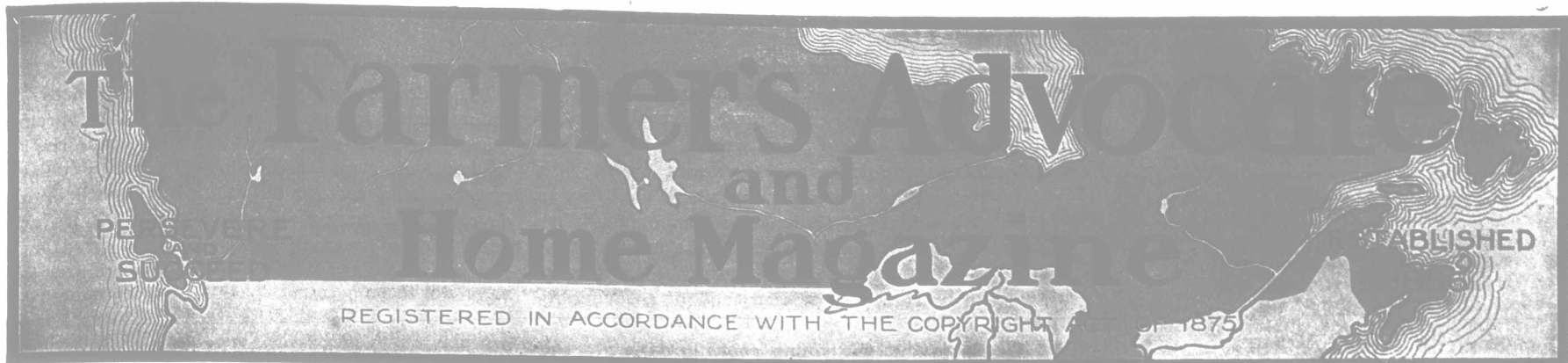




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EDITORIAL.

New fruit pests arrive almost every year, but the grower who sprays thoroughly need have little fear of the outcome.

Corn, rape and alfalfa are bonanza crops for the stockman on a small farm who is under necessity of making his acres produce a maximum return.

As an elderly farmer remarked the other day, there is nothing like including a sprinkling of alfalfa in the seed mixture to show what part of one's farm is adapted to this crop.

Try a few mangels this year. This is one of the best of the root crops, can be sown earlier than some of the others, thus dividing the labor of hoeing and cultivating, and gives heavy yields of palatable winter feed, relished especially by calves and young stock.

As a means of thickening the hay crop and inoculating one's farm for subsequent seeding to alfalfa, there is much to be said in favor of scattering a little alfalfa seed over the high knolls and clay slopes before drilling in the grain and clover. It is unwise to do this, however, unless one is definitely resolved to cut his hay earlier than clover hay is usually made; otherwise, the alfalfa will be leafless, woody, and not easily digestible.

There is generally a time immediately following the completion of seeding operations when the rush of work is not great. There is no better opportunity for overhauling fences than this. The stock have not yet gone to pasture, and so give no trouble. Fences can be hauled out completely and rebuilt. Digging is usually comparatively easy, and all conditions are favorable to the work, which goes a long way toward improving the appearance of the farm.

On its merits, the acreage of corn crop of the country should be largely increased this year. Those who had silage the past winter did not feel the pinch of feed shortage to such an extent as those depending on other crops. Corn seems to withstand drouth better than most of the other roughage crops. A larger amount of feed can be produced per acre than with most fodders, and one of its best features is that the lateness of planting allows for good cultivation previous to this, which cleans the soil, and the crop itself can be largely worked with horse cultivators, saving labor, which is scarce in most localities.

A late date for spring seeding need not worry anyone, so long as he snatches the opportunity when it comes. As Prof. Zavitz has often said, there is a certain period every spring when all nature seems bursting into life and energy. That is the time to put the grain into the ground. Providing this period is not missed, it matters little whether it be early or late. By the end of May, growth is often as far advanced in a late-opening season as in an early one. But for every day lost in committing oats, wheat or barley to the seed-bed after the proper period has arrived, about a bushel per acre is likely to be lost in the yield.

An Alfalfa-Seeding Experiment.

While experimentation is not the main purpose of Weldwood, our staff and readers are certain to be greatly advantaged by the excellent opportunity it affords us for conducting a few simple tests now and then in an incidental way, such as any private farmer of means and enterprise might do for his own satisfaction and profit. One particular experiment tried last summer has been watched with great interest by ourselves and others. A gently rolling field of ten or eleven acres was seeded to alfalfa, some three acres of the highest land across the center of the field being seeded with barley on May 20th, at the rate of one bushel barley and 18 pounds alfalfa seed per acre, 18 pounds being all the drill would sow. The seed was sown in front of a disk drill, and the ground immediately rolled and harrowed. The object in sowing so late was to clean the land somewhat by preliminary cultivation. In this we were disappointed, the field being altogether too dirty. Dry weather set in immediately, and the barley amounted to very little, only some forty bushels being reaped from the whole piece. The alfalfa came on nicely, despite the drouth, standing the dry weather much better than clover seeding on other fields. After harvest, however, the alfalfa appeared to go back, probably owing, in part, to the large amount of grass and weeds with which the land was still infested.

