

The long time element in forestry is unique and involves most elaborate planning and calculations, in order to enable the forest grower to carry on a continuous "sustained yield" management profitably.

With the discussion of what an adequate rate of interest is, with which to charge this business with its long time production, we come upon the field of national economy as one of the fundamental sciences for forestry.

Moreover, the aims and objects of forest management are to a large extent of national economic character. The claimed influence of forests on climate and water flow seem to impose upon State governments the duty to supervise, regulate, or undertake the management of forest areas, and, since other considerations of State besides the cultural effects of forest areas, involved in the peculiarities of the forestry business, indicate, that State management of forest areas will eventually become universal, it is desirable, if not essential, for the practice of technical forestry, that the fully educated forester should have clear conceptions of the principles underlying such duties of the State. Not only are, therefore, those branches of economics which concern themselves with the development of business principles, to be thoroughly mastered, but a knowledge of the functions of the State, of State politics is to the forester even more needful than to the generally educated man, for his business is in closer relation to the State.

In addition to the fundamental sciences, forestry must borrow from other arts and professions. The manager of an isolated property must have varied knowledge and accessories to his art. He must have enough familiarity with the principles of business law to avoid pitfalls; he may have to be his own architect, surveyor, and engineer. There is especially a considerable amount of engineering knowledge needed by him in providing methods and means of economic harvesting and transportation of his bulky crop.

The forester is really in the same business as the logger or lumberman, namely to supply wood materials to the community, with only the added obligation of continuing in the business after the first harvest. He must, therefore, be a competent logger, and all the engineering knowledge of the logger and somewhat more is his need. Forest surveys, especially, will for a time be the occupation of the first foresters, and hence surveying is an essential accessory, including road building, locating of railways, and cruder engineering works.

Every business man needs a certain amount of knowledge in practical commercial law. Singularly enough this has still all to be learned in practice, at the expense of employers and litigation, instead of a systematic course in the University. Every man who claims to have a modern education should have had the op-