HEALTH AND PROFIT IN SCHOOL GARDENS

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HEALTH AND PROFIT IN SCHOOL GARDENS: PORTLAND FURNISHES AN INTERESTING EXAMPLE OF WHAT CHILDREN CAN ACCOMPLISH AS GARDENERS: BY HARLAN D. SMITH

WHEN the warm breezes of spring blow restlessness and wrinkles into the schoolrooms of Portland, Oregon, there is a remedy for the affected small bodies. The call of the outdoors and the soil is answered. This western city, in a way all its own, has gone strong—unanimously, almost—for school gardens. That is, it is a little more enthusiastic over them, perhaps, than other cities that have adopted the idea. Its schoolchildren now may have a lesson in gardening when the daily routine of staple studies grows irksome.

Flower and vegetable gardening during school hours is justified, the board of education believes, because it creates interest in a work in which pupils may well and profitably spend their time after school and during the summer vacation, and because it stimulates lesson-getting at a time of year when a stimulus is needed.

The Portland educators are not in an experiment. School gardening has been thoroughly tested and developed and now is firmly established in that city. The idea, applied with more or less enthusiasm in a number of cities, has been so successfully practiced and developed in this city, that others, desiring to take up the work, have turned to Oregon for a system. Not a little fame, in fact, has come to the "Rose City" through the achievement of its schoolchildren, particularly last year, on vacant lots. A number of cities have sent their garden supervisors to learn; government experts unofficially have ranked it first among American cities in this work; and the demands for a recent bulletin by its supervisor of school gardens, describing the methods, have been received. The excellent work done by the schools of Los Angeles last season was possible largely, perhaps, through a study and an application of the Oregon plan.

Ten thousand six hundred Portland school children, stimulated by the idea of money-making, turned weed-grown and trash-covered lots and backyards into profitable gardens last year. They didn't make a mass of money, but they did grow a mass of garden produce—enough to supply thousands of tables in Portland homes with delicious, fresh vegetables every day. Further, they cleaned and brightened with flowers and growing things dozens of vacant lots—the eyesore type; they settled the vacation problem for many parents, and they learned the science of growing things and the business of selling them.

And they made some money, too, those who stuck to it. Several boys and girls sold their parents more than twenty dollars' worth of vegetables during the summer. Emery Ingham, fourteen years old, made a net profit of $18.10 on a small home garden in which he worked only a few hours a week. Some of the boys opened a street booth down town with their surplus produce and disposed of several hundred dollars' worth that way and locally in their neighborhoods. Altogether, some $400 worth of vegetables were sold. The profits were divided among those workers who, remaining faithful to the gardens after school had closed, saw to the care and sale of the later crops.

HELPED TO START A PUBLIC VEGETABLE GARDEN.

By their street market, incidentally, the children furnished a good business tip, without charge, to the commercial vegetable growers. Portland didn't have a public vegetable market before the school gardeners opened their booth a year ago last sum-
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CHILDREN OF THE ROSE CITY SCHOOL AT WORK IN THEIR GARDENS.

mer. But when the grown-up gardeners saw people coming, baskets in hand, to this booth every morning for freshly pulled vegetables it wasn't long before they were competing. By the time the summer was well under way the street was lined with vegetable stands—a market supplying fresh produce at cheap prices, and taking the place of squawking hucksters, to some extent; all of which, thanks to some enterprising school children.

Forty-three gardens, varying in size from 40x50 feet to two acres, and covering a total area of nearly sixteen acres, were farmed by the Portland youngsters last season. In these gardens 8,100 pupils worked. Thirty-five hundred had gardens in their own backyards; this makes a total of 11,600. But 1,000 children had school gardens and home gardens, too, so the total number enrolled was 10,600.

STARTING JUVENILE GARDENING.

The Young Men's Christian Association of Portland first aroused interest in juvenile gardening in 1910. Then a group of citizens, organized as the Garden Contest League, and led by Marshall N. Dana, a newspaper writer, took over and enlarged upon the gardening propaganda. That year, 1912, the work was done in one large garden at the Woodlawn School. The principal, T. J. Newbill, gave much encourage-

ment and many hours of effort to the work.

Early in 1913 the Garden Contest League was reorganized with about twenty citizens, men and women, as members. They were an enthusiastic lot, too. It was decided to enlarge the work and to call upon the Oregon Agricultural College for an expert to act as director during the entire year. Money to finance the undertaking was easily obtained through subscriptions from various associations and civic clubs of the city—the Rotary Club, the Ad Club, the Progressive Business Men's Club, the Realty Dealers' Association, the Commercial Club, and the Chamber of Commerce.

