

I. INTRODUCTION

Coriander "Coriandrum sativum Var dulce L." is grown as annual herb, although it is a biennial plant of family umbelliferae. It is endigenous to Italy, and Widely cultivated in central and Eastern Europe, some mediterranean sea countries (Morocco, Malta and Egypt) and India. Coriander was known and used by the ancient nations as an ocular anesthetic and by the Greeks and Romans as a remedy for epiphor. It was generally mixed with mother's milk (T.H.S.) and was also used medicinally as flavouring agent and carminative. It is an ingredient of compound tincture of rhubarb. The dried product, the tincture and the fluid extract are used extensively in the liquor industry and in carbonated beverages. The dried product is used also in the formulation of carries and cured meets. The oil is used widely in ginessense and for flavouring the soups and food's spicy sauces. It is used also in pharmaceutical and other preparations for covering undesirable odors and taste.

Oil of coriander seeds is a valuable ingredient of some perfumes, because of its soft, pleasent, slightly spicy note blends into scents of oriental character.

In Egypt, the cultivated area of coriander for fresh leaves is unknown, while the cultivated area assigned to

the production of the condiment fruits had been determined. The cultivated area in 1985 was 16287 feddan produced 13718 tons of seeds, at 1986 it was 15431 fed. produced 12916 tons of seeds, and at 1987 it was 13917 feddan produced 11356 tons of seeds. Such statistics* show that the cultivated area of coriander and its acreage had decreased through the last two years from 1985 to 1987 by an area of 2370 feddan and 2362 tons of seeds. Hence, the production of coriander seeds has to be increased and improved. Using optimum programs for plant nutrition and other agricultural treatments may be achieved. The quality of fresh herb and fruit yield can be also improved and increased by using improved agricultural practices.

This research was carried out to study possible increase of fresh herb and fruit yield and improvement of quality and chemical contents of such products by using the optimum levels of N and P-fertilizer required for plant nutrition and also to know the most suitable substances and concentrations of used growth regulators. This can be achieved by the soil addition of different rates of N and P-fertilizers and/or foliar spray of different concentrations of each of GA₃, NAA or CCC and studying their effect on plant growth, herb and seed yield as well as on their chemical constituents, i.e. NPK contents, volatile oils, and total carbohydrates of both herbs and seeds.

* Ann. Rep.(Hort.), statistical Depart. Ministry of Agric. 1985, 1986 - 1987.