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Seed Sowing.

Every grain of corn and other seed has a shell or less hand, to protect it from external injury; and at its base what is called then as water, bessee they can become avail-the seed pore, or eyo for the passage its able as food for plants. The common ar as wards of the nutrient pulp when the seed is also a most important ingredient in the nonripening, and for the passage outwards of riskment of plants, hence the necessity of the young plant after sowing. Within the a free circulation of far in security luxur, shell is the kernel, consisting of the *embrigo* ant crops. The food taken in by the roots plant with its radicle or root, its genalet or stem, and the neck between them, besidethe seed lobe or lobes, containing materials for nourishing the plant in its first stage of growth.

Four things are indispensable in order to begin the growth of the embrigo plant contained in the seed - heat, water, air, and darkness. The heat is required to bring into activity the dormant vitality of the cinbrigo, and in conjunction with the water, to soften the nutrient materials contained in the seed lobes, and render them available for the sustentation of the youthful plant, until the perfection of its organization will have enabled it to derive its sustenance from the carrounding soil. For this pur-pose, pure water is better adapted than water containing any rich materials, the nutriment which nature has provided in the lober of the seed being fully adequate and of suf- minute openings or pires, which admic air, ficient richness to nourish the plant in its and facilitate the escape of a considerable infancy or dependant state. Water for the portion of oxygen gas, and the superducate proper nourishment of plants, however, should be more or less mixed with atmospheric air, which it always is when in a running state, or when falling in showers of rain. If a dead level, a staff clay, or any other cause stop for a length of time, the motion of the water supplied for food to plants, becomes unwholesome, chilly from not having an opportunity to mix with air, which it can only do by moving or circulating freely without let or hindrance. Far-mers term those soils cold or sour where water lodges and does not circulate freely through. Their defect is the want of a through. due supply of air. The taste of the water on such soils is vapid somewhat like water deprived of air by boiling. Freely circulating air is absolutely necessary for supplying Soxygen and carrying off carbonic a id grs, cannot properly cheet this important change; sare to hight and an, in its circulation through in process the very reverse of what takes and the pulphener in consequence only pre- the leaves of the plant, is converted into place when plants are exposed to conlight. For the same reason light is injurious by carrying off the oxygen requisite in this stage of growth. In sowing any kind of weed, these four circumstances should be warefully attended to. For wast of heat, seeds will not come up in frost; for said of air they will not come up if too deep in the ground ; and if not deeply covered they will not come up from having too much light.-Few will germinate in the light. It is of the utmost importance to the success of the corn crop, that the seed be placed at the light they have the more leade, such, and proper depth in the soil. If it be too thanly of wide planting and summer as ordered to covered, from being expessed to the action the size of the planting and sowing according to the size of the planting must therefore be oblobes will become exhausted, before the young plant will have gamed sufficient strength and power to obtain its food from the soil. If on the other hand, it be buried too deep in the ground, three or four inches, the stem of the young plant is weakened, and its strength spent, in efforts to get above ground to expose :tself to the free action of light, which, the moment the nutrient functions of the seed have terminated, becomes absolutely requisite to the due performance of the functions upon which its existence and future growth depends. In this state, plants are called seedlings.

The very tip of every root fibre is furnished with a spongy sucker, which acts as a *pulp*, they throw out, by their roots, a sort mouth to feed the plant: these are called of excrementations slime, differing in differspongelets, and have their openings or pores | ent plants, but more or less posonous or in. | On lands properly prepared by summer fal-

so very small, that they will not allow any colid substance, however fine to pass, nor any legard thecher than water. All manures must, therefore, 1 e.d. solved, and made as of plants undergoes great changes, especi-ally when it has reclied the leaves. When the water, I clding in solution the nutritive materials, constituting the food of plants is sucked in by the tips of the roots, and passer as it rices, probably from mixing with what has previou ly passed through the leaves. The maky matter in lattice, sou thistle, dandihon, sporgs, aid other plants, is not accually sup.

