# R-package *MultiSelection*: Optimizing Multi-stage Selection Gain and Controling the Variance

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We developed an R-package for maximizing the gain of a multi-stage selection procedure under certain restrictions, e.g. a given annual budget or certain risk limits of each stage. This package is mainly applied in fields of plants/animals breeding, where a multi-normal heredity regression model is commonly built. By implementing the R-package *mvtnorm*, which calculates the multi-variate normal distribution, the number of independent variables is increased from three upto one thousand. This makes it possible that hudge amount of the Marker and QTL information can be used.

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