OZEANO
fresh environment

Strawberries are non-climacteric fruits by their respiratory pattern and by ethylene production during ripening.

Recent researches show a greater relationship between ethylene and maturation of strawberry:

Strawberries are non-climacteric fruit and therefore regarded as independent of ethylene for ripening. The concentration of ethylene in punnets of strawberries in wholesale markets was found to be in the range 0.03–0.36 µl l−1 per punnet. Experiments at 20 and 0 °C, where the ethylene concentration was controlled, showed that the storage life of strawberries was extended by reducing the ethylene level. Maximum storage was obtained at the lowest ethylene levels used of 0.05 µl l−1 at 20 °C and 0.005 µl l−1 at 0 °C. The addition of potassium permanganate to punnets held at either of the above temperatures significantly extended storage life of the fruit and this may be capable of commercial exploitation (Wiilis y Kim, 1994)

The present hypothesis is that a dual activity might be carried out by ethylene in non-climacteric strawberries where the hormone amount needed to trigger at least some aspects of the ripening syndrome might not be particularly high due to the prevalence of the type-II receptors in these fruits. (L. Trainoti, A. Pavanello and G. Casadoro, 2004)

The below study suggests that the presence of ethylene can promote disease development and fungal growth.

ABSTRACT

El-Kazzaz, M. K., Sommer, N. F., and Fortlage, R. J. 1983. Effect of different atmospheres on postharvest decay and quality of fresh strawberries. Phytopathology 73: 282-285.

Effects of different atmospheres, ie, air + ethylene (C_2H_4) at 20 µl/L; air + 15% CO_2; air + 10% carbon monoxide (CO); a controlled atmosphere (CA) of 2.3% O_2 + 5% CO_2; CA + C_2H_4 (20 µl/L); and CA + 10% CO in addition to control (air), on the postharvest decay of strawberry fruits caused by *Botrytis cinerea* were studied with Aiko, G-3, and G-4 cultivars at 0.6 and 3.3 C for 21 days. Air + 15% CO_2 and CA + 10% CO were the most effective atmospheres in suppressing fruit rot. Presence of 20 µl of C_2H_4 per liter, added to either air or CA, resulted in more decay development than in other atmospheres, indicating that C_2H_4 might enhance disease development or fungal growth. Off-flavors were detected after treatment with air + 15% CO_2. Carbon monoxide added to CA during storage of strawberries at 0.6–3.3 C for up to three weeks may provide better results than the current practice of using high CO_2.