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Natural processes useful tool in post mining site restoration.

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This contribution explore role of natural processes in restoration of post mining sites, particularly as concern forest sites restoration. Extensive metaanalysis of succession chronosequences, reveal that rate of woody vegetation cover recovery in post mining sites is quite fast in fact faster that that recovery of woody vegetation in abandoned filed. However results from Czechia and Eastern USA show that site compaction associated with levelling and other site improvements substantially reduce spontaneous establishment of woody vegetation. When ungraded rough and loose substrate is available, the biomass of sites reclaimed by planting is usually but not always higher 5-10 years after planting. In older plots this difference decrease and succession sites may even show high biomass and faster woody production than reclaimed ones. Caron storage is lover that the most successful reclamation but is comparable to reclaimed sites planted by trees with similar CN ratio of the foliage. Spontaneous site may represent very suitable nursing sites for late succession woody species. Also recovery of otter ecosystem function such as water retention is similar. Several wind dispersal species dominate in site colonization, which vary in their colonization strategy which generate variation in site development depending of distance form source of diaspores. These research indicate that natural processes of passive restoration may be useful strategy to restore forest in post mining sites.