

RUNOFF CHARACTERISTICS AND ESTIMATION OF NUTRIENTS FROM A DAIRYING AND AN ORCHARD WATERSHED AND ITS EFFECT ON THE WATER QUALITY OF THE RESERVOIR

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ABSTRACT

Recently, the formation of water blooms dominated by *Microcystis* (blue-green algae) has been occurred frequent into the Terauchi Reservoir with watershed of 51.0 km². As this cause, the runoff from the dairying and the orchard at the watershed which account for 3.3 % of the whole watershed is thought. Then, the loading and water quality of the nutrients to the reservoir from this watershed have been investigated, and the effects on the formation of the water bloom have been examined. From these results, the loading of the nutrients from this watershed was 20 %. In addition, the water quality of this watershed was also different from other watersheds. For instance, though the N/P ratio of this watershed were about 10 or less that of other watersheds were 30-60. Namely, the river water quality of this watershed is N limit and other watersheds are P limit, especially, the tendency was admitted at the case of the runoff stormy events. Therefore, the control of the dairying and the orchard drain is an important problem which conserved the eutrophication of this reservoir.

Key wards; water blooms, runoff nutrients, dairying and orchard, N/P ratio, reservoir