On each side of the spring-seeded strip was a piece of about three acres, which was thoroughly summer-fallowed and thoroughly tile-drained, knolls as well as hollows. These two pieces were sown July 20th with alfalfa alone, put in with a disk drill, seed being scattered ahead of the disks. Notwithstanding the extreme drouth, cultivation had kept this soil moist below, so that the alfalfa made a quick start, coming much less unevenly than might have been expected. Even before the autumn rains came, this alfalfa had made a fine start, and continued growing till ten or twelve inches high. The land here had been almost entirely cleaned, except where piles of tile had interrupted cultivation for a month or so, and here thistles came up rank, choking the alfalfa. Excepting these patches, the summer-seeded alfalfa looked much more promising when winter set in than did the earlier-sown, and this spring it is making a much more even and vigorous start, although the spring sown had a deeper root in the fall. We are not prepared to say what factor is chiefly responsible for the difference, but attribute a good deal of it to the freedom from weeds and grass. Tile-draining undoubtedly helped, for, in one case, where a spur of tile was run up through the spring seeding, the alfalfa is better than on either side of it. The long top also proved a protection, as one small patch, mowed with the scythe last fall, is making a somewhat less vigorous start than the area immediately surrounding.

We are still experimenting on this field, and will keep our readers acquainted with the results. During the winter, one strip was top-dressed crosswise of both spring and summer seeding. On other strips, parallel to this, ground limestone is being applied. We may also try disking a narrow width across the field. Inoculation, we might say, has seemed to produce no noticeable effect, as yet.

Without drawing too positive deductions, then, we would emphasize having land for alfalfa absolutely clean and well drained, both as to surface and subsoil.

As between spring and summer seeding, we are not decided, but rather than sow on foul land in spring would strongly counsel thorough fallowing and sowing alone in July.

The Germination of the Seed.

Few people realize, when they look at a bin of seed grain, that every seed is in reality a young plant of the particular genus and species which it represents. It is the young plant in a dormant state, and, with vital seed, all that is required is a suitable condition of temperature, air and moisture to put new life into the resting embryo, and the seed sprouts and grows just in direct ratio to the degree of food material, oxygen, heat and moisture at its disposal. There is a great difference in seed; therefore, one expects a great difference in the plant from the seed. Various indications are present which denote either high or low vitality. Large, plump seeds, properly matured and well stored cannot fail to produce stronger plants than shrunken, half-ripened, musty seeds. But the seed is really the young plant; therefore, just as the seed is, so shall the plant be when it commences its new life. Is it any wonder that many plants struggle against great odds to reproduce their kind, when so many of the seeds used to start the young plants are such weaklings, with scarcely enough food material surrounding the germ to nourish it until its hair-like rootlets are able to draw upon the soil for necessary food material and its slender blade can absorb carbon-dioxide from the air and convert it into carbohydrate material? Some time elapses before the young plant can draw all its food from the earth in which it is thrust, and the more of this material contained in the seed, the greater chance it has of successfully combating adverse conditions, as cold and wet or drouth. A strong plant can only come from a strong, healthy seed.

There is another factor which often influences seed germination, and which manifests itself very often in the case of the seeds of roots, and that is age. Age, then, is a determining factor in seed germination. True, it is not noticeable very often with the ordinary farm crops, but the fact that old turnip seed or old mangel seed is often slower to germinate, and frequently does not germinate at all, proves that there is a limit to the length of time seeds retain their vitality. The period cannot be definitely stated; different species, different degrees of maturity, and different methods of storage determine to a large extent the length of time the seed remains vital. This should throw out some good suggestions. Sow only new seed that has been kept cool and dry, and seed which indicates a high degree of maturity.

What happens when the seed or living embryo is consigned to the soil? If the soil is moist and warm, and is loose, so that the air or oxygen has free access to the buried seed, activity soon commences. The moisture is absorbed, which causes the seed to swell. The absorption of water also means a taking in of oxygen and oxidation of the carbonaceous ingredients of the seed produces more or less heat. These processes change the solid portions of the seed to a soluble form. The starch or fat, of which the food material of most seeds is largely made up, change to a form of sugar, readily used as food by the young plant, the roots of which begin growth first, closely followed by the stem. Nitrogenous materials in the seed are usually in the form of