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Abstract: The present experiment entitled —Tree resource in selected non forest areas in and around Birsa Agricultural University, Ranchi was conducted during the year 2008. The experiment was carried out at three different sites in and around Birsa Agricultural University, Ranchi. They are 1. Tree resource in Birsa Agricultural University main campus. (500 X 500m= 25 ha.), 2. Road side strip plantation in Kanke – Pithauria Road from BAU (10 km X 25m = 25 ha.), and 3. Tree resource in home stead / farms / vacant lands in Dumartola village of Kanke Block covering an area of 25 ha. (500 ha. X 500 ha.). The objectives of the study are 1. To identify and enumerate different tree species, 2. To estimate the percent of tree crown in the total area, and 3. To quantify the wood and find other NWFP available from such tree resource. The parameters studied include viz. Different tree species present in the site, Crown shapes of different species, Measurement of crown spread, Measurement of diameter, , Measurement of height, Major NWFP available, etc. are recorded on the field whereas other parameters like Number of trees present in each species, No. of trees present in different diameter classes of each species, Total crown area, Percent of crown area with respect to total geographical area studied, Total basal area , Total volume of tree are computed. and classification of species available in study area on the basis of their utilization are compiled. The total numbers of species in the entire site are forty two (42). In site 1 and site 2, the numbers of tree species are thirty one (31) each whereas in site 3, seventeen (17) tree species are present. Among the three sites maximum no. of trees are present in site 2 (2530) followed by site 1 (1178) and site 3 (69). The maximum no. of trees at site-1, site- 2 and site-3 are *Tectona grandis* (253), *Acacia auriculiformis* (956) and *Bombax ceiba* (13) respectively. In all the sites together *Acacia auriculiformis* trees are present in maximum (956) followed by *Cassia siamea* (723) and *Eucalyptus sp*(272) At site 1, site 2, and site 3, the maximum crown area was recorded by *Cassia siamea* (3509.21sq.m), *Acacia auriculiformis* (16631.85sq.m) and *Ficus religiosa* (392.09sq.m), respectively. In all the sites together maximum crown area was recorded by *Acacia auriculiformis* (16631.85sq.m) followed by *Cassia siamea* (10236.20sq.m), and *Eucalyptus sp.* (6379.95sq.m). In site-1 the total crown area of all the species together is 20,512.93 sq.m which is 8.114 % of total geographical area whereas in site-2, it is 43,980.71 sq.m which is 17.67% of total geographical area and in site -3 it is only 1379.40 sq.m which is 0.543% of the total area. In site -1 and site-2 max no of trees are present in diameter class 1-20 cm (685 and 1109 trees respectively) and minimum are present in dia class > 60cm (11 and 163 respectively) . In site-3 max no of trees (29) are present in site-2 The height of the trees recorded in all the sites together ranged from 2m to 18m. Maximum basal area and volume in site – 1 was recorded by *Terminalia arjuna* (12.18 sq.m & 174.35 cu.m)) followed by *Cassia siamea* (8.26 sq.m & 104.86 cu.m) where as in site -2 max. basal area and volume was recorded by the species *Acacia auriculiformis* (105.52 sq.m & 1263.80 cu.m) followed by *Eucalyptus sp* (31.76 sq.m and 346.31 cu.m) In site -3 max basal area and volume was observed by *Bombax ceiba* (1.72sq.m & 23.11 cu.m) followed by *Mangifera indica* (1.48 sq.m & 20.04 cu.m). The total basal area and volume in site-1 are 58.34 sq.m & 780.88 cu.m , in site -2 they are 274.94 sq.m & 2916.09 cu.m and in site-3 they are 6.27 sq.m and 77.09 cu.m respectively Taking all the sites together, the total 3777 trees with a total crown area of 65873.04 sq.m occupy 8.783 % of total geographical area of 75 ha.. It tantamount to be a plantation with 100% crown density in 6.58 ha. Further, the total basal area and volume in all the three sites together is 339.56 sq.m and 3774.06 cu.m respectively. All the species available in the sites are classified on the basis of their utilization. viz Timber, small timber , fuel wood , fodder. Oil seeds and miscellaneous products and the species yielding these products are listed. The study represents the potential of tree resource in non forest areas to supplement the role of natural forests in providing the productive and protective functions for general well being of the people.

Description: TREE RESOURCE IN SELECTED NON FOREST AREAS IN AND AROUND BIRSA AGRICULTURAL UNIVERSITY, RANCHI

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