

SEEDS student wins first place at weed conference

Rolando Mejorado (photo right), an undergraduate student in the UC Davis Plant Sciences [SEEDS](#) program, took home the first place prize of \$500 for his poster at this year's California Weed Sciences Society (CWSS) Conference, which met Jan. 23 to 25 in Sacramento.

A senior majoring in chemistry, Mejorado first teamed up with plant scientists as an intern under Associate Cooperative Extension Specialist Brad Hanson, who, at the time, worked at the US Department of Agriculture. In following Hanson to UC Davis,

Mejorado began working with doctoral candidate Marcelo Moretti, who, under the advisement of Hanson, is now Mejorado's mentor in the SEEDS program. This makes Mejorado one of the few chemistry people at Plant Sciences.



In his poster, Mejorado ties the two fields together. He describes how glufosinate, the active ingredient in an herbicide, migrates through young almond trees. Using radio-carbon monitoring, Mejorado and his research team tracked the glufosinate as it traveled from the leaves and bark into tissues further away, with most wending its way into the tree roots. With this information, the researchers will next take a sample of the tissue and use high-precision chromatography to establish what type of molecule they are dealing with and whether or not it is toxic to the tree.

"That's where Rolando's chemical background will come into play," Moretti said.

The results will give a better understanding of the possible injuries related to glufosinate in woody California crops and lead safer practices for the trees, while increasing the longevity of the orchards. Mejorado will be presenting the results at a national weed conference in March and at a chemical conference in September.

Mejorado's clear description and visualization of this process in his poster is what allowed him to win first place out of 15 posters at the CWSS meeting.

"He basically digested the material in a way that anybody can understand, because not everybody's familiar with this," Moretti said. "Not many undergraduates have research experience or in presenting a poster."

CWSS hosts one of the nation's oldest conferences to bring scientists and farmers together to discuss weed research. Attendance this year reached more than 500.

With this achievement, Mejorado plans to apply to the UC Davis Agricultural and Environmental Chemistry graduate group.

"I'm trying to tie in my chemistry background with an agriculture aspect," he said, adding: "This contest opens a lot of doors."

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