA. If one group tries to develop training, I'm afraid very valid points may be lost. But a group effort will lead to a better training product.	8/15/2022 10:47 AM
5	As the vertebrate pest specialist, I have dedicated a portion of my training on key aspects of labels that may be missed. I can't call it label mandated training but it does emphasize important points. I guess I don't know why continuing education can't address application issues. If a product is so dangerous or problematic that training/enforcement doesn't resolve the problems, then perhaps the product shouldn't be registered? Otherwise, I would think the answer would be a specific certification that is so rigorous, applicators who passed the certification would be allowed to use these highly volatile products because they could charge enough to make following the guidelines worth their while.	8/12/2022 10:53 AM
6	SLA's should approve all training so that there is assurance that state specific requirements are covered. There should be a higher level of verification and accountability for these trainings. Just attendance does not mean the trainings are affective.	8/12/2022 8:40 AM
7	Short and too the point is always best.	8/11/2022 6:09 PM
8	reading and understanding the label should be completed prior to making any application of a pesticide. The mandated training has not really increased more label reading and understanding by the applicator.	8/11/2022 2:21 PM
9	NA	8/11/2022 1:39 PM
10	As label mandated trainings are planned and developed, the state lead agencies and state pesticide education programs need to be involved with developing or at least providing peer review on drafts of the curriculum for the trainings. The draft trainings need to be vetted via test audiences prior to implementation.	8/11/2022 1:28 PM
11	Training requirements need to be displayed more prominently on labels and more outreach needs to be done by manufactures and retailers specifically for private applicators using paraquat.	8/11/2022 11:15 AM
12	Applicator should have LMT certificate of training in hand when purchasing products from	8/5/2022 1:19 PM

pesticide dealers.

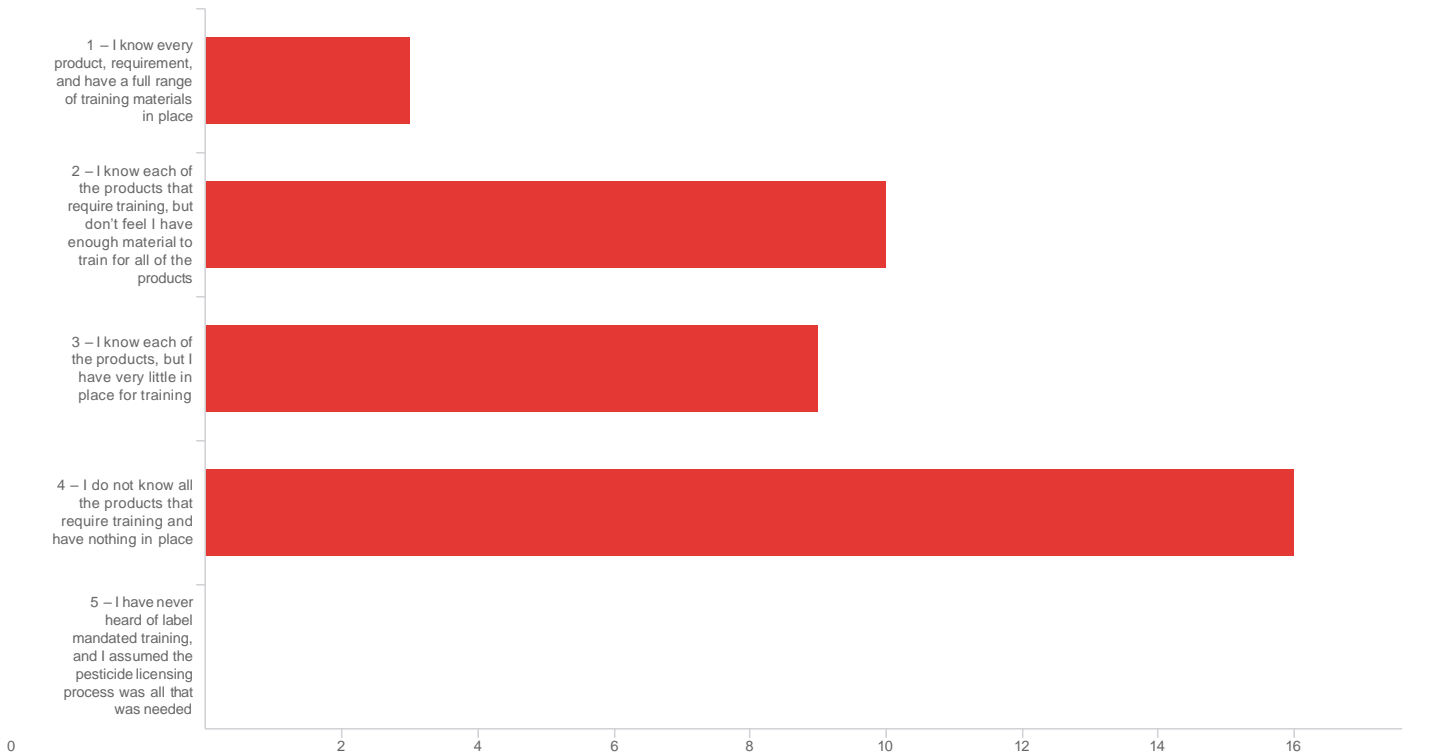
13	Training for various products needs to be product-specific, but consistent in the competencies and safety information addressed. EPA cannot expect states to increasingly monitor and enforce product-specific label mandated training for numerous (and an increasing number of) products. States do not have the funding, staff, time, or capability to give, track, monitor, and enforce this type of additional training that goes beyond applicator licensing and recertification training if the trend in the future is going to be requiring this for an increasing array of products.	8/4/2022 1:34 PM
14	There needs to be a up to date easily accessible database of all completed trainings if states are to be expected to effectively enforce them.	8/2/2022 11:56 AM
15	Label mandated training needs to be enforceable.	8/2/2022 8:36 AM
16	I believe there is an unanswered question by EPA as to what standards they use to decide label-mandated training is required, and whether those standards are risk-based or complaint driven. Why is RUP dicamba training required annually when paraquat training required every three years? Are plant damage incidents more important to EPA than human harm incidents? Why is soil fumigant training only required for the person who purchases the product instead of all applicators using the product? Is purchase of a soil fumigant inherently hazardous, or is it the use of the pesticide that presents the risk? These questions speak to the inconsistency of how OPP has used label-mandated training, and while each user group is different, the consistency of the training and pain point (purchase vs. use) is different, and certainly not apparently relevant to the human health risk of the pesticide.	8/1/2022 4:48 PM
17	The training needs to be mandated, it should be part of the certification process, not an additional requirement for certified applicators. If it is something that needs to be emphasized to existing applicators that may not have had the training, then target those applicators specifically and make the requirement part of certification for new applicators.	8/1/2022 3:58 PM

