

## DEPARTMENT OF THE INTERIOR.

BUREAU OF EDUCATION, WASHINGTON.

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**POSSIBILITIES FOR SCHOOL-DIRECTED HOME  
GARDENING IN ATLANTA, GEORGIA.**

[In the spring of this year J. L. Randall, one of the Bureau's specialists in school and home gardening, spent two or three months in the city of Atlanta, assisting the board of education and the superintendent of public schools in inaugurating the work of school-directed home gardening. While in the city Mr. Randall made a study of school and labor conditions of school children and the economic possibilities of home gardens directed by the schools. The results of the study embodied in this circular should have interest for the people of Atlanta and should prove helpful to school officers in the development of home-gardening work.]

In order to determine the value of the plan of the Bureau of Education for school-directed home gardening in Atlanta, it has been necessary to study the following:

1. The present occupation of children during out-of-school hours.
2. The availability and adaptability of land for growing vegetables.
3. The economic value of gardening to the home.
4. The present training and possibility of future training of the teachers of the city in home gardening.
5. The possibility of incorporating the subject as a part of the school curriculum.
6. The consideration of the immediate and future cost of the subject as a part of the educational system of the city.

The following tables, brief comments, conclusions, and recommendations are the results of this study. The completion of the investigation has been made possible by the thorough cooperation of the school officials, and especially the teachers of the upper grades, in which grades the investigation was made.

**OCCUPATION OF ATLANTA SCHOOL CHILDREN WHILE OUT OF SCHOOL.**

*White grammar schools.*—Of the 3,356 boys reporting from the fourth, fifth, sixth, and seventh grades of the white schools, 2,409 have no money-earning employment after school or on Saturdays, and 107 are irregularly occupied. In vacation 2,319, or 69 per cent of all white boys reporting from these grades of the grammar schools, are not employed outside of the home in money-earning occupations.

A much smaller proportion of white girls in the upper grades of the grammar schools are occupied in gainful occupations in Atlanta than in any other city that the Bureau of Education has surveyed. Of the 3,692 reporting, 3,635 state that they are not employed in money-earning occupations at any time during the year.

*Colored grammar schools.*—Of the 821 boys reporting from these grades of the colored schools, 369, or 44.9 per cent, have no money-earning employment at any time during the year.

A much larger number of girls in the colored schools are employed than in the white. Out of 1,520 reporting, 228 have some definite earning employment.

*Summary.*—Of the total number, 9,189, reporting from all schools, both white and colored, only 1,651, or 17.8 per cent, have some regular employment during the year, either out of school hours or during vacation.

For both boys and girls in the white schools, the average time of employment in home work is six hours per week. The home work of the girls is more definite than that of the boys. The number of children who claim to have some definite home work is large, yet in most cases it has been found to be of a rather irregular nature and of such character that it could be put aside by the child at will.

TABLE 1.—*Occupations of boys of the fourth, fifth, sixth, and seventh grades of the white grammar schools of Atlanta.*

Total number of boys reporting.....	3,356
AFTER SCHOOL* AND SATURDAY EMPLOYMENT.	
Total number employed.....	947
Regular employment.....	840
Irregular employment.....	107
Average earnings per week of those employed.....	\$1.09
VACATION EMPLOYMENT.	
Total number employed.....	1,037
Regular employment.....	931
Irregular employment.....	106
Average earnings per week of those employed.....	\$2.84

HOME WORK.

Average number of hours per week that the 3,356 boys are engaged in home work.....	6
Number who have some regular home work.....	2,322

TABLE 2.—*Occupations of girls of the fourth, fifth, sixth, and seventh grades of the white grammar schools of Atlanta.*

Total number of girls reporting.....	3,692
AFTER SCHOOL AND SATURDAY EMPLOYMENT.	
Total number employed.....	31
Regular employment.....	19
Irregular employment.....	12
Average earnings per week of those employed.....	\$1.72
VACATION EMPLOYMENT.	
Total number employed.....	57
Regular employment.....	51
Irregular employment.....	6
Average earnings per week of those employed.....	\$2.80

HOME WORK.

