

## **TobeeView, a new agricultural software that let's you see the world through an animal's perspective**

**LOCATION:** Almería

**DURATION:** 1'41"

**SUMMARY:** Investigators of the Arid Zones Experimental Station (EEZA) have created TobeeView, a software that presents reality as distinct species perceive it. All it requires is an introduction of an image and its concrete vision parameters in order to observe the world through their perspective and have the ability to study their conduct. This program can serve, for example, seed houses in the improvement of their varieties and creation of photos with the colors that are most striking for bumblebees, thus increasing pollination.

### **VTR:**

How do animals see the world? TobeeView, the computer program, developed by investigators at the Experimental Station of the Arid Zones in Almería, offers a reality of how distinct species perceive their surroundings. Forthat...

**MIGUEL Á. RODRÍGUEZ-GIRONÉS**  
Scientist of EEZA

*"We provide an image, we give a series of parameters corresponding to the visual acuity of the observer and, from there, the program extracts the information of the photos that are being processed and it produces a new image with the information of the animal that is watching the scene."*

The resulting image, a mosaic of hexagonal tiles, is the amount of information the animal receives, but there is no reason to suppose that they perceive the world as such.

The first step is to acknowledge the different visual parameters of each species being investigated. It has already been done with birds, wasps and spiders; and now the study is focusing on the vision of the bumblebees.

**ANA ROLDÁN**  
Biologist

*"What we have studied here, precisely, is how they are able to discern between colors depending on the payoff they receive, in this case it's nectar."*

The software, free and accessible on the Internet, allows experts to better understand animal conduct.

**MIGUEL Á. RODRÍGUEZ-GIRONÉS**  
Scientist of EEZA

*"In order to understand how species interact with each other, we first have to know what they see."*

This new information can also be applied from a commercial point of view.

**ANA ROLDÁN**  
Biologist

*"Once we are aware of the type of colors that are most attractive to the pollinator, this software can be used by seed houses to make an improvement of the varieties they already have, and thus making their flowers more attractive to this kind of pollinizer."*

Knowing precisely the vision of animals will help improve our interpretation of the world around us.