18

All risk mitigation measures placed on labels, including additional training requirements come at a cost to applicators and the state enforcement office. EPA should take into account the cost of enforcing complex measures placed on labels. The time and money spent just on dicamba risk mitigation have been astronomical to state lead agencies without much consideration to the SLA or impact on SLA programs. If the savior to maintaining each chemical is additional workload to the SLA, sooner than later the state will not be able to effectively enforce these measures.

Appendix B – AAPSE Questionnaire

1 - As a Pesticide Safety Education Program (PSEP) rate your understanding of label mandated training?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	As a Pesticide Safety Education Program (PSEP) rate your understanding of label mandated training?	1.00	4.00	3.00	1.00	1.00	38

#	Field	Choice Count
1	1 – I know every product, requirement, and have a full range of training materials in place	7.89% 3
2	2 – I know each of the products that require training, but don't feel I have enough material to train for all of the products	26.32% 10
3	3 – I know each of the products, but I have very little in place for training	23.68% 9
4	4 – I do not know all the products that require training and have nothing in place	42.11% 16

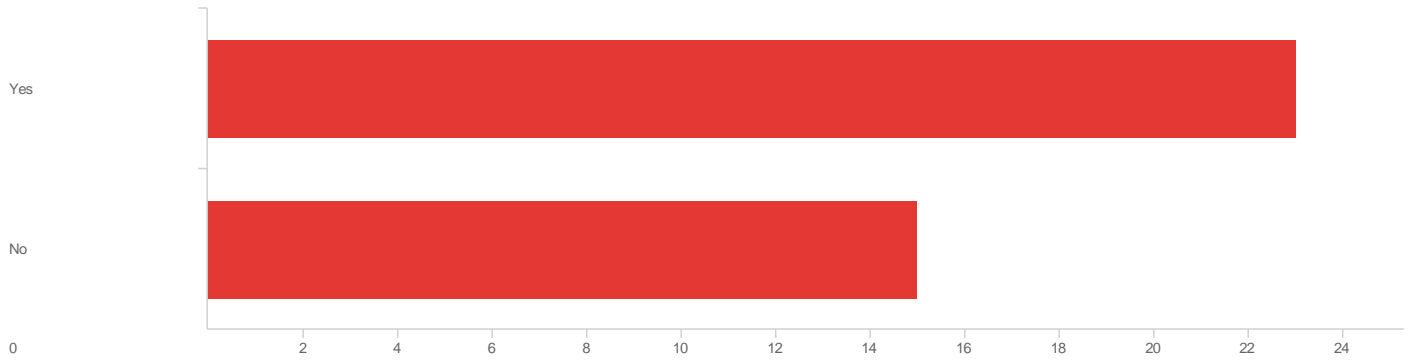
#	Field	Choice Count
5	5 – I have never heard of label mandated training, and I assumed the pesticide licensing process was all that was needed	0.00% 0

38

Showing rows 1 - 6 of 6

2 - Do you feel that label mandated training serves the EPA's purpose to inform

applicators about the potential hazards and safety measures associated with a specific product?