Average number of hours per week that the 3,692 girls are employed in home work.....	6
Number who have some regular home work.....	2,740

TABLE 3.—Occupations of boys of the fourth, fifth, sixth, and seventh grades of the colored grammar schools of Atlanta.

Total number of boys reporting.....	821
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## AFTER SCHOOL AND SATURDAY EMPLOYMENT.

Total number employed.....	412
Regularly employed.....	396
Irregularly employed.....	16
Average earnings per week of those employed.....	\$1.68

## VACATION EMPLOYMENT.

Total number employed.....	452
Regularly employed.....	449
Irregularly employed.....	3
Average earnings per week of those employed.....	\$2.40

## HOME WORK.

Average number of hours per week that the 821 boys are engaged in home work.....	10
Number who have regular home work.....	479

TABLE 4.—Occupations of girls of the fourth, fifth, sixth, and seventh grades of the colored grammar grades of Atlanta.

Total number of girls reporting.....	1,320
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## AFTER SCHOOL AND SATURDAY EMPLOYMENT.

Total number employed.....	194
Regularly employed.....	154
Irregularly employed.....	40
Average earnings per week of those employed.....	\$1.01

## VACATION EMPLOYMENT.

Total number employed.....	228
Regularly employed.....	220
Irregularly employed.....	8
Average earnings per week of those employed.....	\$1.77

## HOME WORK.

Number of hours that the 1,320 girls are engaged in home work per week.....	13
Number of girls who have some regular home work.....	1,040

## FREE TIME FOR WORK IN HOME GARDENS BY PUPILS.

The Atlanta schools are in session for nine months and the time is divided into four terms of nine weeks each. Deducting the holidays and days on which the schools are suspended for other causes, the average number of school days in the year is approximately 175. The average number of week days that the children are not in school is 138. The school day employs the time of the child from 8.30 a. m. to 2 p. m. Thus, two and one-half hours of each of 175 school days and five hours of each of 138 nonschool days might be spent in home gardening or other productive and educative activity and yet enough time be left for home study of the school subjects, play, music, art, and other special subjects. A comparison of the total enrollment and the average daily attendance show that 1,527 children are absent from the white schools each day.

The negro pupil may devote fully as much time to gardening as the white child. Although a larger percentage of the colored children have duties, this is probably offset by a lack of special education interests.

TABLE 5.—*Time that might be used for gardening by pupils of grammar schools.*

Total enrollment in white grammar schools.....	13, 521
Average daily attendance in white grammar schools.....	11, 994
Average number of children absent from school in white grammar schools.....	1, 527
Total enrollment in colored grammar schools.....	5, 631
Average daily attendance in colored grammar schools.....	4, 757
Average number of children absent from school in colored grammar schools.....	874
Average number of school days per year.....	175
Average number of days children are not in school, exclusive of Sundays.....	138
Average number of hours that might be spent in the garden on school days (175), at 2½ hours per day.....	437½
Average number of hours that might be spent in the garden on non-school days, at 5 hours per day.....	690
Total for each child.....	1, 127½
Total for white and colored children at 10 cents an hour, or 80 cents for a day of eight hours each.....	\$2, 159, 388. 60
Cost of vegetables for 18,000 families, at \$120 each.....	\$2, 160, 000. 00

## LAND AVAILABLE IN ATLANTA FOR GARDENING.

Of the 7,778 boys and girls reporting from the white schools, 875 live in apartments, tenements, and flats where the backyard space must be used by two or more families. In 22 school districts it is reported by the principals that there are enough vacant lots for the use of those children who can not have space at home. In the other 19 districts it seems probable that it would be impossible to secure land for every child. When the school-directed gardening plan is completely worked out it is probable that a large number of these children can be supplied with plots large enough for raising vegetables for the family. The building lots in the white districts are generally large, ranging from 40 by 100 to 80 by 240. In the older portions there are many lots of even larger size. With the smallest of these lots it is usually possible to make a garden containing at least 1,600 square feet.

