Dr. Wetzel & NIR
Pioneering Applications

As the Kansas Wheat growing and exporting industry expanded rapidly during and after WW-II, there was a great need for rapid measures of wheat quality on the farm and in transit as well as in the mills. Dr. David Wetzel, an analytical chemist and professor in the Department of Grain Science and Industry at Kansas State University was one of the pioneers in developing and applying the newly emerging technique of Near Infrared Reflectance (NIR) spectroscopic analysis to measuring wheat moisture and protein contents.

About 1976, Dr. Wetzel conducted a demonstration by setting-up a portable laboratory in a wheat field where farmers could bring samples to him directly from their fields and receive an almost immediate analysis, enabling them to make decisions about harvesting, binning, or shipping the grain. At the same time, selected samples were sent back to the wet-chemistry laboratory for confirmation analysis by the classical methods and the results used to refine the algorithms in the NIR equipment, improving their accuracy.

This video was originally made on analog VHS tape in about 1976, recently converted to DVD-video, and then to MPG format for easier distribution and viewing. Although the technical quality does not meet current day expectations, it serves as a historical reminder of the great contributions that Dr. Wetzel and this department have made to Kansas and the world-wide cereal grain producing and utilizing industries.