

Greenhouse Construction for Vegetable Growers

Robt. W. King, Toronto

WHEN contemplating the erection of a glass house for vegetable growing, the first question that broadly presents itself is "what is the best kind of a house to build?"

A very good article on greenhouse construction for vegetable growers by J. D. Fraser, Leamington, Ont., is published in the annual report for 1907 of the Ontario Vegetable Growers' Association. From his experience, the following pointers may be gleaned:

1. Greenhouses should be sheltered from the wind.
2. In no case is it advisable, either for defence or protection, to exclude sunlight. "Admit," he says, "every possible ray of sunlight."
3. Discard wood as much as possible.
4. For supports, use gas pipe set in cement.
5. For sash bars and other necessary wood work, cypress is preferred and must be painted.

6. Vegetables, for proper finishing, require a free circulation of air and lots of ventilation.

7. There is not sufficient air in very low houses.

8. Mr. Fraser builds houses with fourteen feet spans, connected in blocks up to 100 feet wide; but for a house only thirty-five to forty feet wide, he prefers a single span.

9. Large houses are easiest to heat.

10. Don't give a man a contract to put in pipes unless you are sure he knows how to do it. "The ordinary plumber doesn't know anything about heating a greenhouse."

As regards nine of the ten pointers quoted from Mr. Fraser's paper, it is needless to refer to any authority, either in support or contradiction. The only one not accepted or that called forth any question from the numerous experts assembled was No. 8 which refers to the width and height of the houses. And this has been just as much a question with florists with whom we have associated for the last fifteen or more years, as it is with the vegetable men to-day.

LIGHT AND VENTILATION

There are some plants and flowers that like shade and others that thrive better in the sun, but they all want light and air. As the art is not to succeed under glass in the summer when the sunshine and light is in plenty, so much as to produce during the dark days of winter when prices are up and the sun is down the nearest approach to summer out-of-door conditions, we want it in our power to admit every possible ray of light, even if we have to do some shading in the summer months. As regards the construction of the houses for ventilation, as much as is required should be secured for the summer months with as little increase as possible to the shadow of the sash during the darker days in winter.

SINGLE VS. CONNECTED HOUSES

Regarding the width of houses, the question of the day seems mainly to be between blocks of comparatively narrow houses built high and single separate houses of widths ranging from forty to sixty feet. For commercial purposes, the low, narrow, *single* house has long since become one of the mistakes of the past.

The advantages claimed for separate houses are: (1) The additional light on the first bed facing the south, the houses being placed a good distance apart; (2) the ability to obtain side ventilation; (3) in the colder climates the avoiding of the

piling-up of snow in the valleys, especially where the colder temperatures are required to be maintained.

The disadvantages are the extra expenses in a large plant of houses, of the said outside walls and side ventilating, together with the large extra cost per square foot of growing surface for real estate, fuel and boiler plant to heat the same. This has led to the present idea (by advocates of separate houses) of building them extra wide until in a case of a house 150 feet wide by 500 feet long, a whole block is enclosed in a single span, but in such cases, there is no more advantage as regards side light than would be obtained in a block of narrower houses of the same size.

In such houses, other objections materialize, as, for instance, the large extra amount of end glass to install, wind braces and heat in the winter. Another objection is the limited amount of ridge ventilation practical to be installed, also

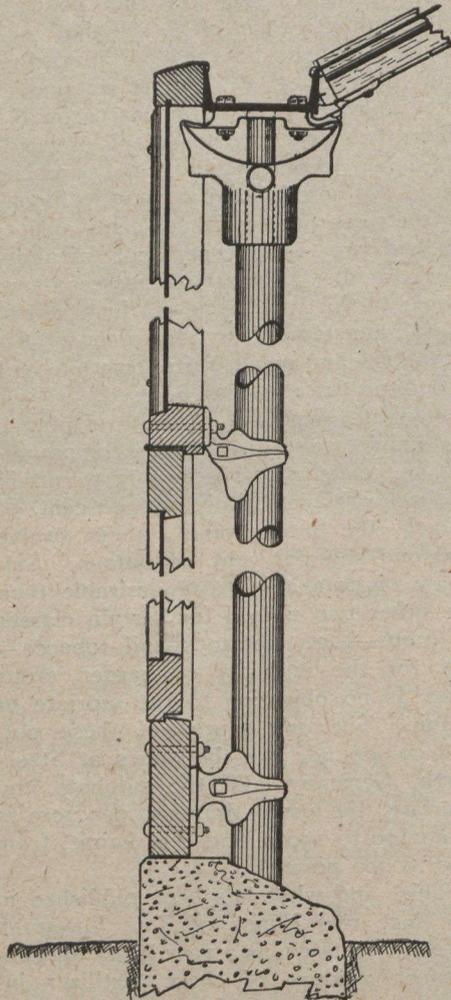


Fig. 1. Sash Being Used for Side Ventilation

Where a large amount of side ventilation is required, side sash can be hinged at the eaves, or where the eaves are too high a header may be run along the sides of the house, and the sash hinged to it as is shown in the illustration. The header is carried by special brackets bolted to the posts.

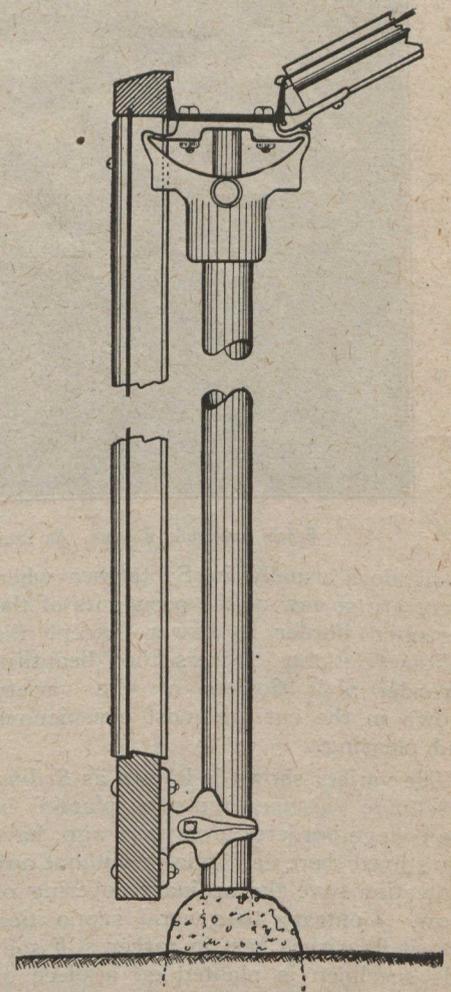


Fig. 2. Method of Ventilation at the Ground

The glass over the wall is intended to reach to within one foot of the ground. The wall is formed by setting a two by six plank edgewise. The plank is carried by special brackets bolted to the posts of the house. An opening is left at ground for ventilator which can be banked up in cold weather.