

SOYBEAN OIL, NO LONGER JUST FOR COOKING

Brandon Weeks, Dr. Paul Worsey, Kurt Kosman, Daryl Andershock,
Rock Mechanics and Explosives Research Center
University of Missouri-Rolla, Rolla, MO 65409-0660

ABSTRACT

Several derivatives of soybean oil are currently manufactured and sold on the open market. Of these, the use of methylsoyate as a direct fuel substitute in diesel engines has been thoroughly researched and practically applied. The use of this product as a fuel gave rise to the idea of using a similar substitution in ANFO blasting agent. The first year of a three-year research program has been sponsored by the Missouri Soybean Merchandising Council. The project is funded for the purpose of opening up of new markets for Missouri soybean products.

Successful preliminary testing has been completed using raw soy oil, methylsoyate, and fully refined salad oil at UMR with detonation velocities and energies similar to ANFO. Work is currently being concentrated on the less processed oils to minimize production costs.

As oil prices rise and resources are depleted, soybean products should become competitive with fuel oil. It is hoped that the technology is ready for commercial production in advance of this scenario. Some advantages of soybean oils include: we don't have to rely on foreign sources, it's a renewable resource, and environmentally sound.