

systems. He says, "the soil in which I proposed to plant being very shallow, and lying upon a rock, I collected it with a plough into high ridges of 4 feet wide, to give it an artificial depth. A deep furrow was then made along the centre and highest part of each ridge, and in the bottom of this, whole potatoes, the lightest of which did not weigh less than 4 ounces, were deposited at only 6 inches distance from the centre of one to the centre of another. Manure in the ordinary quantity was then introduced, and mould was added sufficient to cover the potatoes rather more deeply than is generally done. The stems of potatoes, as of other plants, rise perpendicularly under the influence of their unerring guide, *gravitation*, so long as they continue to be concealed in the soil, but as soon as they rise above it, they are to a considerable extent under the controul of another agent, *light*. Each inclines in whatever direction it receives the greatest quantity of that fluid, and consequently each avoids and appears to shun the shade of every contiguous plant. The old tubers being large, and under the mode of culture recommended, rather deeply buried in the ground, the young plants in the early part of the summer never suffer from want of moisture, and being abundantly nourished, they soon extend themselves in every direction till they meet those of contiguous rows, which they do not overshadow on account of the width of the intervals. The stems being abundantly fed, owing to the size of the old tubers, rise from the ground with great strength and luxuriance, support well their foliage, and a larger breadth of this is thus, I think, exposed to the light during the whole season, than under any other mode of culture which I have seen; and as the plant requires a very large size early in the summer, the tubers, of even very late varieties, arrive at a state of perfect maturity early in the autumn." This method yielded an abundant

crop, the bushel averaging 82 lbs. This experiment suggests the necessity of attention to the distance which should separate the rows of potatoes, and to the direction of those rows, so that the plants may have the best chance of the full influence of that important principle, light. We would urge attention to this circumstance, as we have often observed the rows in our fields crowded together, the vines overshadowing them so as to exclude the light between them; the stalks spindling, pale, and decaying near the earth, and the tubers, or potatoes in the hill, small and few. We are informed by Mr. Knight, "that the distance of the intervals between the rows should be wholly regulated by the length acquired by the stems in each peculiar situation and soil. If the utmost length acquired by the stem be 4 feet, let the intervals be 4 feet also, and if the variety be of dwarfish habits, the stems not exceeding 2 feet, intervals of 2 feet will be sufficient. *The rows should be made from north to south*, that the mid-day sun may be permitted fully to shine between them. Each set, or cut seed, should weigh at least 6 oz., and they should never be placed at greater distances than 6 inches from centre to centre, and a preference should be given to *whole potatoes*. If the plant be very dwarfish, 4 inches from centre to centre between the sets will be sufficient; and if the form of the potatoe be long or kidney shaped, a good deal of advantage will be gained by placing them upon their ends, so that the end which joined the parent plant will be downward. The largest products will generally be obtained from varieties of rather early habits, and rather low statures, there being in very tall plants much time necessarily lost in carrying the nutriment absorbed from the soil up to the leaves, and down in the state of living sap to the tuber."

Strong stemmed varieties are preferable, as they do not fall and overshadow each other, and Mr. Knight