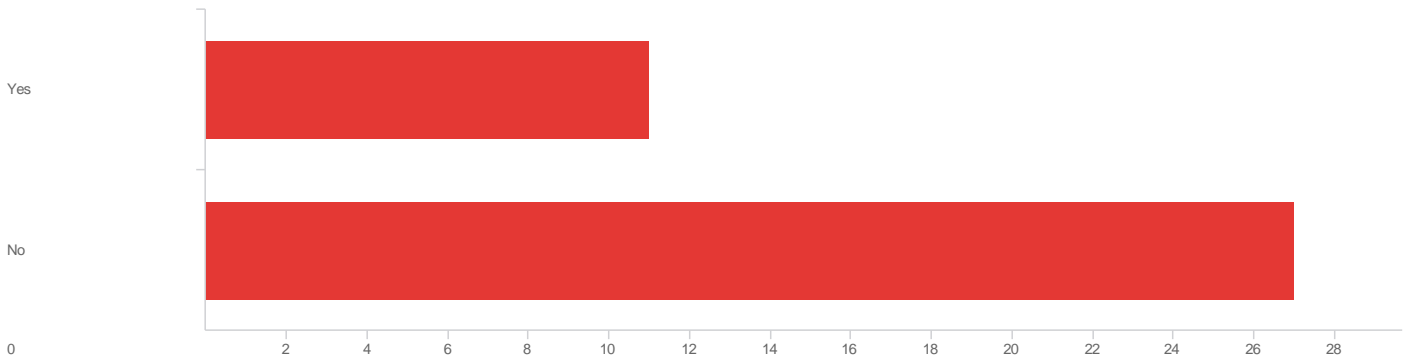
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Do you feel that label mandated training serves the EPA's purpose to inform applicators about the potential hazards and safety measures associated with a specific product?	1.00	2.00	1.39	0.49	0.24	38

#	Field	Choice Count
1	Yes	60.53% 23
2	No	39.47% 15

38

Showing rows 1 - 3 of 3

3 - Do you feel label mandated training should be used for more products?



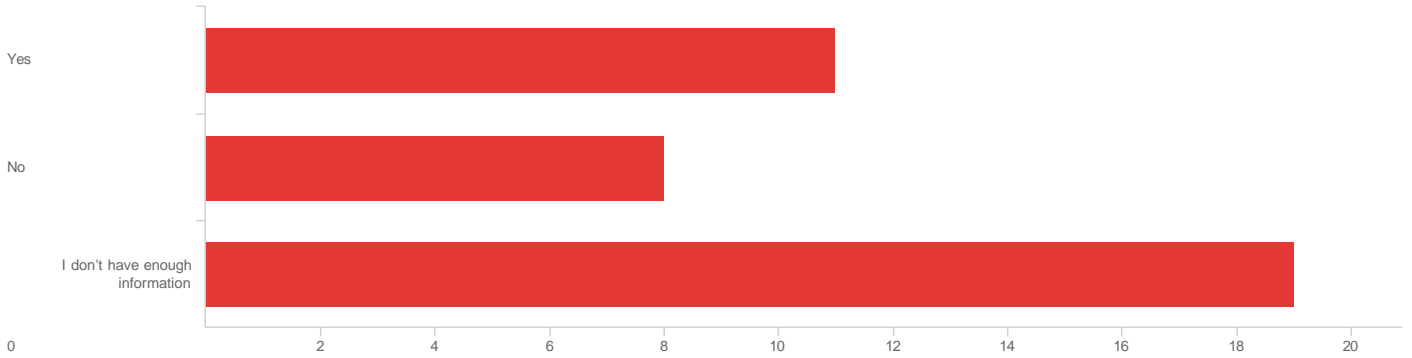
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Do you feel label mandated training should be used for more products?	1.00	2.00	1.71	0.45	0.21	38

#	Field	Choice Count
1	Yes	28.95% 11
2	No	71.05% 27

38

Showing rows 1 - 3 of 3

4 - Do you feel the current examples for label mandated training are consistent and accessible to pesticide applicators?



