

Agricultural Education In Portugal

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In the recent edition of **Teacher Education in Agriculture**, the role of agriculture teachers in the international scene was examined. It was pointed out that changing global situations are bringing new challenges and opportunities to teachers of agriculture. With the increased emphasis on technical assistance and training related to improved methods for technological transfer, teachers of agriculture are now being recruited on an unprecedented scale for overseas assignments. Therefore, it seems appropriate that educators expand their knowledge of agriculture and educational systems in other countries. This article will provide some insight into agricultural education in Portugal.

Portugal consists of the mainland, the Azores, and the Madeira Islands. Mainland Portugal is divided into two distinct topographical regions by the Tagus River. The Tagus flows into the Atlantic Ocean at Lisbon. The northern part of the country is mountainous with a rainy, moderately cool climate. To the south, the landscape becomes rolling plains with less rainfall and a

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warm climate. The summer is generally hot and dry, becoming drier from north to south and hotter from west to east. Agriculture accounts for approximately 18 per cent of the gross national product in Portugal. Principle agriculture products of the country are small grains, potatoes, rice, winegrapes, olives, and almonds. Portugal has the world's largest cork industry, producing two-thirds of the cork in the world.

The development of agricultural education in Portugal can be linked to its geographical setting and history. Portuguese farmers never developed as an important segment of society. In the early history of the country, farmers were reduced to serfdom. Barbarian invasions that began in the 300's were mainly responsible for this early status of farmers. The Moorish conquest in the 600's and Christian reconquest in the 1100's further disrupted life throughout the country. Through the intervening years, the causes of farmers and agriculture have not advanced.

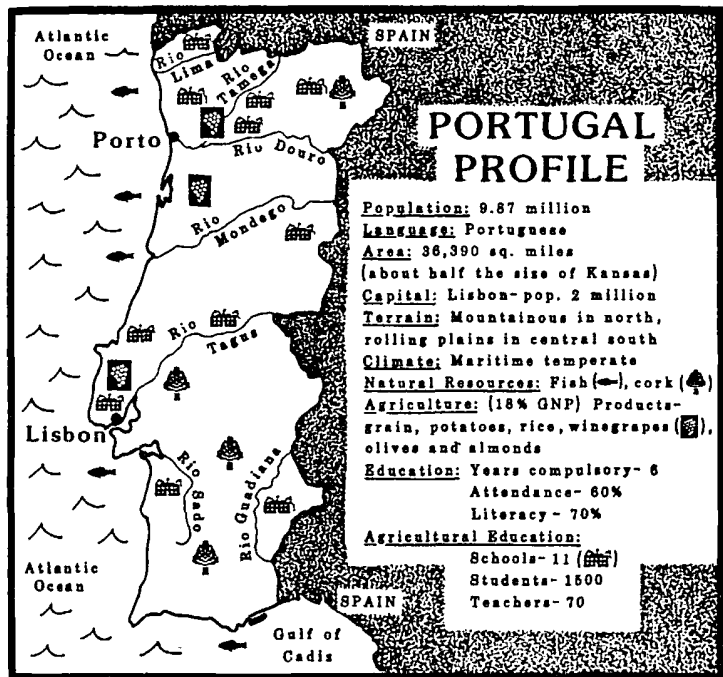
It was into this geographical and historical setting that education in agriculture was first offered formally in the late 1800's. The initial two agricultural high schools were finally established in 1913. Training at these schools was designed to prepare students for farming. However, few graduates entered farming as their services were needed by the Extension Service and the agricultural industry. It was not until the 1960's that additional schools began to appear. By 1983, agricultural education was being provided in 11 high schools located throughout the country.

The educational system in Portugal consists of four distinct phases — primary school, preparatory school, secondary school, and university and colleges. This

educational process spans a period of 18 years with the first six years being compulsory. At the secondary school level, students with a career interest in agriculture will opt for complimentary courses in stream A (natural sciences). The accompanying diagram illustrates the general and agricultural educational system in Portugal.

