Concern about global warming has led to renewed interest in the more sustainable use of natural fibres. Among the natural fibres, silk indeed commands considerable respect. Silk is a proteinaceous polymer secretion in the form of a cocoon, consisting of a continuous filament. Although it has been in use for centuries worldwide, *Bombyx mori* silk is one of the least researched fibre in Kenya. It has many unique physical advantages and properties which make it the highest priced natural fibre. This book therefore, evaluates properties of silk fibre, fabric and cocoons produced by the *B. mori* silkworm, through the rearing of six selected silkworm strains. The properties tested include filament length; raw silk winding breaks; cleanliness, neatness and elongation; silk fabric count; mass; tear resistance; breaking load; cocoon, pupa and shell weights; cocoon thickness and size. The book identifies the most suitable strain for rearing in Kenya based on various aspects of silkworm larval development; larval duration, weight, and mortality. The book further gives a model identifying factors related to quality silk fibre and fabric production.