In the colored schools, of the 2,141 reporting, 276 live in apartments, flats, and tenements where the backyard space must be used by several families. The colored settlements are, in most cases, much more congested. Of the 13 schools reporting, the principals of 5 stated that there are many vacant lots that might be used for the production of vegetables. The building lots are in the main small, ranging in size from 35 by 80 to 50 by 100. On the smallest of these lots it is almost impossible to obtain enough land to make gardens of economic importance. Yet a garden of only 300 square feet, 15 by 20, well cultivated, will produce a good supply of vegetables for a family of four or five.

## ECONOMIC IMPORTANCE OF SCHOOL-DIRECTED GARDENING.

The labor income of about 85 per cent of the white male earners is less than \$65 per month, or \$780 a year. About 13 per cent have incomes between \$780 and \$2,000 a year, and only about 2 per cent have \$2,000 or more.<sup>1</sup> The teachers of the public schools estimate that the cost of vegetable food, both canned and fresh, for a family of five persons for one year is \$123.22. These figures show what a large part of the income could be saved by the production of the vegetable foods used in the home. The earning power of the children who are employed outside of the home is comparatively small (see Tables 1, 2, 3, 4).

<sup>1</sup> Data furnished by Mr. Geo. D. Halsey, of the Vocational Guidance Department.

The school principals report that an average of 224 children leave school to work because of economic necessity. It is possible by saving to the home the \$123.22 which is used for vegetable foods and also by supplementing this amount by additional earnings, that a large number of these children might continue their studies and earn as much as if they left school.

The average labor income in the colored school districts is low, about \$11 per week, or \$575 a year, and the cost of vegetable foods, canned and fresh, is estimated in the colored districts as \$102.52. An average of 168 pupils leave school each year because it is necessary for them to supplement the earnings of the other members of the home. The smaller the income of the family, the greater the amount of bulky, carbohydrate foods used, and thus the greater is the importance of the vegetable gardening.

#### PRESENT AGRICULTURAL INTERESTS OF THE HOME.

In determining the value of instruction in the scientific care of gardens and small animals of economic importance, it is necessary to learn in what percentage of the homes gardens are made or animals of economic importance kept. From the reports of 7,048 pupils it has been found that in 5,233 white homes some kind of home garden is made, and 4,077 children claim to have a garden of their own or to help with the family garden. Many of the gardens are very small, and in practically all of them the production is not over 15 per cent of what would be produced from the amount of land used if the gardening were done scientifically. Poultry is kept at 1,261 homes, pigeons at 432, and rabbits at 372. In visiting the back yards it has been found that the people need many lessons on the care and feeding of animals and especially on keeping animals in a sanitary condition. In many cases the pigeons and practically all of the rabbits are kept as pets.

Of the 1,241 colored children reporting, 1,206 state that there is a garden at their homes and 729 children state that they have a share in the garden work. Poultry is kept at 441 homes, pigeons at 121, and rabbits at 42. The necessity for instruction in the care of these animals is, of course, much greater in the colored districts than in the white, partly because of smaller yards and partly because of the general shiftless habits of a large part of the colored population.

#### USE OF VACANT LOTS FOR GARDENING.

There are many vacant lots in Atlanta that could be used for school gardens or as a supplement to home gardens. Until a large number of back yards have been put in home gardens it would seem best not to undertake any concerted action looking toward the cultivation of vacant lots. Many school principals and teachers desire to obtain the use of large vacant lots near the schools for "individual-plot school gardens." In most cases the soil of these lots is poor and the period of tenure is short or uncertain. Such lots should not be cultivated for school use until they have been examined and approved by the garden supervisor. In any case the cultivation of the land should not be begun unless a written statement can be obtained from the owner giving use of such land for a period of three years or more. To fertilize and improve vacant lots for a short period of use would be a costly proceeding. Many school gardens are at best of doubtful value, and, as stated above, they should not be undertaken until a thorough system of home gardening has been established. The instruction at school should be confined very largely to definite lessons on making satisfactory home gardens, and the actual work at the school should

consist of making hotbeds and cold frames from which a large number of plants may be distributed to the home gardens.