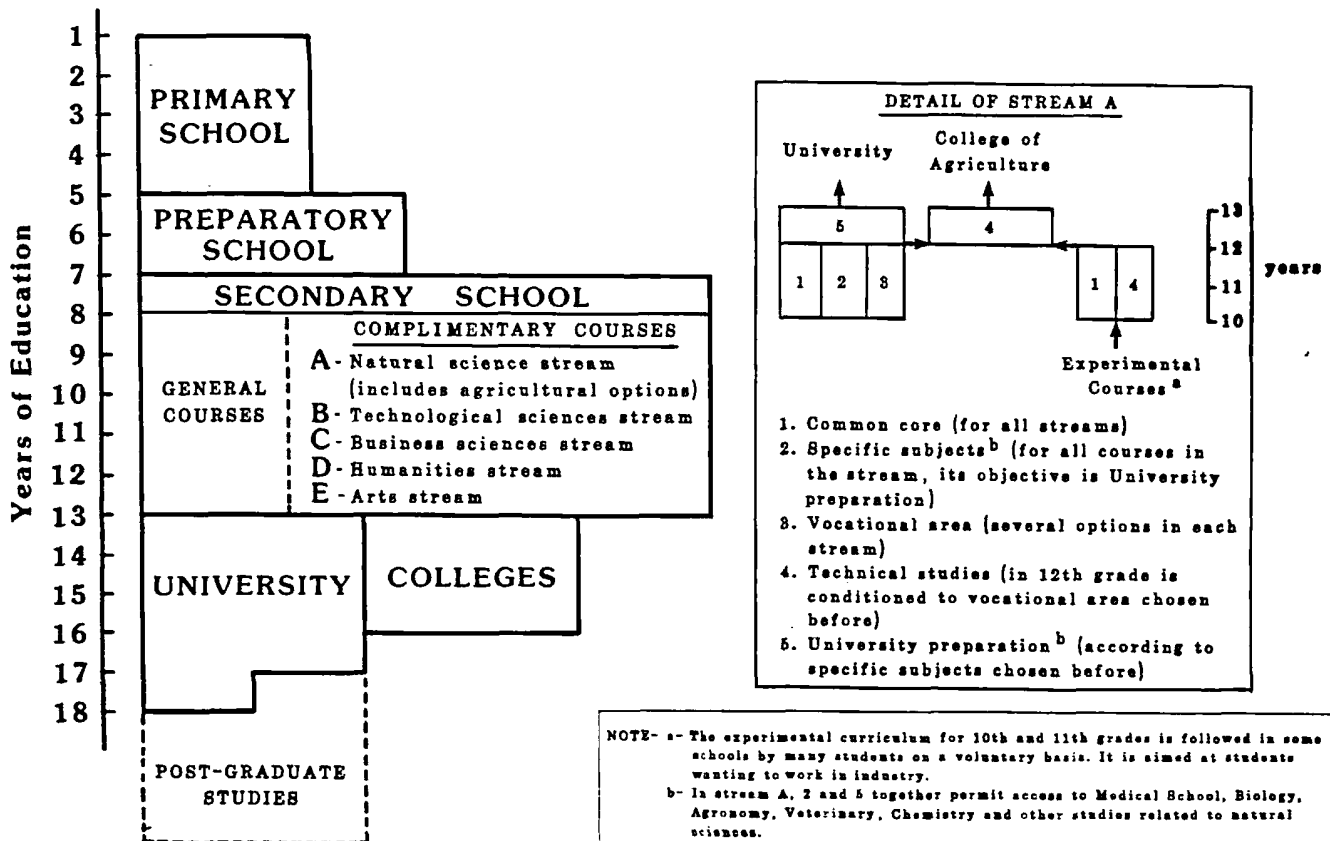
Curriculums in the agricultural schools are divided into three equal clusters of subjects in the 10th and 11th grades. A **common core** for all high school students includes Portuguese, a foreign language (English or French), philosophy, and physical education. **Specific subjects** for the science area include: physics, chemistry, mathematics, biology (10th grade), and geology (11th grade). These clusters are shown and explained in a detail of stream A in the diagram. The third cluster deals with the **vocational area**. Agriculture and food technology are available to students in this area. Courses in these options include:

Vocational Area	10th Grade	11th Grade
Agriculture	Soils and climate Vegetable production I ^a	Animal husbandry Vegetable production II ^a
Food Technology	Industrial crops and animal products Food processing I ^b	Cold storage Food processing II ^b



^a Includes machinery, rotations, soil technology, crops, horticulture and plant protection
^b Mainly winemaking, vegetable oils, dairy products, vegetable processing, and meat processing in some schools

Diagram 1
 GENERAL AND AGRICULTURAL EDUCATION SYSTEM IN PORTUGAL



In the twelfth grade, students who want a diploma in agriculture or food technology will take technical studies that place special emphasis on plant and animal sciences.

Students enrolled in the agricultural high schools attend classes 32 hours a week for 30 weeks. Formal examinations account for approximately 10 weeks of the school year. School holidays are at Christmas and Easter (two weeks each) and the months of August and September. For students not involved in examinations, summer vacation is extended an extra two months.

Each of the agricultural high schools has a school farm. Crops grown and livestock raised on these farms are representative of local conditions. School farm products provide food for the cafeteria and a source of revenue for needed school supplies and equipment. Due to the scarcity and irregular distribution of these schools throughout the country, some have boarding facilities. Students living at a school pay a nominal fee for their board and room.

In the past, teacher training in agriculture consisted of at least two years of teaching experience. At the completion of on-the-job experience, the candidate completed an intensive exam. The exam consisted of lesson presentations before a jury of senior teachers and a written dissertation. Teacher candidates normally held a degree in Agronomic Engineering. In Portugal, Agronomic Engineering includes crops, horticulture, animal husbandry, and primary food processing. Degree preparation consisted of five years of course work that was followed by at least six months of training and a presentation of a thesis. Training was generally on extension or research stations.

At the present time in Portugal, the examination (teaching before a jury and dissertation) has been abolished. The two years of on-the-job experience are now spent under the supervision of a school in-service coordinator. Each agricultural school has two coordinators — one for teachers of crops and horticulture and the other for animal husbandry and food processing teachers. Teachers in each group elect their own coordinator. These representatives are responsible for the coordination of in-service teacher training in pedagogy. Training in scientific and technical areas is provided by the university during the initial degree program. High school in-service coordinators are in turn supervised by a district supervisor. Following the two year in-service training and successful review of their work, teachers receive professional certification. There is some indication that the present system of in-service coordinator scheme will be replaced by a concentrated teacher training program in a College of Education. This training would follow completion of a Bachelor's degree in Agronomic Engineering.

Some of the traditional ways of training teachers of agriculture and their students are beginning to yield to contemporary necessities in Portugal. The most evi-

dent of these changes involves high school curriculum adjustments and improvements in pre- and in-service teacher training. With these modifications, the cause of agriculture throughout the country can be advanced. Even though these changes represent important advancements, much remains to be done in improving the status of agriculture and farmers in Portugal.

Agricultural educators from the United States have made important contributions to the advancement of agriculture around the world. If this assistance is to continue on an expanding scale, teachers of agriculture must develop an even greater awareness of education and agriculture in other countries. The exploration of agricultural education in Portugal can provide the profession with one facet of this awareness.

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Roles of Women in Rural Development

Attitudes by American and International Students

Victoria Arku and Barbara A. Holt

The role of women in the rural development process has become of special interest and importance in the world. Since the start of the United Nations' International Decade for Women in 1975, policy makers have become increasingly aware of the impact of development on women and men and the need to give attention to the women in the planning process.

The needs of rural women were considered to be very critical by participants of both the World Conference of Agrarian Reform and Rural Development, held in Rome 1979, and the World Conference of the Decade for Women which was held in Copenhagen, 1980. Tau (1981) observed that several factors have militated against the development process having a positive impact on rural women. People involved in development efforts have had the tendency to plan for

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