By land classification is very commonly meant the placing of land types in categories according to most desirable use, e.g. arable farming, grazing, forestry or recreation.

Broadly defined, land classification consists of placing land types into exclusive categories according to one or more characteristics. Thus, land types may be classified as to present use, degree of slope, drainage, assessed valuation, soil type, average frost-free period, or any one of dozens of other characteristics.

A scheme for the classification of natural land types according to their physical productivity for cultivated crops, has been developed by the Soil Survey, based largely on its systematic description and mapping of soil types throughout the country.

Briefly stated, this plan consists in relating the productivity of each land type for a given crop to a national standard, namely the most productive land type in the country for the crop. The relationship is expressed by means of indices in which the naturally most productive land type receives a base index of 100, land half as productive, an index of 50, and so on. Such a scheme not only permits evaluation of the productivity of different land types within a locality or county, but also makes possible comparisons of the productivity of land types in widely separated regions.

A natural land type is defined as a kind of land having essential uniformity of physical characteristics or environment, or more specifically, uniformity in characteristics of soils, surface, configuration, and climate. In some instances soil types coincide with land types, in others land types embrace parts of soil types.

To illustrate; the Ontario loam of western New York is soil type, but that portion of the Ontario loam closely bordering Lake Ontario, and having the climatic characteristics of a leeward lakeshore position, and that portion lying at greater distance from Lake Ontario, are different land types, because of their different climatic characteristics. In the interest of simplification, two or more soil types having very nearly the same characteristics, as for example, a fine sandy loam and a very fine sandy loam of the same of closely related series are often combined in practice to form a single land type, because of the slight practical difference in land character between them. The distinction between soil type and land type is an important one.

Physical productivity may be defined as the average capability of the land to produce crops through a period of many years under a given intensity of cultivation or management.

The given intensity of management is here assumed to be that which most nearly maintains or restores the average productivity of land types on a given surface, configuration, and climate. The actual yield of a crop is dependent upon a number of economic factors as well, why is it desirable to undertake a classification of land types according to physical productivity?

A most convenient quantitative expression of the productivity of each land type for a given crop to a national standard, namely land, labor, fertilizer, seed, weed removal, and management, are constant.

Since the actual utility or economic productivity of land for agriculture depends solely upon its physical productivity, but a number of economic factors as well, why is it desirable to undertake a classification of land types according to physical productivity?

Of what use is a classification which purposely ignores as far as possible, any consideration of the economic characteristics of land which help make its use for agriculture desirable or otherwise?

Of the various agents, which, in operation, are responsible for agricultural productivity,—namely land, labor, fertilizer, implements and management, all but land are very variable as to time. These variables agents of production owe their variability to changes in which they can be modified by man in response to economic stimuli. Land, on the other hand, has certain relatively stable characteristics, namely its physical characteristics, more specifically its climate, surface configuration, certain soil characteristics, such as depth, induration of subsoil, texture, and structure. These characteristics of land are in general not readily altered by man; therefore, in terms of its economic environment which is altered by important changes in technique of production and of transportation, by changes in commodity prices, is subject to geographic classification or inventory of relatively permanent value. Described in terms of relatively stable characteristics, however, are subject to little human modification and is lent to geographic inventory and classification of at least semi-permanent value.

A geographic inventory of land resources in terms of the lands' relatively stable characteristics will have significance to 100 years hence, and not merely at the present, granting that some changes in land characteristics do occur through such agents as erosion or irrigation.

Finally, the description of land characteristics furnished by the Soil Survey to its systematic classification and mapping of soils throughout the country provides a sufficiently workable basis upon which to undertake such a national inventory of land resources.

No similarly systematic description land throughout the country in terms of economic characteristics is available, nor because of the transitory nature of economic factors, is it likely that there will soon be one.

The physical classification of the United States can, therefore, be made as a practical workable basis upon which to inaugurate such an undertaking.