C. macrocarpa is easily injured, and care is required during lining-out operations and cultivation to avoid inflicting wounds which may become points of disease entry. Since neither Phomopsis nor Pestalozzia is able to penetrate uninjured bark, the above precaution has particular significance. Deep planting and the mounding of soil round trees during cultivation should be avoided, since buried laterals enable soil parasites to gain entry to the stem. If the burying of laterals cannot easily be avoided, the excess soil round the trees should be carefully removed with a hoe.

All dead or dying plants or foliage of C. macrocarpa within a nursery should be burnt. The proximity to a nursery of unhealthy C. macrocarpa hedges or shelter belts is also a source of infection. Finally, as a precaution against the planting of diseased trees, all stock should be examined before leaving the nursery, and trees showing symptoms of "gummosis" destroyed.

References:


FORESTRY AND AGRICULTURE IN THURINGIA.

(DR. H. KRAUSE, Research Institute of Rural Economy, University of Jena, Germany.)

Germany has a greater proportion of her land area under forest than the countries of western and southern Europe, but has a smaller proportion than the eastern and northern countries. The German climate favours forest growth more than the hot and dry climate of the Mediterranean countries, where, too, steeply sloping hillsides were early devoted to agricultural use, in contrast to the forested slopes in Germany. The original forest areas of the Mediterranean countries had been largely decreased by being converted to vineyards and olive groves, as well as to
arable land, while much forest land was ruined by intensive goat grazing. On the other hand forest does not dominate Germany so much as in the eastern and northern countries where the climate is not so favourable for agricultural purposes. Another cause for this difference is the fact that settlement advanced to a greater extent in Germany, particularly during the 8th and 14th centuries.

The German forest areas are firstly the mountain regions viz: the Harz, the Sauerland, the Westerwald, the Odenwald, the Black Forest, the Bavarian Alps, the Bohemian Forest, the Thuringian Forest and the Riesen Gebirge. Secondly there is the forest of the plains on the light sandy soils of Lower Silesia and Brandenburg. On the other hand there is very little forest in Schleswig-Holstein and on the good clay soils of Mecklenburg, Pomerania, and East Prussia. Hence the western and southern parts of Germany are more densely forested than the northern and eastern.

Since the 14th century, the end of the great German colonisation, no considerable conversion of forest to agricultural land occurred until the 19th century, when, often as the result of local financial difficulties and also as the result of the liberal trend in economic policy, part of the state forest was alienated to private uses and part of this was converted later to agricultural land. The same process occurred at the same time in France and Austria. Periods of prosperity and depression have also had their effect on forest areas. In times of prosperous agriculture, forest areas were converted to arable land and vice versa. During and after the war nearly every German state forest had some part converted to agricultural land which was let at a low rental to the poor of the neighbouring village or township for the raising of potatoes and other vegetables. The greater part of this land has now been resumed by the State for forestry.

At the present time more than 27% of the whole area of Germany is under forest, i.e., managed forest, because nothing comparable with the unmanaged “native bush” of New Zealand exists. Three quarters of this forest is coniferous, the remainder is in hardwoods chiefly beech and oak. Nearly half the German forest is state or public property, the rest is privately owned and partly connected with farming. The forest area of the small farms under 5 hectares of agricultural area is naturally small, mostly only 1 hectare, but on the larger farms of up to 100 hectares the forest
area may be 5 hectares or more. These smaller forest areas belonging to farms of under 100 hectares amount to only about ¼ of the total German forest area, and the rest is owned and used in tracts of more than 100 hectares. Of the State forests (32% of the whole forest area), about half is managed in areas of from 2000 to 5000 hectares.

The interrelationship of farm and forest is really more important than the relatively small area of forest on the farms indicate. Among the peasantry the forest is considered as a reserve for use in times of depression. A block of mature forest is thought of as a safeguard of the farm. The same idea obtains regarding forest which belongs to the village as a whole, i.e., the communal forest. The income from this forest makes it possible to reduce the village tax (Gemeindesteuer); or if for example, a new school is necessary, part of the cost can be covered by the sale of timber from a few hectares of the village forest. It is the general opinion among the peasant community of central and south Germany that the condition of the farm woodlot indicates the efficiency of the owner as a farmer.

In the mountain regions where soil and especially climate are not so suited for agriculture, the relationship of forest to agriculture is still more significant; so much so that in many parts agriculture could not exist without forestry. In Thuringia more than 1-3 of the whole area is forested, mostly in spruce. In the Thuringian forest itself the actual forest land is 70 to 80% of the whole. Here 9-10 of the forest is owned by the State or by large private owners. Agriculture is carried out only in the valleys and the farms are small—between 2 and 6 hectares. Ploughing is done by cows; horses are seldom used and only when the peasant is sure of using them also in the forest. This condition of affairs demonstrates one advantage of an intimate connection between forestry and agriculture. With horses the peasant is able to till his soil much better than with cows. Furthermore the work in farm and forest does not clash because the forest work with horses is carried out mostly in the winter when the ground is frozen and cannot be tilled. The peasants, too, have the right to graze cattle and sheep in the forest. Goats are usually not permitted because they cause too much damage to the trees. Further the peasants can use the litter (Spreu) from the forest floor. They cart it away and use it in the animal stalls, thus forming a basis for stall manure, and so saving straw for feed. This procedure and the pasture rights go back to the middle ages when the peas-
ants as a community owned the forest. During the last 50 years these rights have been much discussed because the State forest department claims that the disadvantages therefrom to good silviculture are greater than the advantages to agriculture. The peasantry on the other hand claim that they are able to carry on their small farms only with the help of these ancient rights.

Another advantage to the peasant is the right to cut dead trees, etc., for firewood. Forestry also provides the peasantry with work in the forest nurseries in addition to tree felling and hauling logs.

But in spite of all the assistance that forestry gives the small peasants, their position is not satisfactory and has not been so for a long time. In old records of the forest department there occur reports on the low standard of living and on measures for assistance. One measure was to create subsidiary village industries in order to provide additional income. Such industries included the manufacture of glassware, toys, lace and cigars. The financial difficulties have increased during the last 50 years owing to the subdivisions of holdings among the children of the original holder, thus greatly lessening the area worked by each.

During the last 20 years the forest has created indirectly new sources of income for the peasantry. The forest-clad mountains and charming valleys have become popular holiday resorts. It is becoming more and more the fashion for peasants to take in paying guests (Sommerfrischler) during the summer.

On the other hand the mechanisation of the glass industry has resulted in the establishment of large factories in the central plains among the brown coal fields far removed from the mountain forests. The manufacture of toys, which was chiefly an export industry is now seriously handicapped by the import restrictions of foreign countries, and by foreign competition, chiefly by Japan.

Hence the economic condition of the population in these parts of Thuringia is still very unsatisfactory. In the case of one village of 700 inhabitants the whole male population, with but very few exceptions was on the dole for two years. Such state assistance is only temporary, but measures are now being taken to transfer part of the population to the east of Germany as settlers thus increasing the size of the holdings of the remaining peasants to an area where they can carry on with a type of production, viz., pasture, which is suited to the climate.