BOARD OF EDUCATION IN CHARGE.

It should be said here that the board of education, realizing, after the 1913 season, the importance of school gardening, took charge of it last year and now makes an annual appropriation to carry it on. The salaries of the supervisor and his assistant now are paid by the board of education, as are the other expenses. The total cost to the city last year was about $3,000. One thousand dollars additional was collected locally for fencing and ground preparation. The low cost may be attributed to a fine spirit of cooperation among the teachers that enabled one supervisor to handle the work.
M. O. Evans, Jr., a graduate of Cornell, who was taking special work in vegetable gardening at the time in the Oregon Agricultural College, was sent by that institution to direct the larger propaganda planned by the Portland citizens. He began his work March 1, 1913, and it is hardly an exaggeration to say that night and day, ever since, this young man has worked with increasing enthusiasm and unlimited energy at his job. Indeed, the remarkable development of the garden work in Portland in the two years since then has been largely brought about by the efforts of Evans. He is a genius in handling children by thousand lots and keeping every one interested. He worked nights planning his work, addressing meetings of teachers and civic clubs, or meetings of school communities in which leadership and advice were needed to get a school garden started. He induced pupils to enter the work for the pleasure and the profit in it, not for prizes. He supplied them with ideas for laying out attractive beds and encouraged friendly rivalry between the schools participating. Every child was his friend. He gave suggestions for disposing of
their produce and helped them carry out their plans. With his assistant, W. H. Dunham, a graduate of the Oregon Agricultural College, who was employed from March to June inclusive, Evans gave personal supervision to every one of the forty-three gardens. And he managed somehow to visit many of the 3,500 home gardens.

Recently the Oregon college called Evans to a larger field. In the extension service of that institution he will have the entire State as a workroom.

It was rather a late start that year—March 1—but in spite of that and the disadvantage of having to break up heavy sod lots in a short time, twenty-eight pieces of land were prepared and planted by the children that spring. These gardens covered in all about ten acres. Thirty-six hundred children were enrolled that year in the school gardens and about 3,500 had gardens at home. The season closed in June with a very successful exhibit. Lack of funds prevented carrying on the work through the summer.

To encourage school competition the director divided the twenty-eight gardens into two classes—Class I consisting of areas over 11,000 square feet—twelve in all—and Class II made up of sixteen gardens of 11,000 square feet or less. Prizes then were offered for the best garden in each class.

When the board of education took over the work late in 1913 it retained Evans and
gave him the title of Supervisor of School Gardens. December 1 the supervisor started preparations for the next year. That month, January, and February were spent in hauling fertilizers, breaking ground and organizing the work. The twenty-eight gardens of the previous year were increased to forty-three. With one exception the use of all these lots was obtained without cost. Many garden sites were trash-covered and unsightly and required considerable work before they were ready for the plow. In this work of reclamation boys worked like Trojans, taking much pride in the remarkable changes that were wrought. Sixteen tons of ground lime rock, 296 loads of manure, and a great many tons of wood ashes hauled from the furnaces of the schoolhouses, were used in preparing the gardens last year. In most cases the boys scattered this fertilizer.

How those gardens grew from that treatment! The Stephens School popcorn plot, covering one-fifth of an acre of ground never before used for such a purpose, was made to grow fully matured white popcorn at the rate of seventy bushels an acre—a remarkable yield for popcorn.

The school contests adopted in 1913 were opened again last year. Two prizes of $10 each also were offered for the best home gardens by pupils under thirteen years and over thirteen years, respectively. These were the only prizes offered, the policy being to put the gardening project before the pupil as an

PUPILS OF SHATTUCK SCHOOL EXPRESS THEIR SCHOOL PRIDE IN LETTERS OF LETTUCE.
opportunity to do something for himself, rather than give the impression, by offering many prizes, of hiring him to enter the work.

**Enjo eying the Work.**

Much of the garden making was done during school hours. Some teachers preferred to allow that privilege only as a reward for good deportment or good scholarship, but in most cases, where a majority of pupils were enrolled in the work, certain regular periods during school hours—perhaps three times a week—were allotted to the garden. At these periods the teachers would accompany the pupils, taking direct charge, giving suggestions, and seeing to it that the time was well spent. Mr. Evans or his assistant would be present whenever possible to direct the work personally. To make their gardens attractive many of the schools used fancy borders of vegetables or flowers. The name of the school, done in large letters of growing things, expressed to passersby for many weeks the pride of the young workers.

