Seven-year vegetation and soil dynamics after burning in dry dipterocarp forest at Sakaerat, Nakhonratchasima province.

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ABSTRACT

The study was aimed at to know the changes of vegetation and soil after burning gore seven years in Dry Dipterocarp Forest at Sakaerat in Nakhon Ratchasima Province. Numbers and densities of vegetation species and soil properties were investigated in the plots of five-times burning, two-times burning and control.

The results revealed that in five-times burning plot, the numbers of species of trees and saplings were increased and the densities of saplings and shrubs were increased but the numbers of species of herbs, vines and grasses were decreased. The number of shrub species was not changed. For two-times burning plot, the numbers of species of tree and sapling were increased, and the densities of trees, saplings and shrubs were also increased. The numbers of herb species was decreased and the densities of seedlings and grasses were also decreased. The numbers of species of seedlings, vines, grasses were not changed. For the control plot, the number and the density of sapling species were increased but the densities of seedlings, shrubs, herbs, and grasses were decreased. The species number and the density of tree were not changed, and the number of species of seedling, herbs, and vines were not changed.

The results of soil analysis were appeared that for five-time burning plot, the amounts of sodium and sulphur were increased, the amounts of silt, organic matter and calcium were decreased. Soil bulk density, soil particle density, potassium, magnesium, phosphorus and cation exchange capacity of soil were not changed. For two-times burning plot, soil moisture content, organic matter, cation exchange capacity, sodium and sulphur of soil were increased. The amounts of silt and phosphorus were decreased. The amounts of clay, pH, potassium, calcium and magnisium were not changed. For the control plot, soil moisture content, cation exchange capacity,

organic matter, Calcium, magnesium, sodium, and sulphur were decreased. The amounts of silt and clay were decreased. Soil bulk density, soil particle density, soil porosity, sand, soil pH, phosphorus and potassium were not changed.

The result was shown that periodic prescribed burning should be done in the dry dipterocarp forest for maintaining the forest type.