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Soil management and Agronomic application of olive mill wastewaters to limit erosion in olive culture in Tunisia

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Olive tree culture is known in Tunisia since several thousand years. The remarkable adaptation of this specie to difficult environmental conditions (semi arid and arid zones of the centre and the south) and the attachment of the Tunisian olive growers to this culture, can explain the vast expansion of the olive tree through all the country. Then Tunisia can be considered as an olive producer by excellence. Olive growing is considered among the strategic sectors since its plays an important socio economic and environmental role. Tunisian olive growing counts about 65 millions of olive tree mainly of olive oil varieties (only 3 millions olive trees for table) covering more than 1650.000 ha (1/3 of cultivated soil). He has also a fundamental contribution of the equilibrium of the commercial balance (Olive oil exportations represent 45% of exportation of the agricultural products (first place) and 5 % of the total of exportations (fifth place), and playing too an important social and ecological role by its remarkable adaptation to the difficult environmental conditions: valorisation of semi arid and arid zones and fixing of rural population, avoiding desertification by soil fixing in marginal and desertic regions. Except the intensive plantations and some semi irrigated orchards, the major part of the orchards is conducted in rainfall conditions (90%) and (66%) of the trees are located in semi arid and arid zones (100 to 350 millimetres /year). Physical, geomorphogical, hydroclimatical and socio-economic conditions affecting the soils are very favourable for their degradation. In fact, more than half of this area is threatened by erosion or seriously affected by this phenomenon. In order to limit the degradation of soil resources a strategy for soil and water conservation was be elaborate. In the lecture and to limit erosion effects, some management plans and experiences will be

presented and discussed. In other hand, we report our results about the agronomic application of olive mill wastewaters with phosphate rock in a semi-arid Mediterranean soil and his influence about physical and chemical and microbial community soil properties.