Last year for the first time many of the juvenile gardeners, with the supervisor’s help, con-
continued their work through the summer, following one crop with another according to the most improved methods. Committees of boys from every school were made up before school closed—every garden to be cared for by a committee of interested boys from that school. These boys met twice a month at the call of the supervisor. For six weeks the juvenile booth at the city market was maintained. The boys were allowed all the produce from the various gardens and the money received was divided among them.

Combining School and Home Gardening.

Mr. Evans has some interesting ideas on the school garden scheme in general; some on the organization and management of this new phase of public school study that should be of much value to officials who are contemplating introducing this feature into their schools. His suggestions have worth primarily because they are in harmony with the theories of eminent educators and government experts, and, further, because they are fresh and thoroughly tested—direct from the field.

School and home gardening should be a part of the work of grammar grade pupils in every city and town, Mr. Evans believes. It is a legitimate and profitable part of school activities. School time for gardening is justified, especially when a large majority of the children in a room wish to engage in the work. Two or three hours a week usually is sufficient to keep a garden plot in condition, after the ground is prepared and planted. If a minority only wish to enter it is best that they should do the work, largely at least, outside of school hours.

The ideal arrangement is a school garden supplemented by a home garden. The first then is in reality an experimental and object-lesson garden where each pupil, tilling a small plot, may learn things that may be applied at home on a larger scale. Where the school grounds are large enough to afford a suitable area it is best to have the garden there. It then can be made more of a permanent institution and can be beautified by laying out permanent flower beds set with perennial plants. Vacant lots usually can be secured close to a school. The garden should not be more than a quarter-mile from the school. It should be well fenced. This need not be expensive, as it can be done by the manual training students in the high school if manual training is not taught in the grammar grades.

Planning Space and Work.

A very satisfactory garden can be made on a single lot, 50x100 feet, or even less. A mistake easily is made by attempting to use too much ground. The average boy or girl in the fourth, fifth or sixth grade does not need a plot larger than five or six by ten or twelve feet, even if plenty of ground is available. Pupils in the grades above the sixth usually can handle a plot equivalent to 6x15, or 7x12 feet. Pupils especially interested and energetic can, of course, take care of more space, but for the average child plots of these sizes will be found sufficiently large.

Mr. Evans believes it is a matter for the teacher to decide whether to include the
smaller children of the first, second and third grades in the gardening work. If the teacher is interested and willing to be with the children most of the time they spend in the garden it is advisable to allow them to come in. They enjoy the work greatly and are very energetic, often much more so than some of the older pupils. Unless closely watched, however, they do not get much benefit from the work, and often do damage by pulling up the young plants with the weeds. If they are included they should have a section in the rear of the garden, divided into long, narrow beds, in which each child has a few square feet, or, if the space is limited, only two or three rows.

LEARNING TO BE GARDENERS.

Preliminary instruction should be given the children in the class-room before they are taken into the garden. Seeds may be studied and short exercises written concerning certain vegetables and their uses, with drawings of the seed and its matured product. Reasons for different operations may be explained and graphically illustrated on the blackboard. Germination tests also should be made by the pupils.

Each pupil should have a garden at home whether or not he has one at school. If ground is available any healthy boy or girl seven to nine years old can care for a garden containing at least 100 square feet; for example, a plot 10x10, or 5x20 feet. The Industrial Club Project—a State contest—requires at least one square rod, which is not excessive for boys or girls from nine to eighteen.

Demonstration plots, exhibits, the preparation of the soil, the use of fertilizers, the grouping of the plots, systems of planting, flower beds, competition, record-keeping and marketing are other interesting features of the Portland plan that might be discussed here were not the space limited. A recent bulletin by Mr. Evans, published and distributed free by the Oregon Agricultural College at Corvallis, covers these and all other phases of the work. It is a most useful manual for one assuming the responsibility for a school garden.

A PORTLAND BOY’S GARDEN PROFIT.

Emery Ingham, a fourteen year old boy, kept a strict account of the business he did in a small garden, 45x30 feet, in the back-

FIVE PLANS FOR LAYING OUT SCHOOL GARDENS.