#### QUALIFICATIONS OF THE PRESENT TEACHING FORCE TO DIRECT HOME GARDENS.

The fine spirit of enterprise and cooperation in the teaching force of the elementary schools points toward a period of real progress in the elementary schools of Atlanta. A large number of teachers have expressed a desire to be trained to direct home-garden work, and a few of the teachers through practical experience and summer courses have become so well trained that they would make satisfactory teachers if school-directed gardening were put into practice immediately. About 60 of these teachers have attended the training classes and many of them will keep up their interest through the summer. A large number of the teachers have volunteered to visit the home gardens during the vacation period, and from these teachers should be selected the permanent home-garden teaching force. As a small number of teachers are now well trained in gardening, the following schedule is suggested for the employment of teachers and for salary increases for extra work, after school, on Saturdays, and during the summer vacation.

#### *Suggested schedule for the employment of white teachers of gardening.*

Calendar year.	Number of teachers.	Increase per month over present salary.	Cost by years.
1918.....	10	\$10.00	\$1,200
1919.....	10	10.00	1,200
	10	12.50	1,500
	20	.....	2,700
1920.....	10	10.00	1,200
	10	12.50	1,500
	10	15.00	1,800
	20	.....	4,500
1921.....	10	10.00	1,200
	10	12.50	1,500
	20	15.00	3,600
	40	.....	6,300
1922.....	10	10.00	1,200
	10	12.50	1,500
	30	15.00	5,400
	50	.....	8,100
1923.....	10	12.50	1,500
	40	15.00	7,200
	50	.....	8,700
1924.....	50	15.00	9,000

The 20 garden teachers required in the colored schools should be appointed on a similar basis at the rate of from three to five yearly.

#### CONCLUSIONS.

1. There are several thousand children in Atlanta who do not have a productive occupation for any part of their out-of-school time and those who are employed earn but little.

2. These children have enough out-of-school time to be able to furnish much of the vegetable food supply for the family after they have been trained to make practical back-yard gardens.

3. Enough land is available in Atlanta to give to each child sufficient space to produce all the vegetable food needed by his family.

4. To cultivate intensively all of the back yards of the city would be of great economic value to the community and to the individual families.

5. The cultivation of vacant lots should not be undertaken until the children have been trained to make really productive home gardens.

6. If the teachers attend regularly the garden course given by the supervisor the first 10 teachers may be appointed by January 1, 1918.

It should be remembered that the only cost for this work will be the salaries of director and teachers and the cost of seeds, fertilizers, and tools. The land and the children would otherwise be idle.

#### RECOMMENDATIONS.

(1) That the board of education of Atlanta begin immediately the establishment of school-directed home gardening, nature study, and elementary science in the public-school system. That this department be put in gradually and solidly rather than all at one time.

(2) That the supervisor of gardening be required to build his department in such a way that it will become an integral part of the school system and conform to the general policies of the board of education. He should be expected from time to time to make reports and recommendations to the superintendent of schools.

(3) That it be a part of the duties of the supervisor of gardening to give courses for the training of teachers who are now in service and to supervise gardening and nature-study training of the normal students in the Lee Street School.

(4) That as soon as the teachers have the requisite training one teacher in each small school and two in each large school should be appointed as special departmental teachers of gardening, elementary science, and nature study.

(5) That the special teachers of gardening and science be on duty for 12 months during the year and that these teachers visit and instruct the children in home gardening after school, on Saturdays, and during the summer vacation.

(6) That the special garden teachers do not receive extra salary for the work during school hours, but that for the out-of-school time they be paid for their work as outlined in the section of this report entitled "Suggested schedule of employment for white teachers of gardening."