World Academy of Science, Engineering and Technology International Journal of Agricultural and Biosystems Engineering Vol:17, No:11, 2023

Common Caper (Capparis Spinosa L.) From Oblivion and Neglect to the Interface of Medicinal Plants

Authors: Ahmad Alsheikh Kaddour

Abstract: Herbal medicine has been a long-standing phenomenon in Arab countries since ancient times because of its breadth and moderate temperament. Therefore, it possesses a vast natural and economic wealth of medicinal and aromatic herbs. This prompted ancient Egyptians and Arabs to discover and exploit them. The economic importance of the plant is not only from medicinal uses; it is a plant of high economic value for its various uses, especially in food, cosmetic and aromatic industries. It is also an ornamental plant and soil stabilization. The main objective of this research is to study the chemical changes that occur in the plant during the growth period, as well as the production of plant buds, which were previously considered unwanted plants. The research was carried out in the period 2021-2022 in the valley of Al-Shaflah (common caper), located in Qumhana village, 7 km north of Hama Governorate, Syria. The results of the research showed a change in the percentage of chemical components in the plant parts. The ratio of protein content and the percentage of fatty substances in fruits and the ratio of oil in the seeds until the period of harvesting of these plant parts improved, but the percentage of essential oils decreased with the progress of the plant growth, while the Glycosides content where improved with the plant aging. The production of buds is small, with dimensions as 0.5×0.5 cm, which is preferred for commercial markets, harvested every 2-3 days in quantities ranging from 0.4 to 0.5 kg in one cut/shrubs with 3 years' age as average for the years 2021-2022. The monthly production of a shrub is between 4-5 kg per month. The productive period is 4 months approximately. This means that the seasonal production of one plant is 16-20 kg and the production of 16-20 tons per year with a plant density of 1,000 shrubs per hectare, which is the optimum rate of cultivation in the unit of mass, given the price of a kg of these buds is equivalent to 1 US \$; however, this means that the annual output value of the locally produced hectare ranges from 16,000 US \$ to 20,000 US \$ for farmers. The results showed that it is possible to transform the cultivation of this plant from traditional random to typical areas cultivation, with a plant density of 1,000-1,100 plants per hectare according to the type of soil to obtain production of medicinal and nutritious buds, as well as, the need to pay attention to this national wealth and invest in the optimal manner, which leads to the acquisition of hard currency through export to support the national income.

Keywords: common caper, medicinal plants, propagation, medical, economic importance

Conference Title: ICAACS 2023: International Conference on Agriculture, Agronomy and Crop Sciences

Conference Location : Dubai, United Arab Emirates

Conference Dates: November 13-14, 2023