

either be sown in this earth, or in pots to be plunged in it.

The proper average heat for a hot-bed intended to raise flower seeds, or to grow cucumbers, is 60°; but melons require a heat of 65° to grow in, and 75° to ripen their fruit. This heat should be taken in a morning, and does not include that of the sun in the middle of the day. When the heat of the bed becomes so great as to be in danger of injuring the plants, the obvious remedy is to give air by raising the glasses; and if this be not sufficient, the general heat of the bed must be lowered by making excavations in the dung from the sides, so as to reach nearly to the middle of the bed, and filling up these excavations with cold dung, which has already undergone fermentation, or with leaves, turf, or any other similar material which will receive heat, but not increase it. When the heat of the bed falls down to 48° or lower, it should be raised, by applying on the outside fresh coatings of dung, grass, or leaves, which are called linings.

When hot-beds are made of spent tanner's bark or decayed leaves, a kind of box or pit must be formed of bricks or boards, or even of layers of turf, or clay, and the tan or leaves filled in so as to make a bed. Where neatness is an object, this kind of bed is preferable to any other; but a common hot-bed of stable manure may be made to look neat by thatching the outside with straw, or covering it with bass mats, pegged down to keep them close to the bed."

The above mode of preparing hot-beds, recommended by our fair authoress, will answer well for growing melons and cucumbers, but if cabbage plants, lettuce, or radishes are required, the bed need not have more than 13 inches of manure. The soil put on the hot-bed will require to be at least one foot thick; on the surface of this sow the seed, and give plenty of air as the plants advance in growth.

HORTICULTURE, &c.—It is truly gratifying to the lovers of horticulture and botany, to see the number of structures, from the unostentatious glazed pit to the magnificent conservatory, which have appeared around us within the last few years.

I am fully convinced that, generally speaking, there is no class or profession, which can erect and keep in repair, and work at less expense a small greenhouse or vinery, than the farmer. There are many landlords, I know, who would object to farmers having structures of the kind, as they consider them superfluous, and not in accordance with the farmer's vocation. May I ask, why may not the farmer have his little greenhouse or pit to grow a few early grapes or potatoes, or his wife and daughters, a few ericas, camellias, or calceolarias? he pays his rent, and manages his farm well, therefore I assert that he has as much right, if he chooses, to erect a small house or pit, as his landlord his extensive conservatory. I know there are some landlords who object to their tenants enjoying the sports of the field, or in fact any enjoyment at all; but would have them continually plodding on in their daily vocation of tilling the soil and attending their stock without any recreation at all; however such fancies have their own reward, for I have always seen that where the most generosity and liberality exist, the best tenants and good management abound.

The various papers which follow on this subject will show what can be performed at a small cost and little

room; it is true that the produce cannot be great, at the same time many little luxuries can be obtained, which although intrinsic in value, are gratefully received as presents, and give pleasure to the donor to be able to give a dish of fruit weeks before the out door season would allow.

There is generally some sunny corner or convenient spot, where a small house can be placed, if near the house so much the better, as by the great improvements which have taken place of late years in the system of heating by hot water and steam, the fire of the kitchen or sitting room will perform the office with little cost and extra trouble. A house fifteen feet long, and twelve feet wide inside, will produce much if properly managed, for fruits, plants, and vines, and two glazed pits, eight feet by seven feet, will be ample.

If fruits are the object, the house should have a pit eight feet wide in the front part of the house, built of brick set in cement, so as to hold water for bottom heat, and a galvanized iron tank against the back wall, to heat the atmosphere of the house. In a house of this kind vines in pots could be grown so as to come in early, and ripen their fruit before the vines planted outside are brought into the house in the end of April. A few dwarf peaches or nectarines also in pots; cucumbers in boxes on the tank at the back, while a hanging shelf and the front would contain a few pots of strawberries or French beans. The pits could be planted with early potatoes, so as to be ready by January, when another planting is made of the same, followed by cucumbers, melons, or vines, in pots according to the fancy of the owner.

If on the other hand, flowers are preferred, an upright glass in the front would be requisite, with the entrance in the centre, and a stage on each side, with galvanized tanks under each for heat. I would not advise the cultivation of plants that require a strong heat, but the more hardy denizens of the Cape, Australia, and China, among which some of our most magnificent exotics are found, many of these would only require the exclusion of frost, and plenty of air on all occasions when safe. A house of this kind, with little care and trouble, would give a continued succession of flowers.

First, in the autumn, the beautiful Chrysanthemums, followed in the middle of winter, by the Chinese primrose, *Primula sinensis*, camellias of all sorts, hyacinths, jonquils, tulips, narcissus; succeeded in spring by cinerarias, fuchsias, calceolarias, pelargoniums, epacrides, and Australasian plants, until the vines are brought into the house, and the weather sufficiently warm to allow of the plants being turned out of doors, for the vines to be accommodated with the temperature most congenial to them, when a few balsams, cockscombs, and other annuals can be admitted to fill the stages.

The pits would preserve during winter, verbenas, heliotropes, and other half-hardy plants, for bedding out in spring.

Such a house would be erected for £20 or £25, and the pits in proportion. Glazed lights can now be purchased at from 9d. to 1s. per square foot, painted and all ready for putting up; a common carpenter could make the rafters and put the frame work together, and a bricklayer complete the remainder.

As I said before, the structure could be heated by the kitchen or house-fire, or from the boiler that cooks the food for the cattle: or at a small cost a boiler and pipes might be purchased; or the old smoke flues could be made if preferred, which, after all, are perhaps the best.—*Thomas Keir Short.—Farmer's Herald.*

Nothing is bestowed on man in this life, without great labour.—*Horace.*

Labour relieves us from three great evils—indolence, vice and want.—*Voltaire.*