

State forest, and will in future be managed along sound conservation lines. The emphasis will be on the re-establishment of an effective forest cover, preferably by natural means, and only as a last resort by the introduction of an exotic cover.

16. *Fire Protection the First Essential for Soil Conservation.*—The measures necessary to implement a sound conservation policy in protection forests may be summarized as : protection from fire ; prohibition or control of grazing ; extermination of animal pests ; limitation of sawmilling activities ; and, in certain cases, artificial re-establishment. Of these fire protection is the most important. Fire is the greatest single menace to vegetation and can in a few hours undo the work of centuries in building up a stable soil-vegetation complex. It is in the control of fire that the Forest Service has made its greatest contribution to soil conservation. The advance gained by the passing of the Forest Rural Fires Act in 1947, which for the first time set up the machinery necessary for the protection of all forest and rural land in the Dominion is now being consolidated by the drafting, in consultation with all the Fire Authorities concerned, of suitable regulations under the Act. It is confidently expected that these regulations will have further beneficial and far-reaching effects on the safety of protection forests and hence on the stability of soil and water resources.

17. *Eradication of Deer and Other Serious Pests Essential.*—Of almost equal importance, and, since the effects are less spectacular, possibly of even greater danger, is the damage being done by introduced animals. Evidence continues to accumulate that many beech-protection forests, particularly in districts of moderate rainfall, must ultimately disappear completely unless the present high deer population is very much reduced. The objective, obviously, should be one of complete extermination, but such a policy is unrealistic and impossible to achieve. The most that can be hoped for, and the objective which must be gained, is the reduction of the deer population to a level which will allow the beech forests to recuperate. The problem of how to achieve this objective has not yet been solved ; it is being given the closest attention by the Forest Service as well as by other relevant authorities.

18. *Logging Activities Only Occasionally Threaten Soil Conservation.*—By comparison with fire and animals, the risks attached to sawmilling activities are negligible. This does not mean, however, that as a policy matter the Forest Service does not exercise the greatest care in the administration of logging operations in State forests. With the sawmilling industry moving further back into hill-country forests, the need for vigilance is greater than ever before. The Forest Service performs an unspectacular, but nevertheless valuable, function in continually resisting applications for cutting rights on forest where, for one reason or another, the vegetative cover must be preserved intact. On many soils removal of a relatively few large trees per acre in no wise endangers soil stability, and, in many cases, replacement of an over-maturing forest by a young growing stand will actually improve soil stability and decrease water run off, but in other cases the reverse may operate, in which event the forest is closed to logging operations. This work, which is of routine nature, tends to go unnoticed by the general public ; it is a valuable contribution to the whole problem of soil and water conservation.

19. *Sand-dune Stabilization Essentially for Maximum Development of Farm Land.*—The Forest Service contention that sand-dunes should be managed primarily to restore as much of the land as possible to farming production is rapidly winning wide recognition. Originally, due to certain legal defects in the Forests Act, 1921-22, responsibility for dune work finally passed to the Public Works Department during the depression period of the thirties, since when it has been confined to fore-dune stabilization and tree-planting for timber-production. The legal defects having since been removed, the Forest Service believes that it is the most suitably staffed to co-operate with the Department of Lands and Survey in minimizing and effectively managing a protective screen of forest for the maximum development of farming-lands behind.