**Dairy Equipment Lubrication** Lake To Lake Dairy Cooperative, Manitowoc, Wisconsin, operates four plants in Wisconsin for processing milk, butter and cheese products from its 1,300 member farms. The large co-op was able to realize substantial savings by using NASA information for improved efficiency in plant maintenance.

Under contract to Marshall Space Flight Center, Midwest Research Institute compiled a handbook consolidating information about commercially available lubricants. The handbook details chemical and physical properties, applications, specifications, test procedures and test data for liquid and solid lubricants.

Lake To Lake’s plant engineer used the handbook to effect savings in maintenance labor and materials costs by reducing the number of lubricants used on certain equipment. Strict U.S. Department of Agriculture and Food and Drug Administration regulations preclude lubrication changes in production equipment, but the co-op’s maintenance chief was able to eliminate seven types of lubricants for ancillary equipment, such as compressors and high pressure pumps. Handbook data enabled him to select comparable but less expensive lubricants in the materials consolidation process, and simplified lubrication schedules and procedures. The handbook is in continuing use as a reference source when a new item of equipment is purchased.
The photo selection shows representative member farms and some of the ancillary and production equipment employed at the four plants, which are located in Manitowoc, Sheboygan, Kiel and Denmark, Wisconsin.