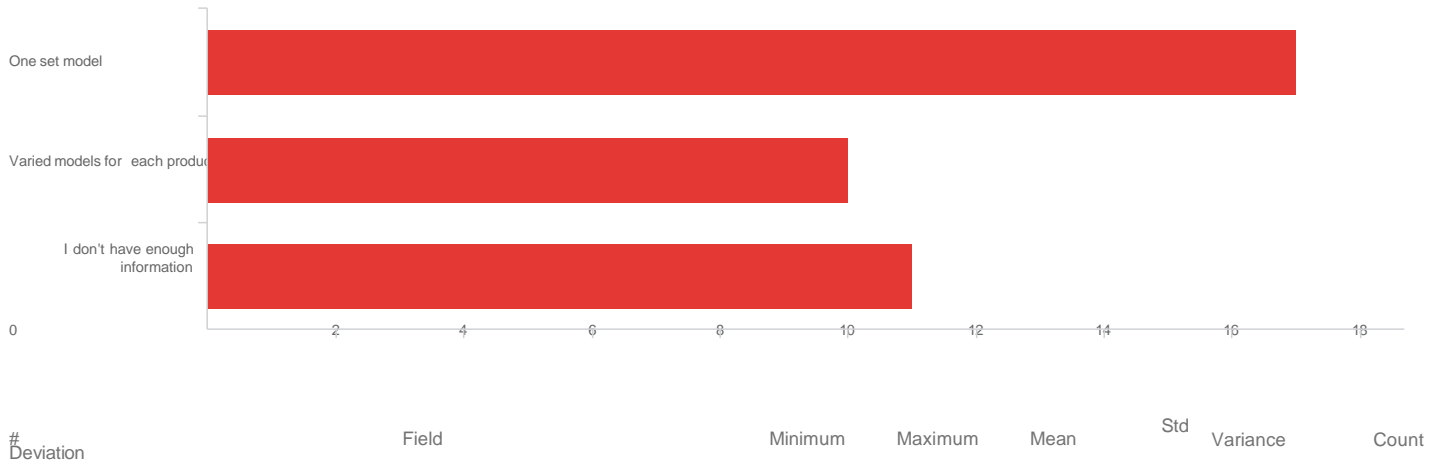
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Do you feel the current examples for label mandated training are consistent and accessible to pesticide applicators?	1.00	3.00	2.21	0.86	0.75	38

#	Field	Choice	Count
1	Yes	28.95%	11
2	No	21.05%	8
3	I don't have enough information	50.00%	19
			38

Showing rows 1 - 4 of 4

5 - Do you feel there should be one model for label mandated training or should it vary

depending on the product?

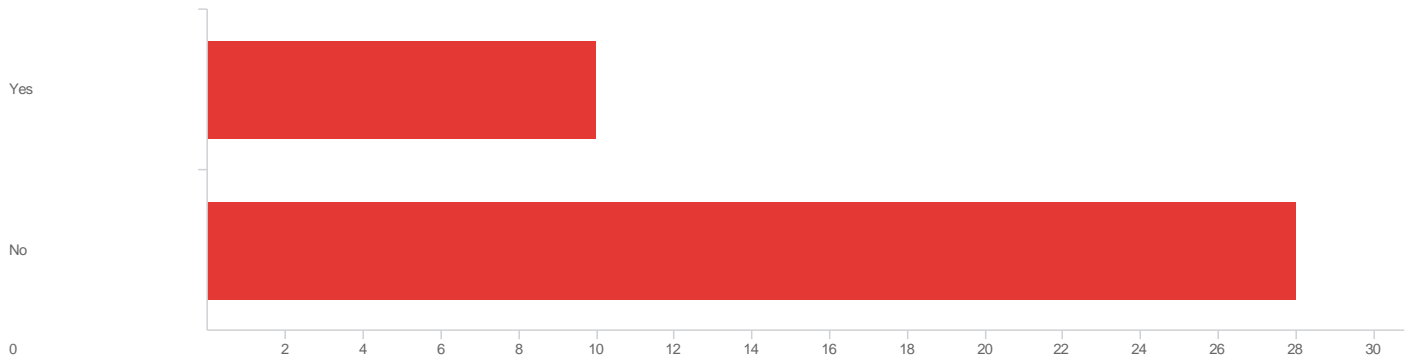


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Do you feel there should be one model for label mandated training or should it vary depending on the product?	1.00	3.00	1.84	0.84	0.71	38

#	Field	Choice	Count
1	One set model	44.74%	17
2	Varied models for each product	26.32%	10
3	I don't have enough information	28.95%	11
			38

Showing rows 1 - 4 of 4

6 - Has your program developed materials for label mandated training?



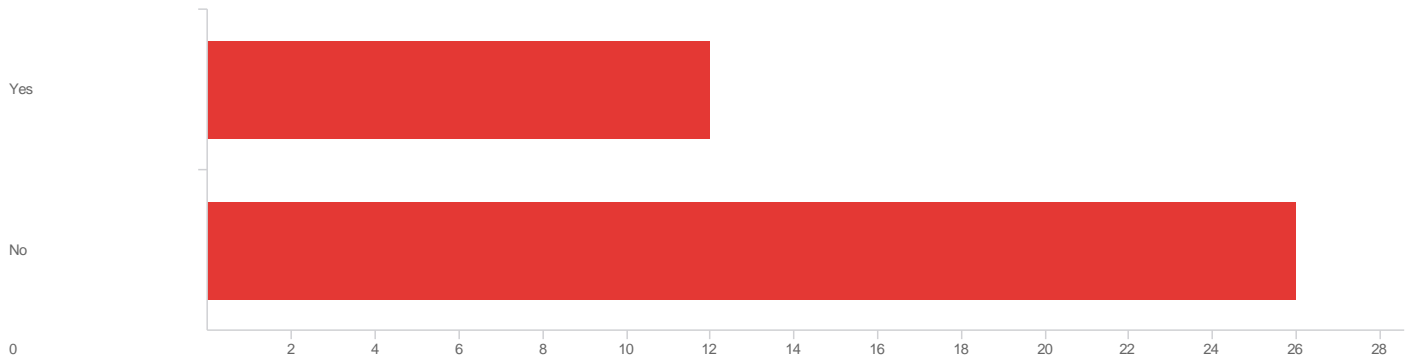
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Has your program developed materials for label mandated training?	1.00	2.00	1.74	0.44	0.19	38

#	Field	Choice Count
1	Yes	26.32% 10
2	No	73.68% 28

38

Showing rows 1 - 3 of 3

Q7 - Have you provided label mandated training as part of your program?



