Do we really need new policies? A study on soil sealing in Egypt

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- University of Damanhour, Faculty of Agriculture, Department of Natural Resources and Agricultural Engineering, Egypt.
- University of Naples Federico II, Faculty of Agriculture, Department of Science of Soil, Plant, Environment and Animal Production, Italy.

INTRODUCTION

Egypt has the lowest area of agricultural land per individual in Africa. The agricultural land stands for a total of approximately 3.5 million ha which characterized about 3.5% of the total area of Egypt in 2007. The urban encroachment over arable productive agricultural land in Egypt is common and is called (urban desertification). Therefore, the annual loss of arable land to urbanization is 1.2%. This indicates a serious situation to the agricultural area, the Academy of Scientific Research & Technology (1994) has reported that during the period from 1978 to 1984, the annual expansion rates of the dwelling area ranged between 5.3 and 30.8% of studied sites. Recently, the Ministry of Agriculture and land Reclamation has estimated the total loss as 1,200,000 acres, i.e., about 16% of the total irrigated agricultural area of the country. In Egypt there have been many ministerial and governor’s decrees, in addition to, documents and laws which were declared in order to protect agricultural land. Of the most important laws and decrees which in the past prohibited developments on agricultural land are Law No 3/1982, Law No 116/1983, the Prime Minister Military Decree No 1/1996 and Law No 53/1996. In the present, Law No 119/2008 is the law that control developments on agriculture lands.

METHODOLOGY

Different data sets were used in the study to project both the soil sealing growth along with the policies controlling the soil sealing problem. Soil sealing and urbanization data were obtained from the World Bank database in addition to literatures concerning soil sealing and urbanization in Egypt. The Egyptian law and different studies concerning the Egyptian policy were used to acquire the development of the Egyptian policy to counteract the soil sealing and urban encroachment problems. Both the soil sealing data and the opposition policies were overlaid to study the effect of the different policies on the soil sealing growth rate and to study if changing the policy would stop the problem or at least slow it down.

RESULTS AND DISCUSSION

Figure 1 shows 3 different data sets of soil sealing or urbanization growth in Egypt which cover a duration of 52 years (1960 - 2012). Also, diverse policies, laws and decrees concerning soil sealing or urban encroachments were projected on the diagram based on the issuing year. The data showed a continuous growth of soil sealing and urbanization over time with almost the same growth rate. Also, it was clear that although many laws and decrees were issued in different occasions, nearly, no effect have been seen on the growth trend or rate of the problem. This could be due to the wrong or unsuitable application of the policy. This could be explained also as many departments involved in protecting agricultural lands in Egypt are overloaded with work. The lack of human and office resources, knowledge, financial means, equipment and so on makes the life of these agencies tougher. Rapid action is needed in the country to guarantee that urban encroachments will not take place solely on agricultural land. The law No 119/2008, the last policy improvement, persuades strategic planning and zoning updates, which might be the correct accomplishment to control and organize physical developments on agricultural land in Egypt.

REMARKS AND CONCLUSIONS

The data showed that, despite the availability of clear policies to address the problem (in this case urban encroachments on agricultural land – soil sealing) and strict laws to legalise, this did not resolve the problem or even reduce the size of the damage by a reasonable degree. This could indicate that, sometimes the problem may not be resolved by changing policies or laws associated to this problem, but the solution lies in the proper application of the existing policies and laws. Also, this could be fulfilled by raising awareness among the community members to the dangers of this problem at the moment and the expected damage in the future. Also policies should support scientific research and provide scientific and practical solutions to this problem. Alternatives must be provided to the community members in order to fight and overcome this phenomenon. Awareness must also be raised about the total area of fertile agricultural land that being lost annually in Egypt through urban encroachments. Then clarify the risks of losing agricultural land which lead to a shortage of food resources and the impact on the agricultural economy and the Egyptian economy in general and the consequent problems. Afterward, present solutions and alternatives available to overcome this problem. This way we can apply the law firmly on violators who encroaching on agricultural land and apply policies and laws with clear result. Finally, it is possible to have an excellent policy but the final results of this policy are not good enough because the methodology of applying the policy was incorrect or unsuitable. To get good policy results and attempt to solve the problem, a good policy is needed along with a suitable method of applying this policy.

Contact Info: operaharb@hotmail.com