



DEH/VECTOR Action Items Jacumba Community Meeting

Response to Action Items

August 17, 2010

During the July 7, 2010 community meeting to discuss concerns by residents in Jacumba regarding eye gnats and current efforts by the County to study and control them, several suggestions and recommendations were offered by residents. The suggestions and recommendations will be reviewed by the UC Cooperative Extension (UCCE) and the County Departments of Environmental Health, Vector Control (DEH/Vector), and Agriculture Weights and Measures, as part of the ongoing San Diego County Eye Gnat Research Project. The results of the review will be posted on the DEH/VECTOR Jacumba Eye Gnat Project Webpage and will be shared with the community during future community meetings scheduled by the Office of Supervisor Dianne Jacob.

The following is a summary of Suggestions and Recommendations offered by residents and the County's plan to review them:

1. DEH/VECTOR/Vector and UCCE discuss increasing the number of traps in the community and discuss the effectiveness of the current traps in the community. In addition the adequacy of existing trap crops will be discussed.
 - DEH/Vector will arrange meeting between DEH/Vector and UCCE.
 - DEH/Vector and UCCE will meet with Bornt Farm on any changes or implementation of Plan.

Response:

Issue 1. Increasing the number of traps in the community.

There are a specific number of traps (12) placed on a geographic grid in the community since the 2008 research study. There are a few others strategically placed to monitor selected areas. The traps are there to monitor eye gnat populations within the community and determine if there are differences in the population over time following pest management practices implemented at the farm. It is important to maintain trapping consistency over time in order to accurately measure any change in the gnat population. If the number of traps were to increase at this time, the monitoring to determine the effect of mitigation methods would be compromised. The methods used to date have indicated that the population has been reduced significantly. The average trap count in 2008 in the community was 158.4 eye gnats/trap/day and the average trap

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count in the community in 2009 was 78.8. The preliminary data as of June 20, 2010 shows an average trap count for the community of 1.3 eye gnats.

Table 1. Average number of eye gnats/trap/day captured on a geographic grid in the community of Jacumba

Jacumba Eye Gnat Study	
Year	Average Number of Eye Gnats/Trap/Day
2008	158.4
2009	78.8
2010 (as of June 20, 2010)	1.3

Issue 2. The effectiveness of the current traps.

The farm has made changes to their trap design, and their traps are highly efficient as an adult eye gnat trap. However, as a monitoring tool, the traps used by UCCE are used to acquire a relative measure of the population of eye gnats within the community, and they are quite efficient as well. Regardless of the trap design, the UCCE traps are efficient enough to determine the effect that selected mitigation methods used by the farm have on the eye gnat populations. The UCCE trap design has been used by researchers in the Coachella Valley for 40 years. In addition, all traps are using the same mixture of bait.

Issue 3. The adequacy of existing trap crops.

The existing trap crops were started later than expected, and are not yet mature, which means that the trap crops are expected to improve and be more efficient over time. Trap crops need regular watering to ensure their growth. The data to date has indicated that when the trap crops were sprayed that the number of eye gnats in the community was significantly reduced. Therefore, as the trap crop improves, it is expected to have an even greater effect. The trap crops were started late and did not receive adequate irrigation, all of which will be addressed in the subsequent 2011 Eye Gnat Nuisance Prevention Plan.

The selection of alfalfa and corn was made following extensive discussions among numerous county agencies, the farm, and UC researchers. It is unclear whether this crop will be the most efficient until others can be tested. In effect, the type of plant is not as important as the hindrance that it causes to fly movement. The more plant material that the fly has to pass through; the more chances they have of contacting the pesticide that has been applied. Therefore, it doesn't matter whether the plants are alfalfa, corn, or a combination of weeds, as long as it causes a barrier between the farm and the community and that the fly is hindered in its movement.

The crop needs to be trimmed so that pesticide applications can be performed using the farm's conventional spray equipment. In addition, the crop needs to be shaped over

time so that the alfalfa can grow into a dense stand. Once cut, the alfalfa can be sprayed with selected herbicides to improve the stand. The corn row is not proving to be effective at this point and is likely to be replaced in the next year with more alfalfa. This will be discussed at the end of the growing cycle. It is a work in progress; however, the data indicates that there is potential for additional eye gnat reductions due to the present trap crop size and design.

