Study Shows Promise for Using Olive Pomace to Improve Asphalt Pavement Performance

To reduce the potential environmental impacts of waste generated by olive oil processing on soils and groundwater the OOCC is looking at ways to help the California olive oil industry utilize olive pomace from its processing facilities.

As part of its 2020/21 Research Program, the OOCC funded a project that is exploring the use of olive pomace as a natural modifier to improve the performance of asphalt pavements. This project is led by Kun Zhang, Ph.D., P.E., Assistant Professor, Department of Civil Engineering, California State University, Chico.

A progress report from this first of year of the study found the addition of processed olive pomace to asphalt as a binder could improve the asphalt’s resistance to oxidation-induced cracking and fatigue cracking and therefore extend the life of asphalt pavements when compared to the control mix. Results indicated that adding a 15% mixture of dried and processed olive pomace to asphalt had the best results.

The use of pomace-modified asphalt binder also allows incorporating recycled asphalt materials, which promotes sustainability for both agriculture and road industries.

Future work on this project will focus on the chemical composition in the processed olive pomace and identify active ingredients that could further extend the life of asphalt pavements.

Study authors are now seeking funds for additional research through the 2021 Agriculture and Food Research Initiative. The OOCC has submitted a letter of support for this project to encourage valuable and practical uses for byproducts from olive oil processing.