
HOW SPECIALIZATION IN GARDENING PAYS.

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In the Province of Tarlac, school authorities are giving special attention to gardening because the province is preëminently agricultural and because there is a relative dearth of materials suitable for other industrial work for boys. The work has been notably successful and has developed to a degree that makes it a subject well worthy of consideration.

The emphasis upon gardening began in the municipalities of Gerona and Paniqui, about 1913, under the late Mr. Allen A. Helms, who was then supervising the Gerona District. Mr. Helms had just come from the Central Luzon Agricultural School at Muñoz, where he had given a successful demonstration of practical farming. He believed that school gardening could be and should be successfully carried on at every school in Tarlac Province. During the following two or three years, he established and developed practical school and home gardening at every school in his district. In doing this work, Mr. Helms followed out carefully the rules and fulfilled the requirements of the Bureau of Education. Noticing this practical and successful work in gardening, the school-authorities began to give the subject more attention and other schools began to do more and better gardening.

During the school year 1915-16, the following municipalities may be said to have specialized in school gardening: Gerona, Paniqui, Camiling, Santa Ignacia, San Clemente, and Pura. In these towns, the gardening was kept going at practically every school throughout the entire year. Only a few barrio schools stopped the work at vacation time. Certain other schools also did especially good work in gardening. Among these were the central schools at Moncada, San Manuel, and Anao. This specialized gardening, if it may be so called, is spreading rapidly over the province. It is believed that very soon every school in the province, large and small, will be doing decidedly good work in gardening. The rapid increase in the work may be seen from a comparison of the total values of the output of the school gardens of the province for the past two school years. For 1914-15 the total value was ₱1,801.75. For 1915-16, it was ₱6,013.33, an increase of ₱4,211.68, or over 233 per cent in one year. Such progress is remarkable.

In the schools where gardening has been emphasized, no

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special means have been employed and no new system has been introduced. The specializing has been neither more nor less than a careful carrying out of the Bureau of Education rules and suggestions regarding school and home gardening. Superintendents and industrial supervisors have laid special emphasis upon the matter of gardening and the supervising teachers and municipal teachers have taken pains to carry out the gardening plans. The results speak for themselves.

Some of the things which have been emphasized are: (1) Seed selection, (2) proper cultivation, (3) crop rotation, (4) proper watering of gardens, and (5) the observance of garden day. For the purpose of this article, schools which have emphasized the five things named are considered to have specialized in gardening.

In every school where gardening has been emphasized careful attention has been given to the selection and preservation of seeds. Few seeds are now purchased by these schools. At the close of the school year, in each school one may find a nice assortment of good seeds stored for use during the next school year. The seeds are kept in bottles with charcoal in the manner prescribed by the Bureau of Education. The following is offered as an example of what can be done in the way of seed saving: At Paniqui, Tarlac, the assistant supervising teacher, Mr. Alfonso Cancio, has grown large luscious American tomatoes for seven years, selecting and preserving seed each year since the first. He now has a supply of seed ready for the eighth year's planting.

The cultivation of the garden also receives careful attention. In this, the suggestions made by the Bureau are followed, but it is noticeable that the schools which have the best gardens have reduced the paths to a minimum width. A large amount of cultivation is insisted upon. The best home gardens have few, if any, uncultivated paths. Experience has proved that deep cultivation at some distance from the plants greatly increases their growth.

The proper rotation of crops is another matter that has been emphasized. It has been proved that, for every month in the year and for almost any sort of season, there are food plants which will thrive and produce well, if properly cared for. For example, if the ground is well plowed before the planting is done, camotes and sincamas planted in March or early in April will produce a large and valuable crop during the ensuing vacation time, the hottest and driest part of the dry season. A large number of the barrio schools in the Paniqui district secure money in this way for athletic goods for the next school year.