Conflicting issues and concerns related to traps and trap crops will be addressed in the 2011 Eye Gnat Nuisance Prevention Plan.

2. Update the DEH/Vector webpage with a clearer message on filing complaints.
 - DEH/Vector will review webpage and request changes

Response:

This recommendation has been implemented.

3. Evaluate community's recommendation to spray Malathion, or comparable pesticide, over the community.
 - DEH/Vector will coordinate a meeting with UC Cooperative Extension and Agriculture, Weights and Measures
 - Conclusions of these discussions will be presented at the next community meeting

Response:

This recommendation will require further analysis as there are numerous issues associated with spraying a town with pesticide.

4. Include weather conditions in the data collected by UC Cooperative Extension on trap counts.
 - UC Cooperative Extension agreed to record weather conditions in future eye gnat reports

Response:

UCCE will include weather data in future reports.

5. Create a plot or block plan and post it on the website so residents understand the areas that are being inspected by DEH/Vector
 - DEH/Vector will meet with Bornt Farm to create a map plot or block plan
 - DEH/Vector will ensure the plan is posted on the website

Response:

This recommendation has been completed and there is now a map posted on the web site.

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6. Currently DEH/Vector conducts our inspections every week on Thursday and the residents requested that we alternate days of the week. In addition, more detail has been requested to be included in the inspection reports, such as use of water and fertilizer during fallow period.
- Starting the week of July 12th DEH/Vector will vary its inspection frequency so inspections will be unannounced. Inspections during the week of July 19th will include more detailed information on the Farm's activities during the fallow period and any other observations.

Response:

This recommendation has been implemented. Inspections are now more random and more detail on fallow period activity will be included in future reports.

7. There is a dispute over the meaning of the following provision in the Plan:
Eye gnat populations peak during the warmest times of the year, which leads to greater populations toward the end of the year and in the following year. Therefore, a fallow growing period for the entire growing area during the months of July and August will be instituted. Crops can be rotated out of production and back into production so that there is a fallow period on the entire growing grounds; however, enough time will be allowed so that the rotation can occur over time and not all at once.
- The dispute is no longer relevant since Mr. Bornt agreed during the meeting to have no crops growing and no watering of crops from July 13th to September 13th. The trap crops still need to be watered.
 - For use in future Eye Gnat Nuisance Prevention Plans DEH/Vector will seek assistance from County Counsel to provide language that is clear to all parties.

Response:

Issue 1. Timing of Fallow Period

Mr. Bornt met with DEH/Vector Control and UCCE and he advised that he could not leave his farm totally fallow until September 13th but he will comply with the written plan by keeping each plot/block fallow for two month rotating periods. The original suggestion of a fallow period was made by the farm managers and welcomed by the UCCE researchers. However, the crop must be rotated in and out of production. It is not possible to shut the entire production area down on a single day and start up again on a single day. Therefore, it is understood by UCCE that every acre of production would be out of production for two months, (but not all at the same time) and it was suggested that the warmest part of the year would be best because the eye gnats would go through multiple generations in the warmest part of the year.

Research conducted by UCCE determined that peak eye gnat production occurs around mid-August (See 2008 eye gnat report). In addition, in order to finish production in a timely manner by approximately Thanksgiving time, ground preparation would need to

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begin well in advance of the second part of the season for the farm. It is clear that every acre of the farm will be out of production for two months during the warmest part of the year, on a rotating basis (see attached map). This is a significant concession by the farm and welcomed by UCCE research staff. This should produce a notable impact on the eye gnat population, though the cumulative impact has not yet been determined.

Issue 2. Need clarification on the stockpiling and mixing of fertilizer, use of water and planting of seeds during the fallow period.

The stock piling of fertilizer and mixing of fertilizer into the soil will not have any effect on the eye gnat population dynamics since the fertilizer used by the farm is not attractive to the eye gnat as a food source or a site for egg laying.

The attached plot plan describes the different plots of land, their fallow period and the week the farmer intends to plant.

Issues, concerns and unclear language related to the fallow period, fertilizer use, and watering will be addressed in the 2011 Eye Gnat Nuisance Prevention Plan.

For questions regarding this Action Plan, please contact the Department of Environmental Health at (858) 694-2629 or vector@sdcounty.ca.gov.