One of the main guidelines of the global environmental agenda is lowering the ecological footprint for food production. Part of this challenge is associated with vast areas of degraded pasture. In Brazil, 70% of the total pasture area used by livestock is diagnosed as degraded, representing 118.3 million hectares. To reverse this scenario, a transition process for a sustainable agro-ecological productions system needs to be researched, such as Silvopastoral Systems (SPS). The area for this case study is in a tropical landscape, in a mountainous Brazilian region and, therefore, with low potential for mechanization, fact that decreases the area’s competitiveness in agribusiness, reflected by a long period of social, environmental and economic decline, especially after the 1950’s. This paper aims to evaluate SPS as a strategic tool for the recovery of degraded lands in this landscape, in three dimensions of sustainability: social, environmental and economic. With real data from six grass-fed cattle farms, being: two of degraded monoculture pasture (DMS), two of productive monoculture pasture (PMP) and two of productive silvopastoral system (PSPS); a set of approximately one hundred agroecosystems sustainability research items were developed and used to evaluate principles and goals that guide the transition from conventional production systems to sustainable systems. The results presented a gradual sustainability evolution between the production systems in social, environmental and economic aspects, for the final score consolidating all indicators points, each one production system has obtained the following points: DMS (0.46), PMP (0.64) and PSPS (0.72), with 0.7 being the breakeven score for sustainability and 1.0 the maximum. In this way, this research presents the high potential of SPS as a strategic tool for recovering degraded lands in grass-fed cattle farms. The use of diagnostic tools methodology has proven to be efficient and should be encouraged to facilitate the process of sustainable transition in the livestock production chain; it can be applied in different types of landscapes, if necessary, allows adjustments to suit particularities, as well, it has low cost, is easy to implement and covers a range of production profiles from subsistence agriculture to large production areas.