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THE APPLICATION OF MODULES IN IRRIGATION

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In Punjab Irrigation System, the outlet discharge is generally influenced by the water levels in distributary and the water course. The heads of the distributary are generally manually control led under the supervision of the irrigation engineer and the effort is to maintain a constant supply level in the offtakes fed through manually controlled regulator gates. The discharge of the offtake is calculated by using a discharge table or a curve. Considering the average regulating condition of Punjab Canals, the reported discharges of channels are generally incorrect and doubtful because of the errors in discharge measurements and changing bed levels due to silt movement.

The irrigation engineers are divided mainly in two schools of thought in regard to application of modules. One prefers the positive module for maintaining a constant discharge to the irrigators whereas the other favours the use of proportional semi-modules as the remedy for unsteady flow in the distributary. Experience has, however, shown that one system of moduling cannot be assumed to have a universal application. There are three classes of devices available for moduling of outlets, namely modules, orifice-semi module and flume semi-modules. The semi modules can be used for proportional distribution of irrigation water. Mr. Crump introduced the idea of flexibility. Mathematical treatment shows that an orifice semi module with a setting of 0.3 and flume semi-module with a setting of 0.9 would have a flexibility of 1.0 which means that the outlets with these settings would serve as proportional modules. Flume semi-module is proportional over a wide range of fluctuation in discharge whereas