

Dedication



Dr. Nakayama retired in January 2003 after working as an ARS Research Chemist for 40 years, including five years as a Research Leader. He now serves as a Laboratory Collaborator.

His interests in broad areas of scientific endeavor benefited agriculture in many ways. He contributed theoretical concepts and simplified laboratory procedures for determining the ability to treat various soils to seal canals and ponds. Ranchers have used these procedures for reducing seepage in stock ponds.

He developed guidelines on irrigation water treatment for the prevention of clogging of drip irrigation systems, which also includes the evaluation of irrigation water for its suitability in drip systems. Chemical water treatments based on these findings are now accepted and used as routine procedure by drip irrigation operators. Users' manuals for farm operators and designers now include water treatment recommendations for setting up and maintaining drip/trickle irrigation systems.

He was a major contributor to a team that worked toward the commercialization of various lines of guayule, a North American Desert plant of major interest to the United States as a source of latex rubber that did not depend on foreign imports.

He was a major participant of another team that developed information for the agronomic and water management of guayule that includes planting, maintenance, and harvesting of the crop. Adequate information is now available for the commercial production of guayule in the southwestern United States. The drought tolerant guayule can be handled as a temperate zone plant similar to cotton, but management has the flexibility of delaying or skipping an irrigation without killing the plant.

He developed the idea of using a byproduct of the latex extraction, guayule resin, for controlling termites and fungal wood rot to both solve the problem of wood damage, and to solve the waste problem of guayule by-products, when latex production is fully commercialized, by incorporating the byproducts onto wood composite materials. This resulted in the granting of a patent on which he is the senior named patent holder. This promises to produce tremendous savings to the consumer and conserve the country's wood resources, which otherwise would be required for the replacement of termite- and fungi-damaged wood.

Over this period, he was senior author or coauthor of 129 journal articles and technical publications, and senior-author of five book chapters, coauthor of four other book chapters, wrote five book reviews, and edited one book as a senior editor, as well as producing numerous editorials, abstracts, research reports, and popular articles. He was instrumental in contributing to the establishment of an international journal, *Industrial Crops and Products*, and has been the original Editor-in-Chief since 1991, following editorships of the *El Guayulero Newsletter* and the *Association for the Advancement of Industrial Crops Journal*.