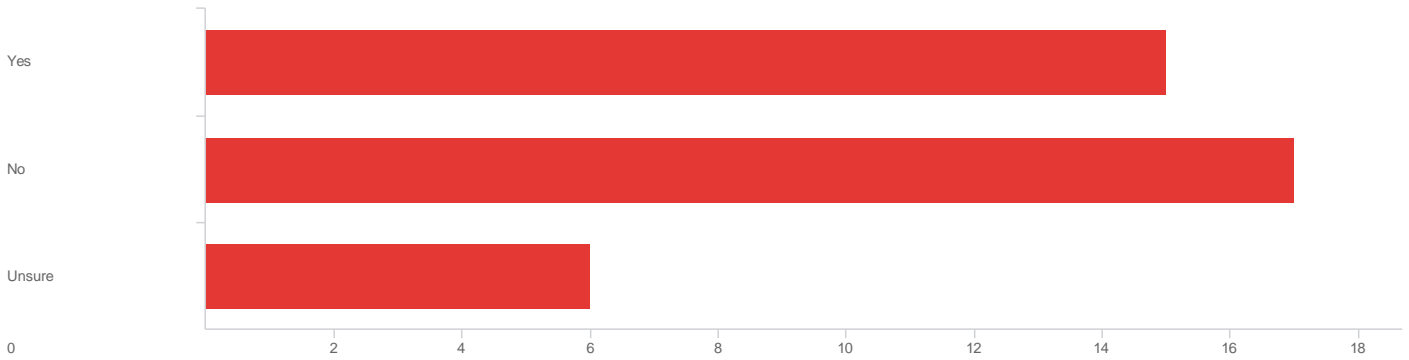
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Have you provided label mandated training as part of your program?	1.00	2.00	1.68	0.46	0.22	38

#	Field	Choice	Count
1	Yes	31.58%	12
2	No	68.42%	26

38

Showing rows 1 - 3 of 3

Q8 - Does the completion of label mandated training currently count towards continuing education/recertification credit in your state or territory?



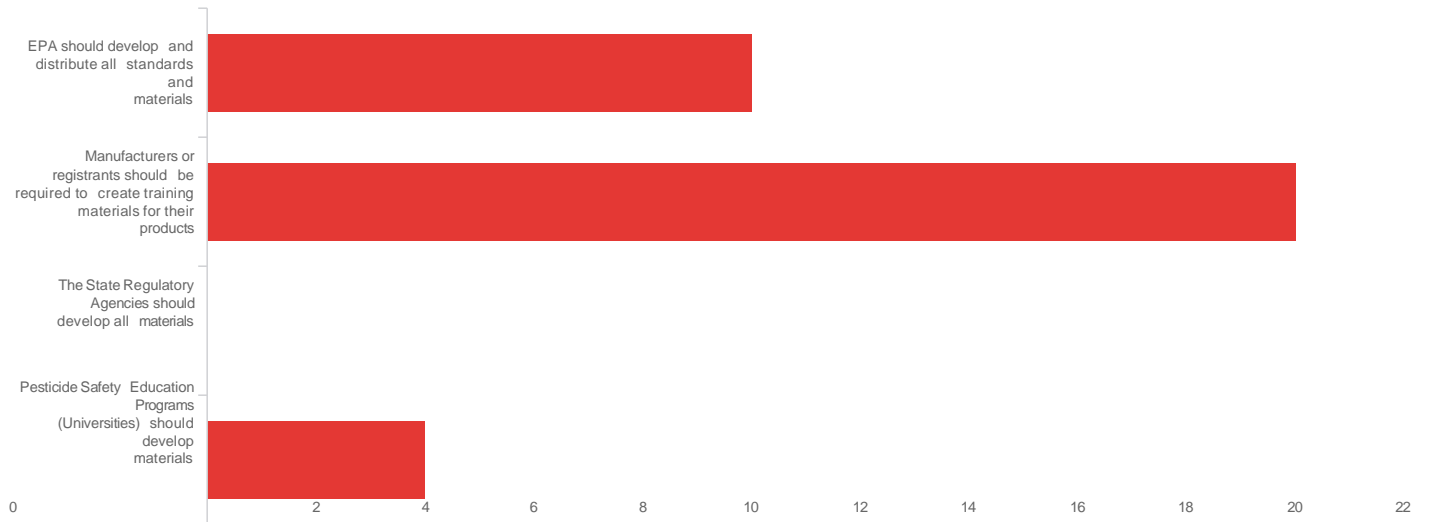
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Does the completion of label mandated training currently count towards continuing education/recertification credit in your state or territory?	1.00	3.00	1.76	0.70	0.50	38

