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Qualitative and Fodder Yield Responses of Pearl Millet (*Pennisetumglaucum* L.) as Affected by different Accessions and Cutting Managements under Saline Water Irrigation

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Abstract—*A pot experiment was carried out under transparent shed facilities at ICAR-CSSRI, Karnal Haryana. The experiment was conducted in Factorial RBD to assess the production potential of 20 Pearl millet accessions (ICFH-1 to 20) derived from ICRISAT with three cutting management (as single, dual and multicut purpose); two irrigation water qualities [I_1-0.69 (tap water) and I_2-6.0 dS m^{-1}(Saline water)] scheduled at 1.2 ID/CPE ratio. Among tested accessions, ICFH-15; ICFH-16 and ICFH-17 had resulted in the maximal Total Dry matter yield (76.12;79.33 and 73.67 g/pot); Total crude Protein yield (6.49; 6.23 and 6.14 and g/pot) and Total ether extract yield (1.49;1.41 and 1.39 g/pot). Under tap water irrigation ICFH-5 had resulted in significantly maximum total green fodder yield (TGFY) for single cut purpose (349.3 g/pot) and accessions ICFH-15 (395.7 and 421.6 g/pot) was recorded the highest TGFY for double and triple cutting. Thus these accessions could be adapted with tap water irrigation under above mentioned respective cuttings. While in case of irrigation with saline water ICFH-1 was recorded the highest TGFY (332.3 g/pot) for single cut. ICFH-15 had resulted in the maximal TGFY under dual and triple cutting (332.7 and 360.3 g/pot respectively). Therefore these accessions may be adapted under aforesaid respective cutting purpose. Overall accessions ICFH-15;16 and 17 could be adopted as a strategy for getting higher green fodder yield and better nutritional quality with good quality as well as saline water irrigation either for dual cut or three cutting purpose in NW region of India and elsewhere under similar agro-climatic conditions.*

Keywords*: Pearl millet accessions, cutting management, salinity and fodder quality yield.*

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