

## THE PATTERN OF EROSION UNDER CANOPIES OF TWO SPECIES OF MAPLE (*ACER INSIGNE*) AND SILVER PINE (*CUPRESSUS ARIZONICA*), IN THE FOREST OF POL-E-SEFID IN MAZANDARAN PROVINCE

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**Introduction:** Splash erosion is recognized as the first stage in a soil erosion process that results from the soil surface bombing by rain drops (Qinjuan *et al.*, 2008). Leaf with raindrops avoid direct confrontation of structural changes in the soil and prevent erosion risk to reach a minimum (Sokouti and Oskoe, 1378). Deciduous trees due to greater LAI, attract more rain and the dense canopy of the rain beginning to absorb all the rain and then more time than other species (species of conifers) water they pass through (Afrandsorkhny, 1389). Geostatistical methods to consider the position and arrangement of the data as well as their spatial correlations are generally high accuracy (Salsky, 1992). Popular models such as kriging in the field (Ghahroudi Talley, 1381). Although linear kriging estimates the weight of such data sets in place of  $u$  (grade-point simulation) yields the highest accuracy (Gyvn, 2005). In the subsequent study of ordinary kriging interpolation method was used Arc GIS software.

**Materials and Methods :** Talar watershed study area is in the southern part of the Mazandaran province in Pol-e-sefid. Average Rainfall Region 604mm, which is mostly in the form of rain and snow in winter and rain is fallen. To determine the pattern of erosion under canopies of *Acer insigne* and *Cupressus arizonica* has been used. Cover the bottom with a thickness of 10 cm by 4 mm sieve, passing clay that had been buried embankment layer thickness of 10 cm and with zero slope beneath the trees were produced. To determine the effect of rainfall on soil loss of 483 pieces of metal nailed to a length of 15 cm was used. Nails with equal intervals and specify a location on savings held under shady trees in the underlying clay settled as 5 cm and 10 cm below the soil surface under the new soil. After precipitation, the rate of dislocation nails accurately measured by a ruler. After arranging data measured normal to the Minitab statistical software and descriptive statistics of soil loss under each tree were extracted. In order to map the pattern of soil erosion under tree Arc GIS software and ordinary kriging interpolation was used.

**Results and Discussion:** After 13 hours rainfall protrusion of soil nails measured for the two species. With a addition of the kinetic energy of the rain to stop, but to gather raindrops and transfer it leaves less and consequently collect a large volume of water reaching the speed drops to the speed limit and waste ground parts clinging to the trunk (due to the water flow on the branches and trunk) and the distal part of the crown (due to greater heights and slopes leaves) is. However, due to the uniformity of needle-leaved tree leaves and the amount of waste under any broad-leaved species is less. In the study area, despite a plan to prevent overgrazing and indiscriminate logging and Hmyntvrjlvgyry of many hard runs, But I still see the remains of water erosion in the region. Which is the reason there is forests of trees a single tree are. Afrand sorkhi *et al.*, (1389) in their research have concluded that species of conifers than deciduous species have higher LAI and one species of conifers native to forests in areas threatened, the most utilized. However, the role of vegetation in controlling erosion phenomenon is also inalienable.



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