The watering of the gardens has been quite a problem. Various plans have been tried. The best success has been attained where good wells were dug within the garden sites. A little irrigation system of bamboo pipes and small ditches carries the water to the part of the garden which needs it. The gardeners usually draw the water by means of a pulley, rope, and bucket. The object of the watering is two-fold: (1) to tide over any short, dry times during the vegetable growing season, and (2) to make possible the production of vegetables and leaf crops far into the regular dry season. At Gerona, where the schoolboys dug a good well during the past school year, a large garden of fine plants was kept growing in good condition from October until after the middle of April. The lettuce, pechay, beets, mustard, cabbage, peppers, and string beans were growing just as well in March and April as at any time during the preceding regular season.

The boys who have specialized in gardening have learned a great many things by practical experience. For example, if there are extra large tomato plants but no tomatoes, these boys will at once explain that it is because the tomatoes were watered too much after the plants were large; that tomatoes require comparatively little water after the plants are large. If cabbage does not head well and the worms are taking it, the boys will explain that cabbage should not be watered by putting water upon the plants; that cabbages require a considerable quantity of water, but that it should be brought to the plants by means of ditches which are at least a foot distant from the root stalks. There are numerous other things which the boys can tell with equal promptness and certainty.

Garden day is observed by the schools of each municipality in Tarlac. The suggestions sent out by the Bureau of Education are followed. Garden and agricultural exhibits are made the big features at each garden day celebration. The people donate the necessary bamboo. The schoolboys bring it to the town plaza and construct booths. All schools of the town compete in garden exhibits, each school using one booth. The variety, quantity and quality of fresh garden products exhibited by the schoolboys would be a great surprise to most people in the Philippines. The farmers of the town compete in agricultural exhibits, the farmers of each barrio using one booth. Interest in these exhibits is rapidly spreading among the farmers. As an example, in the barrio of Dicolor, Gerona, the teacher organized a barrio garden day in the observance of which about seventy farmers participated. They exhibited their products in indi-

vidual booths. The prize winner exhibited 50 different farm and garden products. Several others exhibited 38 or 40 different things. It is interesting to note that the winner had formerly been a barrio teacher and had once been a pupil at the Central Luzon Agricultural School.

During the school year 1915-16, the schools of six entire municipalities, with several additional schools, took part in the specialized gardening. There were about 84 schools and 100 teachers interested in the work. Some 1,489 pupils took part in it. The total area of land cultivated by them, based on the February reports, was 62,970 square meters. The total value of the product for the year was ₱5,327.76. It is interesting to note that in the schools which emphasized gardening, 67 per cent of the boys took this work; they cultivated 65 per cent of the area of all of the gardens, and they produced over 87 per cent of all of the output of the gardens.

Of the total harvest of garden products for the year, about seven eighths was used by the pupils and their families. About one eighth was sold for cash. All of the cash went either to the pupils or into the pupils' fund, only a small amount going to the latter. The total of the cash thus distributed in the province during the year was ₱761.80. About 95 per cent of it was earned in the schools specializing in gardening.

The total product was much greater where special attention was given to the gardening. The 233 per cent increase for the province in one year was undoubtedly due, in part, to the increased number of schools specializing. The product per 100 square meters, or per pupil, was also much larger in these schools. Among the municipalities specializing, the highest average per 100 square meters was ₱13.98 and the highest average per pupil was ₱7.04. Among the towns not specializing, the highest average per 100 square meters was ₱3.57 and the highest average per pupil was ₱1.15. The lowest averages among the towns specializing were ₱2.85 per 100 square meters and ₱1.28 per pupil. Among the towns not specializing the lowest averages were ₱0.53 per 100 square meters and ₱0.41 per pupil.

It may be that certain unfavorable results could accrue from such specialization in gardening. This might happen if the idea were carried too far or were to be overdone in any way. Nothing of the kind, however, is anticipated in Tarlac. It is believed that the industrial courses can be kept properly balanced. A very large place is given to gardening for boys because it is the proper and natural industrial work for a strictly agricultural province.