to a considerable extent in South Germany, Hungary, and the East Indies.

The Virginian tobacco-plant, N. Tabacum, is a coarse rank­growing annual, with a simple unbranched cylindrical stem which attains a height of 6 feet and upwards, terminating in a panicle of pink flowers. It has alternate simple oblong lanceolate leaves, those at the lower part of the stem being slightly stalked, and of large size, reaching to two feet in length, while the upper are semi- amplexicaul and of variable outline. The seeds are brown in colour, with a rough surface, of minute size, and exceedingly numerous, as many as 40,000 having been counted on a single plant. The whole of the green parts of the plant are covered with long soft hairs which exude a viscid juice, giving the surface a moist glutinous feeling. The hairs are multicellular, and of two kinds, one branching and ending in a fine point, while the other, unbranched, terminates in a clump of small cells. Stomata occur on both surfaces of the leaves, and, with the peculiar hair structure, render the microscopic appearance of the plant highly characteristic.

Tobacco will flourish over wide areas and in very dissimilar climates, but it is best suited for regions having a mean tempera­ture of not less than 40o F. and where early autumn frosts do not occur. It develops the most highly appreciated qualities in tropical lands possessed of a comparatively dry climate. Tobacco is a most exhausting crop, and requires rich and abundant manuring, the character of which exercises a distinct influence on the quality of the product. A crop grown under such widely different conditions of climate and agriculture as is the case with tobacco must of necessity be subject to varied treatment both in cultivation and in curing, and here we can refer only to the general features of the growing and securing of the crop.

In European cultivation, the tobacco-seed is sown in a hotbed about the end of March. The seed-beds are kept covered with damp straw or withered leaves till the seedlings appear above the ground, after which the covering is removed, and, to protect the young plants from frost, to which they are extremely sensitive, the beds are covered at night with mats. So soon as the plants can be handled, they are picked out in rows in a garden bed, where they remain protected from night frost till they have developed five or six leaves and have a height of 3 to 4 inches. They are then ready for transplanting, by preference in moist weather, into prepared drills 20 to 25 inches apart in the field. The transplanting is done about the end of May, or earlier in localities free from night frosts, and in dry weather the field is plentifully soused with liquid manure. The plants are carefully weeded and attended to, and the soil is frequently stirred with narrow hoes until the period when they show symptoms of flowering. This may be when they are only 3 feet high, or not until, they have reached their proper height of 6 or 8 feet ; but the flowers must not be allowed to form, except in the case of a few plants left purposely for seed. To obtain fine and strong leaves on the plant is the great object of the cultivator, and a fine tobacco plant ought to have from eight to twelve large succulent leaves. Cultivators commonly diminish the number of leaves by “topping” or breaking off the top, under the idea that the remaining ones will afford the strongest tobacco. Suckers or shoots near the root are carefully removed, and every­thing is done to concentrate the strength of the plant in the leaves. Every leaf injured by insects is removed, and the crop is watched until the leaves have a yellowish tint and begin to droop, when they are fit to be gathered. This is usually in September, so that the plants, from the time of their insertion on the mounds, have occupied the ground four months, during which time they have been subject to many vicissitudes,—from the attacks of insects, from a disease called “firing,” caused by the long continuance of very wet or very dry weather, and from the occurrence of autumn frosts while the crop is yet in the field.

In the harvesting of the tobacco crop several distinct methods are followed. In ordinary European cultivation the ripe leaves are separated from the standing stalks in the field. The three lower root-leaves are first stripped off and laid, face downward, around the root to wilt, after which they are bundled and carried to the barn. Afterwards the remainder of the leaves are separated, working from the top downwards, and, similarly, they are spread on the ground till by wilting they lose their brittleness. They are then bundled and packed, tops upward, closely on the floor of the barn for some time to sweat, by which the uniform ripening and subsequent favourable drying are promoted. The bundles are carefully watched to prevent overheating, which would blacken and injure the leaves. In the tobacco-growing districts of the United States the entire plant is cut down in the field close to the ground, then the stalks are spitted on long rods or laths, care being taken to keep the leaves from touching each other, and on these rods they are carried and hung in the barn or curing-house for drying.

The curing of the leaves which follows has for its objects the drying and preservation of the tobacco, and, by a process of slow fermentation, the modification of certain of the leaf constituents, and the development of the characteristic aroma of the substance. Subject to various minor modifications, the process of curing is carried out either slowly by the air-cure process or rapidly by fire­curing. The European cultivators, who generally cure by the slow process, either spit the leaves through the middle on a long rod or string them on a cord, taking care to keep each leaf from touching its neighbour. These rods or cords of leaves are suspended in a barn or curing-shed in a way which allows the free circulation of the air, and at the same time brings the whole contents of the shed equally under the drying influence of the air currents. When the weather is clear and dry, free circulation of the air is in every way promoted, but on humid days the moist air is excluded and sometimes artificial heat is required to prevent mildew and rotting of the leaves. Under favourable circumstances the tobacco will be dry and ready for further treatment in from six to eight weeks, and the leaves should then have a fine bright warm brown colour.

In the United States the quick-drying process by artificial heat is employed principally for the preparation of export tobacco. Formerly the heat was obtained by means of an open charcoal fire within the curing-barn, but now the structure is heated by a system of flues which permits of the burning of any kind of fuel. For dark shipping tobacco, the entire plants, cut down close to the ground, are immediately housed, and at once dried off. Red shipping qualities are prepared by leaving the cut stems either in the field or hung on scaffolds in the barns for a few days to wilt and wither in the air, after which they are dried by artificial heat. In the treatment of both dark and red kinds the temperature within the barn is gradually raised till it reaches 170o F., and the drying is complete in from four to five days.

By whichever way treated, the tobacco-leaf at this stage is brittle, and cannot be handled without crumbling to powder. The contents of the barn are therefore left till moist weather occurs, and then by the admission of atmospheric air the leaf blades absorb moisture and become soft and pliant. In this condition the leaves are stripped from the stems, sorted into qualities, such as “lugs,” or lower leaves, “ firsts,” and “ seconds.” These are made up into