#	Field	Choice	Count
1	Yes	39.47%	15
2	No	44.74%	17
3	Unsure	15.79%	6
			38

Showing rows 1 - 4 of 4

9 - Who should be responsible for developing training materials related to label

mandated training? (select the one you feel is MOST fitting)



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Who should be responsible for developing training materials related to label mandated training? (select the one you feel is MOST fitting)	1.00	4.00	1.94	0.87	0.76	34

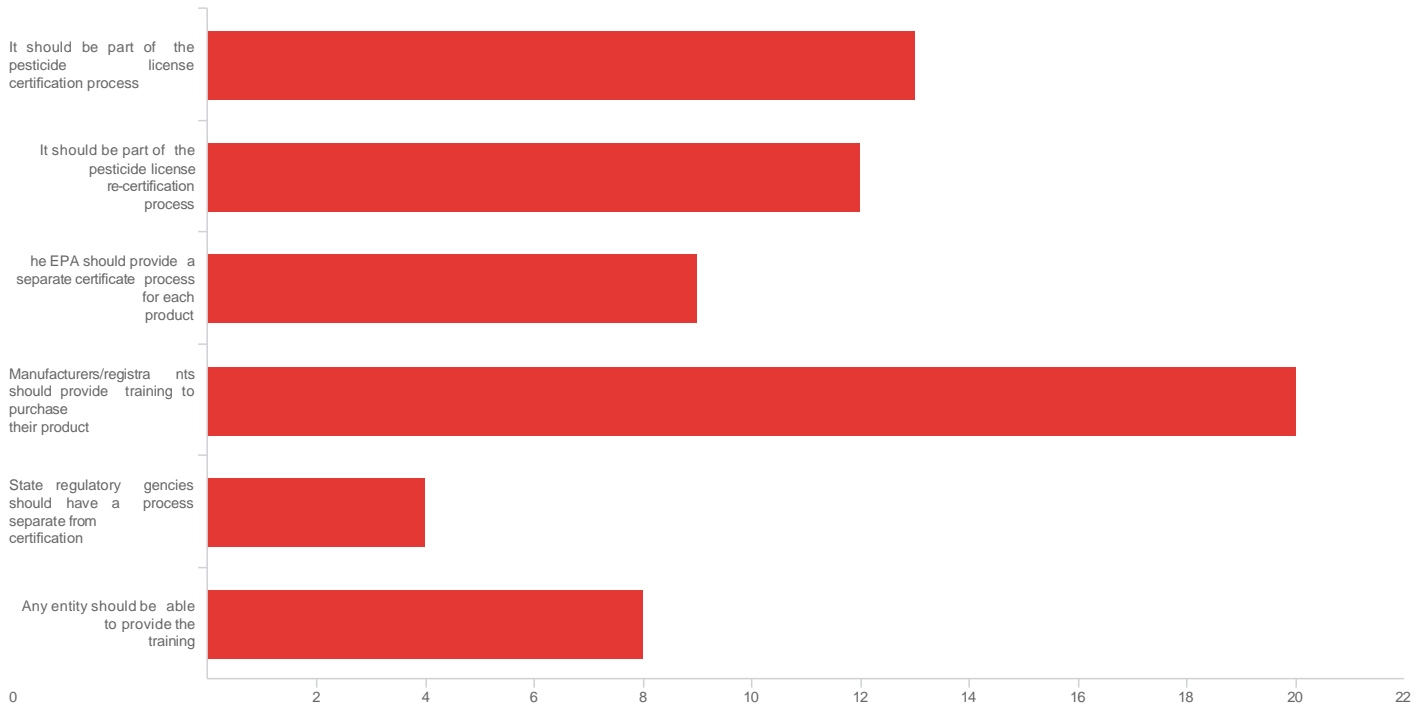
#	Field	Choice Count
1	EPA should develop and distribute all standards and materials	29.41% 10
2	Manufacturers or registrants should be required to create training materials for their products	58.82% 20
3	The State Regulatory Agencies should develop all materials	0.00% 0
4	Pesticide Safety Education Programs (Universities) should develop materials	11.76% 4

34

Showing rows 1 - 5 of 5

10 - What process should be used to provide label mandated training? (check all that

