

**A GEOGRAPHICAL ANALYSIS OF IRRIGATED
AGRICULTURE IN BAGO DISTRICT**

PhD DISSERTATION

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ABSTRACT

Bago District is located in the Southeastern part of Bago Region, (southern part of the Central Basin of Myanmar). Topographically, except northeastern and northwestern parts of the district remaining areas are low flat and covered with meadow soil and meadow alluvial soil which is most suitable for cultivation. Main drainage as Sittaung and Bago River system flowing in the middle portion of study area. Bago District generally experience tropical monsoon climate. Irrigation is essentially the artificial application of water to the cultivation in the summer period. The main objective of this research is to geographically investigated the irrigated agriculture and its associated problems within Bago District. Types and distribution of irrigation sources are exhibited with related information and figures. The cropping intensity is used and applied by Myanmar Agriculture Department. Crop ranking and crop combination method is calculated and studied by John.C.Weaver's method (1954), because the Weaver's technique is mathematically sound. The spatial distribution of cropping pattern indentified by Crop concentration index and Crop diversification are calculated and analyzed by Bhatia's method (1965). A technique for determining an index of productivity coefficient is discussed by Enyedi's technique (1964). An analysis on cropping intensity and irrigation intensity are used by regression method. The relating variables with irrigated agriculture are collected and calculated with Factor analysis method. Moreover, an analyze with Multivariate or Multiple regression method .The spatial and temporal variations of sown areas and crop yield are depicted by GIS spatial analysis. In this research, the irrigated areas steadily increased and the main three types of irrigation system also increased proportionally, it indicated that the more development of irrigated agriculture. The Bago District comprise 8 townships, among them Bago, Thanatpin, Waw, Nyaunglebin and Daik-U Townships, the increasing of cropping intensity depend on irrigation intensity and more developed multiple cropping pattern. The role of irrigated agriculture is largely involved and supported in the development of District's economy.

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