FIGURE ONE: A GARDEN 44X100 FEET; GOOD TYPE FOR LOT 50X100 FEET; BEDS 8X17 DIVIDE INTO TWO OR FOUR PLOTS; UNIFORM PLANTING SYSTEM.

FIGURE TWO: 50X100 FEET; GOOD TYPE WHERE CROWDED FOR SPACE: OUTSIDE BEDS 10X20; INSIDE BEDS 8X20; EACH BED PROVIDES FOR FOUR PUPILS; PATHS THREE FEET AND TWO FEET.

FIGURE THREE: 100X100 FEET; DIAGONAL ARRANGEMENT FOR CORNER LOT; TRIANGLE BEDS USED FOR FLOWERS; RECTANGULAR BEDS 10X22 PROVIDING FOR FOUR OR SIX PLOTS.

FIGURE FOUR: 120X125 FEET; PLAN FOR SQUARE AREA OF ANY SIZE; NINE FRONT ROWS OF BEDS: 8X20 FEET; PRIMARY ANNEX IN REAR, BEDS 6X20 SEPARATED.

FIGURE FIVE: 90X200 FEET; PLAN FOR LONG, NARROW GARDEN; BEDS 12X16 PROVIDING TWO OR FOUR PLOTS EACH; DOUBLE ROW FLOWER BEDS 3X12 FEET.
yard of his home last summer. These figures, taken from his books, show that for a spare time occupation business was good. Ten similar reports, sent to the United States Department of Agriculture, at Washington, received much praise from the officials:

**Expenses.**

Preparation of seed bed (10 hours' labor at 10 cents) ........................................ $1.00
Cost of seed and plants .................................. .75
Cost of planting (labor at 10 cents an hour) .......... .20
Cost of manure and commercial fertilizer ............. 1.50
Cost of cultivation (labor at 10 cents an hour) ....... .90
Cost of gathering vegetables .......................... .30
Cost of marketing crop ................................. 1.25

Total outlay ........................................... $5.90

**Receipts.**

From fresh vegetables sold at public market ........... $13.50
Kale, and sunflower seeds, for chicken feed .......... 7.00
Value of vegetables used at home ...................... 3.50

Total receipts ......................................... $24.00
Total outlay ........................................... 5.90

Net gain ................................................ $18.10

The gain of such work to the children, as every one knows, is of far more value than can be estimated in dollars and cents — encouraging and excellent as is the report. The knowledge won will be a lifelong, ever-increasing asset. The health gained will lay a foundation for future development of brain and body. The happiness will make towards a life of buoyant, joyous experience instead of a dull, nerveless, plodding existence. These must be added to the net gain. It is not that the energies of the youth of our land be altogether diverted to farming, but that they may have the broad grasp of life in all its pleasurable details.

**WEATHER-PROOF GARDEN LABELS**

GARDEN makers will welcome the two weather-proof plant labels recently devised. Plant labels of all kinds have filled the markets for years, but, as every one knows, their worth is seldom above a season's lasting. But these are permanent, solid, simple looking, and can be used year after year. One, made to stand in the ground, is made of rust-proof iron, galvanized and japanned green. The stake is 18 inches high and the opening at the top will take a card 2½ by 1½ inches. Over the white celluloid card is a cover of mica. Upon this celluloid card the name of the plant is written with an ordinary lead pencil. The mica covering protects it from water and dust or dirt that might fly upon it when the ground is watered. This neat and permanent label will be welcomed by every one desiring to make a study of plant conditions.

The other is a small label also made of white celluloid with a cover of mica. These are to hang upon rose plants, fruit trees, etc. Upon it can be written the name of the plant, date of grafting or of planting, name of species, etc. This label is attached to vine, plant or tree by copper wire so that the branch is not injured. The wire never rusts and the information written upon the card is not obliterated by the storms of winter. As every one knows, it is an easy matter to forget the name of a rose bush, chrysanthemum or peony planted. With these two simple labels gardeners will not be puzzled as to where they had planted their choicest tulips or which of the rose trees blow red, white or pink.

As the plans of the gardener change and bulbs are transferred to a different bed the transfer can be noted on the marker. When one variety of rose or shrub is discarded, its name label can be made to serve for the new species substituted for it. Thus the same frame or same mica covering will serve duty for many uses, while the card within it can be renewed as often as desired. The more expert the gardener, the more he appreciates the advantage of such helps to memory, such faithful recorders of experiments.