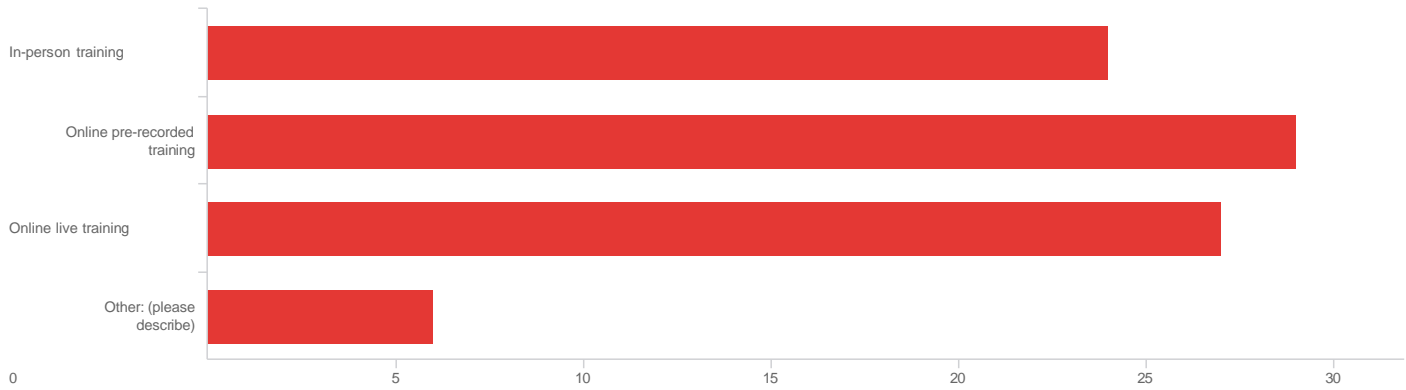
apply)



#	Field	Choice Count
1	It should be part of the pesticide license certification process	19.70% 13
2	It should be part of the pesticide license re-certification process	18.18% 12
3	The EPA should provide a separate certificate process for each product	13.64% 9
4	Manufacturers/registrants should provide training to purchase their product	30.30% 20
5	State regulatory agencies should have a process separate from certification	6.06% 4
6	Any entity should be able to provide the training	12.12% 8

11 - How should the training be structured/formatted if the EPA requires specific training

for additional products? Select all that should apply.



#	Field	Choice Count
1	In-person training	27.91% 24
2	Online pre-recorded training	33.72% 29
3	Online live training	31.40% 27
4	Other: (please describe)	6.98% 6

86

Showing rows 1 - 5 of 5

11_4_TEXT - Other: (please describe)

Other: (please describe)

state if they chose

I do not agree with product specific training. This is a bad road to go down. I think we would be better to focus on quality core training and all pesticide products should be used appropriately

All of the above should have a knowledge test to determine understanding of the products hazards.

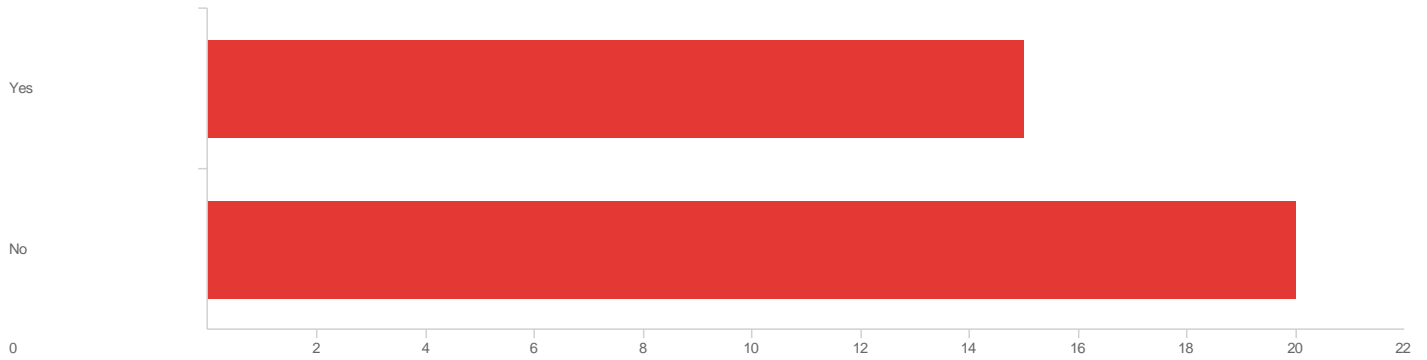
in-person or online

It is stupid idea to require label mandated training for products intended for private applicator use. If a product is so problematic that it requires specialized training it probably shoudn't be registered.

This depends on the student. All three would be needed.

12 - Have you received feedback from employers and/or pesticide applicators about label

mandated training?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Have you received feedback from employers and/or pesticide applicators about label mandated training?	1.00	2.00	1.57	0.49	0.24	35

#	Field	Choice Count
1	Yes	42.86% 15
2	No	57.14% 20
		35

Showing rows 1 - 3 of 3

13 - If "yes," what feedback have you received?

If "yes," what feedback have you received?

Many are confused on where to find it

The same training that is already covered in core training. It is difficult to maintain records of product specific training in addition to the certifications that applicators hold. This is cumbersome and does not really add value to training.

We receive requests for in-person training.

It was difficult for them to understand the technology for on-line instruction.

concerns that there would be an unreasonable number of products requiring label mandated training

They find it hard to find and dont know what they need

that it is too complicated to keep up with all the different renewals

Applicators often reach out because they cannot find where to complete the training, especially as dicamba training moved online.

