The Tea rose under glass.

By C. D. Evans. '96.

The Tea rose is the most beautiful of all roses raised for market. Its refinement of color and its powerful fragrence make it the center of loveliness. It is a native of china. Botanical name Rosa Indica Odorata.

The Tea class is much more uniform in the characteristics of the different varieties than any of the other large groups. In judging its merits we lay less stress on fulness of flower than on the beauty of the bud. The flower varies same in size and fulness but little compared with other varieties.

The following are fine in both bud and flower. Perle des Jardins (Canary yellow). Isabella Sprunt (Sulphur yellow). Camelie Kach (white). Catharine Mermet (flesh color with silver luster). Souvenier d'un Ami. Sunset (Salmon yellow). Bon Silene. (Deep Salmon shady) and many others. There is also a large variety of hybread Teas.

Construction of the house: The modern rose house is three-quarter span,

long span facing the south, and from sixteen to twenty feet wide and one hundred and fifty feet long. It is cheaper to build of wood but not so durable. If built of wood the wall may extend to the plate as this is cheaper, but practice has found it well to have a row of glass eighteen to twenty inches wide, the entire length of the house on the south side. It is cheaper in the outcome to use good glass, American first or French second, the durability will more than make up for the extra price. If the house is eighteen feet wide the front or south bench should be about thirty inches wide, the two middle ones about forty-two (each) inches wide with an eighteen inch walk between them and the back or north bench about twenty-four inches wide. The walks between the center and side benches should be twenty-four inches wide. This allows the front and back benches to be placed about

an inch from the wall. Where purlins are used they should come over the walks so the drips will not be on the plants. The front and bench should be about twenty inches from the glass. The south center bench may be level with the front bench or level with the north center, which is about eighteen above the side benches. The slope should be such as would catch as much light and heat from the sun during the winter months as possible. The benches need not be over five inches deep. The walls should be about seven or eight inches thick.

Heating System: For rose forcing steam is probably preferable, as with right firing as one should have, to be sure of success, Steam is cheaper and can be more easily regulated, for all houses over one hundred feet long two inch pipes should be used. Three and a half inch pipes are best for mains of eight hundred to a thousand square feet of

radiation. In addition to the main it requires about one hundred and fifty to seventy-five square feet of one and a quarter inch pipe to one thousand square feet of glass, where a temperature of fifty to sixty degrees is to be maintained. The pipes should not be over twenty inches from the bottom of the bench. If iron benches and wooden bottoms are used and are run quantitatively steam heated, it would cost about thirty-two dollars per foot. One built wholly of wood would be about two dollars per foot cheaper.

Propagation: There are four methods of propagating roses, by cuttings, by budding, by grafting, and by layering. The methods rank in the order named. I will speak chiefly of cuttings since the others do not prove a success here. Budding is practiced in England but does not do well in our warm climate. The most successful cuttings are made from strong plants. The cuttings should be taken from the

plant in the late winter months. Some make single eyed cuttings but they are not so vigorous as those with three or four. After they are made, place them in good clean sand and keep well moisted, with a temperature of about seventy degrees. It will take from four to six weeks for them to root sufficiently to pot off. Dont use over two inch pots to start with. It is well to re-pot until four to six inch pots are used. The soil should be one of sand to two of dirt.

By the middle of July the house should be prepared for the winter crop by cleaning it, and if the previous crop had not been kept extra clean. To do this all the old soil and rubbish should be removed and the house thoroughly swept, after this it is well to close the house for two or three hours during the heat of the day and burn some sulphur this will destroy all the insects in the house at the time; after fumigating it

is well to take some fresh slaked lime and white wash all wood work, not painted. This will distroy any fungaid growth and give a lighter appearence.

Planting: There are four important points to consider in planting or setting out roses. First: have good vigorous healthy plants. This is of vital importence, never use culls. Second: Soil. This is of as much importence as the plants, and in selecting it, care should be used to select the very best, circumstances will permit. Third: putting soil in benches, commence by placing a two inch sod in bottom of bench with grass down so as to cover the cracks. The soil should be of a loamy tendency as this is best for roses. If the soil is light it will be well to add some clay or when too heavy to add some sand. If soil is fair to good add one part of well rotted manure to eight parts of soil. Next to

the sod place a thin layer of well rotted manure and on top of this the dirt finish. Fourth: The distance the plants are placed is important. Be sure they are not crouded but waste no room. Say ten or twelve inches apart; now make the hole large enough to admit the rose without disturbing the dirt around the roots, fill with loose dirt taking care not to break the roots, pressing the dirt firmly when you plant the rose.

After three or four weeks it can be cleaned of weeds and a thin mulching of well rotted manure can be spread over the entire surface not over an inch deep. This will stimulate the plant and it will be best to keep the buds pinched off until the time they are wanted to bloom.

It is now time to stake them and various methods are used, but the trellis is preferable. A wire is stretched full length of the bench, over each row, and fastened at each end to a support about twenty

inches above the bench. Now take nice stakes twenty-four inches long and place by each plant and fasten to over-head wire and tie plant to the stake.

From now on they will require close care. If the plants were good and strong and planted from three and a half or four inch pots in July, a fair crop may be taken during the early part of October and the next at Christmas. If the plants were poor it would not be to the Florists interest to cut first crop.

Watering and regulating the temperature is the key to success. They should be sprayed lightly early in the day and water soaked or allowed to get too dry if so the red spider will injure them. Dont water late in the day if it can possibly be avoided.

One failure is liable to lose half the profit on a crop. The month of September is the hardest month in the history of the rose, here we meet the black-spot, mildew

and almost all diseases the rose is heir to. at this time of the year it is well to keep a small fire just enough to expel the dampness, the windows should be left open just enough to give a slight draft to keep the dampness from settling on the plants. Tobacco is the best destroyer of insects, liquid form evaporated is preferable to fumigating as it does not hurt the color of the flower or leave an odor on the foliage. Dont prune too much during active growth, as this checks the life of the plant.

When and how to cut the flower is one of great importance and it should be done by one with experience. He must know when a rose is in its best condition to cut, for the purpose desired.