Bearing this in mind, it is obvious that the the ashes. The case for example may occur that growth of a plant may be impeded, simply be-some hitherto unknown plant is recommended cause the mineral constituents principally needed, for cultivation, and tried in a soil equally unknown, indeed essential to their proper developement, as to its amount of the constituents which that have already been drawn from the soil by the particular plant requires. previous cultivation of another plant, requiring nearly or altogether the same constituents. If, of this plant in one field or soil, may pronounce it sential matters are not artificially supplied.

Such a complete exhaustion of the soil as we have supposed, for the sake of illustration, to be effected by a single crop, is not very likely ever to happen in fact. But what really happens, and that commonly enough, is, that although all the salts are not exhausted, yet being present in the lative ; a chemical analysis of the ashes of plants. soil in relative proportions very different to the amounts required by various plants, a single crop of wheat may deprive the soil so completely of those plants can be called exhausting which find one of its mineral constituents, that another crop an insufficient amount of ingredients necessary of wheat would not grow upon it, and this soil to their growth present in the soil. So that may still contain abundant mineral constituents plants requiring a considerable amount of mineral for the production of a good crop of clover or constituents, such as wheat, for instance, when turnips.

It will now be obvious that it is possible to grow three, four, or more successive crops of the same grain upon the same fields, whenever the but an inconsiderable amount of mineral ingredisoil contains a sufficient amount of the necessary inineral constituents, and that if a soil possessed an illumitable amount of these subisances, or received a constant and sufficient supply of the preceding remarks it will be evident how illthem, it would be able to produce successive crops of the same cereals continually and for ever, and moreover that a rotation of crops would be in ed beyond the power of controversy, that all such cases wholly unnecessary.

What we have stated with respect to the cereals, applies equally to all other cultivated plants : so that any plant may be grown upon the same upon practical experience, are mere illustrations. field continually, and good crops obtained, if the ingredients of the soil which the plant requires as clover, peas, vetches, lucerne, buckwheat, &c., either are present originally to an unlimited and even tobacco, potatoes, beet-root, carrois, amount, or the farmer furnishes the field with a j &c., do not exhaust the soil, but on the contrary constant and sufficient supply of these substances, are, in a certain measure, capable of improving

to you than perhaps has hitherto been the case. buckwheat, which is frequently sown during fal-You will no v understand that an exhausting plant low, and subsequently, when nearly in flower, must be one which in comparison with other cul- ploughed into the soil in order to improve and uvated plants requires many inorganic constitu- enrich it. The power of the soil to produce ceents, and consequently requires for its successful reals, after having grown crops of these plants, is cultivation a soil rich in those constituents. We thought to prove their non-exhausting nature. need by no means wait for the perfect develop- The term fallow crops, indeed, indicates that ment of a plant, and subsequent tria's upon the fields left fallow in order to restore their fertility same soil where it is grown, in order to know for the cereals, have been found by experience to whether it is an exhausting plant or not; we can be capable of yielding crops of these plants witharrive at a positive conclusion upon this point im- out their subsequent ability to grow the cenealer mediately, by burning the plant and examining being affected.-Far. Library.

Practical experience, arising from the growth for example, we take a field the soil of which contains the mineral and saline materials required to produce wheat, and yet only in a quantity exactly sufficient to produce a single crop, it fol-lows, of course, that a second crop of wheat can-not be reared upon the same field. The soil is completely exhausted for the moment, and will the lapse of a long time, and after a series of the plant in one held or soil, may pronounce it to belong to the class of exhausting plants, whilst in another soil it may be found to be a non-ex-hausting crop. Thus, the most contradictory conclusions may be drawn from practical expe-rience, and many a farmer has paid the penalty of this uncertainty. It is frequently only after the lapse of a long time, and after a series of remain so for ever, if it does not contain substan-successful and unsuccessful trials, that it is at last ces which may by disintegration and decomposi-tion furnish a new supply of the ingredients and which will not. All this may be obviated, necessary to the growth of plants, or if these es- and the question determined at once, by burning the plant, examining its ashes, and carefully analyzing the soil; this will enable us to determine whether a given field will repay the cultivation of the plant or not.

Thus you perceive that the terms, "exhausting" or "non-exhausting plants," are merely reas well as of the soil, can alone enable us to decide upon this point. Strictly speaking, only grown in a soil rich in those constituents, cannot be designated an exhausting crop relatively to the soil : whilst on the other hand, plants requiring ents, when sown in a soil not adequate to supply even a small amount of these ingredients, must relatively be considered exhausting plants. From founded the assertion is that certain plants improve the soil by enriching it. It is a fact, provplants whatever, withdraw certain mineral constituents from the soil, and thus so far impoverish it. All such notions of improvement, founded

It is frequently asserted that fallow crops, such Viewed in this light, the subject will be clearer it. This is especially said to be the case with