That it is ridiculous, poorly conceived, and poorly delivered, primarily in regards to the training provided by registrants.

They want more resources

They confuse it with annual recertification and/or complain that they have to complete at least 2 separate trainings a year.

Consensus that is an extra time burden, and confusion about what training is needed and where to get it.

In general, they feel it is repetitive and not helpful. Especially the annual training for dicamba.

It was a bit of a moving train. Hard to create training on something that was changing by the month. We did it at first, but the information was so disjointed and evolving that we had to give it up. We point to industry training now. Training does not always mean people will do it and of course no body wants to do anything more for anything.

They don't know what is required of them and feel very little support in finding this information. They want everything to be found directly on the label and as part of the licensing process.

14 - If you have additional suggestions on how to improve label mandated training,

please include them in the space below.

If you have additional suggestions on how to improve label mandated training...

I think classes of products should have the same format - all dicamba products as an example. The EPA should review to ensure it meets the needs for risk reduction. Sellers should not be allowed to sell without proof of training successfully completed.

Label mandated training undermines what PSEPs already do. This is added requirements to applicators that really does not add much value to current core training. This is added, cumbersome training that adds another recordkeeping layer to applicators, PSEP, and SLA. I do not agree with label mandated training in general.

I am not a proponent of label mandated training. Label mandated training for specific products and their use creates many challenges and I'm not convinced the applicator retains enough information to make it worthwhile. What training does is stresses that the product poses special concerns, what they are, and one should pay close attention to the label for specifics. All applicators should be reading the product label and following instructions, regardless. The continued addition of products that require label mandated training will only make for a complicated system of education and record keeping. Not everyone uses or has sufficient bandwidth for online learning, so in-person training will be needed. This presents logistical challenges for everyone involved. If label mandated training continues then it should be created and provided by the manufacturer (registrant) that benefits from the sale of the product and not a financial burden to government or educational institutions. A central database of all label mandated training, for all products should be kept by one entity and shared to the respective states. My first thought would be EPA maintains or supports the central database with access by SLAs.

My concern with label mandated training is the quality. I have attended an industry sponosed training and it felt much more akin to a 'trade-show' than a focus on safety or how to use the product correctly/safely. I am not particularly well-versed in label mandated training but as I mentioned I was concerned after this one particular instance. I do think a regulatory agency should explicitly provide the training minimum contents or else we will likely continue to see product 'show and tell'

Although the process is simple and straight-forward, it does become complex by the manpower needed to deliver, distribute and record the process. We need to find a way to incorporate into pre-certification or recertification programming. Potentially, a supplement to Core or private applicator certification.

Applicators know that enforcement of LMT is unlikely. So why do it?

best to discuss issues of product and how to prevent any possible negative outcomes

I feel very strongly that the product registrants should be responsible for providing this training/training materials. It's an unfunded mandate if these responsibilities are pushed onto state regulatory and/or PSEP programs. I already do not have enough staff to provide the content I need to without adding in the responsibility of dicamba, paraquat, and whatever else

EPA has refused to hold the registrants to the same standards they required state PSEP Coordinators to follow for certification and recertification. Applicators, regulators, and PSEP coordinators are confused and frustrated by additional training requirements that do little to mitigate the hazards posed by certain active ingredients and formulations. Training doesn't solve the problem if the formulation and the label make it almost impossible to apply a particular product. EPA needs to get its head out of the sand and take care of these type products during registration. Label mandated training has not been the answer and will not be the answer. It is a horrible compromise that EPA has reached with certain registrants for certain products. Label mandated training should not be our new normal. The questions on this survey did a poor job of allowing us to address the real issues. We are going to be sorry if we think the only way to handle problematic pesticides is with more training. Some of these products should have never been registered and EPA knows it.

I find the concept of label mandated training to be frustrating. The label is the law and training simply tells people what is on the label. It is the applicators responsibility to read and follow the label and it is the EPA/SLA responsibility to investigate misuse. The emphasis shouldn't be on creating a mandated training, it should be on improved enforcement.

It is a slippery slope. IT would be nice to have 1 training for all, but so many variations. I was contacted by an amish applicator that did not know about the online training or the requirement for Paraquat. So, options need to reach beyond ONLINE!!!

If you have additional suggestions on how to improve label mandated trainin...

I'm not a fan of label mandated training. If we are going to go down this road then there needs to be more consistency, coordination, and funding to make the training impactful. Leaving it up to SLAs and PSEPs to provide the training or fill in the gaps is not a constructive solution. EPA should be leading the charge with help and buy-in from manufacturers/registrants.

I don't have much experience with this subject. We provided a checklist, on our custom pesticide application recordkeeping tool, for soil fumigation requirements

We developed training the first year this came up and offered it both in person and online. At the time, the information and labels were changing so it was difficult to assure our training was accurate. We figured the registrant had the most recent info so we referred it back to them.

It needs to be standardized and provided to all states for integration into their C&T programs.

End of Report