

Thermometers and Hygrometers for Sericulture

The success of a silkworm farmer depends on how well they can control the ventilation, temperature, and humidity of the silkworm nursery. Nakamura Zen'emon (1806–1880) designed one of the first thermometers to be used for domestic sericulture by copying thermometers brought to Japan by German doctor and botanist Philipp Franz von Siebold (1796–1866). Zen'emon went on to record in detail the most suitable temperatures for successful silkworm rearing and published them in a book in 1849.

Shimizu Kinzaemon (1823–1888), invented the sericulture-specific hygrometer in 1873. A hygrometer is an instrument used to measure the amount of humidity in the air. In 1874, Kinzaemon published his research in a book explaining the importance of accurate humidity and temperature control. The book was later translated into French.

By the 1880s, both instruments were standard across the industry.