When the sap arrives at the leaves it is somewhat in a thickened state, and is spread out under the very than slim of the upper aide of the leat, and exposed to the action of the air, as the blood is in the large of man and other animals. For this purpose the leaves are provided with very numerous and portion of oxygen gas, and the superduous required solvent of the food upon which they hog plants have become capable of mainplant is substance. After the sap his pass tunning a separate existence, independent of ed through the leaves, and by giving out us the n-trancat contained in the seed, light, superfluous viter has become reduced to which in its entryotic or first strice, was so about one-thild, it torus the pulp, chicity highly injurious, has now become absolutely composed of charcold, and a or a dark high and indepensably necessary to the performcolour; this, with the more or less yellow ance of those functions upon which its growth have of the transparent usage of the leaf and having depend, and without which gives it the prefix colour. When no pulp in conjunction with a free circulation of at-is formed the leaves becomes yellow. The mospheric air, it never could arrive at influences from this are of practical import. healthy maturity. This shows the necessi-take place in the dark, seen light teng in-take place in the dark, seen light teng in-take place is to secure to then dark. dispensible to open the pores of the leaves; the full benefit of light and air. The say, hence plants growing under thick trees, or or crude alment, taken in by the roots, alter any thing that obstructs the seen's light, | undergoing an indoitant change, by expoand the party rener in consequence only pre-pared in small q - itities, they become slen-der, yellow shand sickly; the leaves, which stituting the component parts of the plant in are the organs for digesting and preparing all its stages, from the tender seeding to the pulp from the sap being incapable of full maturity. Whilst the leaves are perdaly performing their functions. When the forming these functions in converting the change of sap into pulp is in any way pre-crude sap into nutritive pulp, care should be venied, as by change or by excessive mois-taken that the soil be hept in such a state of ture, the leaves become yellow.

The more I tht plants are exposed to, the hardie, will they be; provided they be not gorged with too watery food ; and the less light they have the more leable, sichly, and being crowded together become nearly as much shaded, at least their nide yes if planted under trees. The perfect growth and size of plants, depend upon a supply of the food proper for the formation of sap, and on a healthy formation of the pulp.

The formation of the puly in a plant is onologous to the digestive process that the food undergoes in the human or of the arimal stomach, to render it capable of promoting the growth of the animal body, and of maintaining it in a state of robust health, equal to the performance of all its functions. Independent of the water and gases, which are given out by plants, in the formation of pulp, they throw out, by their roots, a sort

jurious to the same kind of plants which throw it out. This accounts why too successive crops of the same kind do not succeed. It is not, as is generally supposed, from the plant food in the soil being exhausted, but from the excrementations shane, which acte, upon the same sort of plants that produced it, as a slow poison. This shows the necessity of a systematic arrangement in the selection of crops to succeed each other in rotation. This excrementitious slime, though injurious or poisonous to plants of the came hand that produced it, is yet a nonushing food for plants of a different Thus, the excrementations slime givkind. es up into the plant, it takes the name of en out by beans or clover, so far from being sap. The sap introst plants, if not mall, injurious, is found to be highly favourable a clear fluid, she hay exect, becoming these to the production of wheat. The same has been proved with respect to the succession of other crops. In tracing the changes that take place from the tune the seed corn is put into the ground, until the plant arrives at maturity, and perfects its seed, several facts present themselves to the observer which are practically of the utmost importance, and which should never be lost sight of by the intelligent agriculturist. When the ceed is put in the ground, the four requisites to cauble it to perform its functions and prodace a seedling plant, able to sustain itself by nutriment taken from the soil, are heat, water, air, and darkness. This considera-tion will sufficiently indicate the points to water (constituting two-thirds of the sup), which attention should be directed in putting which had been taken in by the roots as a the seed in the ground. When the seed tillage, and in such a condition, as to secure for the roots a sufficient supply of nutritive matter to supply the demand made upon them by the constant waste of sap, which the growth of the plant necessarily creates. Farmers in general pay little, if any, attention to these important points, and the consequences are an immente waste of seed, and deficient crops."-Hints on Agricultural Economy.

> The foregoing article is well worthy the farmer's attention. We believe that in no country, would the beneficial effects of drill sowing of wheat and barley be more decidedly perceptible than in British America, provided the crop was once heed. It would give air to the crop, and prevent, in a great degree, the disease of rust and mildew so prevalent here. The hoeing, together with the free circulation of air, would have a considerable effect in destroying, or preventing the ravages of the wheat fly. We most strongly recommend the drilling of wheat.

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