Taken from *Sampling Methods for Multiresource Forest Inventory* by Shreuder, Gregoire, and Wood.

Systematic sampling presumes that the population can be arrayed in some order, which may be natural (e.g., a time sequence implicit in the population such as days in the use of a campground during the summer) or artificial (such as numbered quadrants on a map). In the first case the value y_i of the ith population is likely to be correlated with its position in the ordered frame (weekend versus weekday use) but not in the latter. The ordering may be considered haphazard in the latter case but needs to be carefully considered in the former.

Systematic sampling is not generally endorsed by theoretical statisticians, but practitioners and applied statisticians have continued using it because it is a convenient way of collecting information and avoids the problem of poorly distributed sample units, which can occur in random sampling. Assurance from theoreticians that a random sample is still a representative sample does not allay the fears of practitioners, who intuitively feel that a well-spaced sample, guaranteed with a systematic sample, ought to be more informative than a less-well-distributed random sample.

There is no assurance that a systematically chosen sample will be well distributed over the population of interest, but practical experience suggests that in many cases a good distribution will be obtained. Systematic sampling does well relative to SRS if there is a linear trend in the ordered population. When the ordering is purely haphazard, the systematic sampling estimator is as precise as SRS. Generally, no penalty is incurred by choosing systematic sampling for practical convenience.