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AGRICULTURAL AND
RURAL EXTENSION SCHOOLS
IN IRELAND

By A. C. MONAHAN

SPECIALIST IN RURAL SCHOOL ADMINISTRATION
BUREAU OF EDUCATION



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CONTENTS.

	Page.
Introduction.....	5
Agricultural instruction in colleges and schools.....	9
Itinerant instruction in agriculture through county instructors or agricultural agents.....	19
Rural extension schools in agriculture, poultry, and butter making.....	23
Rural extension schools in household arts, home industries, and farm carpentry.....	26
The establishment of the department of agriculture and technical instruction.....	30
APPENDIX.	
The estates commission and congested districts board.....	37

ILLUSTRATIONS.

	Page.
PLATE 1. A, Typical rural school in the south of Ireland; B, Another south of Ireland rural school.....	8
2. A, Clonaslee, Queen's County; reached by Itinerant instruction in domestic economy; B, Itinerant instruction in domestic economy.....	8
3. A, Central Technical Institute, Waterford; cooking class; B, Class in practical mathematics and mechanics, summer course of instruction for teachers.....	8
4. A, Irish training school of domestic economy, Kilmacud, near Dublin; B, Irish training school of domestic economy; one of the kitchens.....	8
5. A, Technical school, Ballymore; B, Workshop in the Municipal Technical School, Bangor, County Down.....	16
6. A, Northlands School of Housewifery, Londonderry; B, Killarney School of Housewifery; kitchen.....	16
7. A, Mountmellick, showing the cottage fitted as a permanent home for itinerant schools of cooking and household arts; B, County Itinerant instruction; manual instruction in woodwork.....	24
8. A, Administration building, Albert Agricultural College, Glasnevin, near Dublin; B, Dressmaking class, Ursuline Convent, Sligo.....	24

AGRICULTURAL AND RURAL EXTENSION SCHOOLS IN IRELAND.

INTRODUCTION.

Ireland has a total area of 32,373 square miles, or approximately 21,000,000 acres, of which about 15,000,000 are arable and the rest mountain, bog, and water. It is practically the size of the State of Maine, or slightly less than one-half the size of Missouri, or one-third of Oregon. The population in 1911 was 4,382,000, of whom 860,000 were reported as engaged in agriculture as an occupation. This is 45 per cent of the total number engaged in occupations, not including housewives.

Public education is under the control of three different boards—the Commissioners of National Education, the Intermediate Board of Commissioners, and the Department of Agriculture and Technical Instruction.

The Commission of National Education, composed of 32 persons, has charge of the Irish National Schools, which constitute the elementary free public school system. The immediate head of the system is the Resident Commissioner of National Education. Assisting him are various officers employed in the Department of Education, among whom are 6 chief inspectors and approximately 66 district inspectors, or an average of 2 to each county. These are field men with inspectional and supervisory functions similar to those of superintendents of schools in the United States. The school course is eight years in length and includes practically the same subjects as those in the elementary schools in America. Each school is under a local "manager" or trustee. The building is provided by the local community, and the manager engages the teachers, who, however, must be approved by the Department of Education. The teachers are paid from National funds. The administration of the course of study is entirely in the hands of the national department. School attendance is compulsory up to 14 years of age.

The Intermediate Board of Commissioners has control of a large number of secondary schools, practically all of which were started as private schools and remain in a measure under private control. Nearly all have been in existence for many years. In connection with a large number of them are elementary grades, which are also under the charge of the intermediate board. Some of these schools

are endowed, many charge tuition, and all receive funds from the national treasury through the intermediate board. Many of them receive funds also from the Department of Agriculture and Technical Instruction for following the department's program in teaching experimental science, drawing, manual instruction, and domestic science. The total amount received from the two boards amounts to about \$26 per year per pupil. Many of the schools have other sources of income, being provided for by religious orders, with voluntary teachers; otherwise they would be unable to maintain themselves. The salaries paid to these teachers are very small.

The Department of Agriculture and Technical Instruction has control of a group of special technical or agricultural schools, either by itself or in cooperation with local authorities. It has control also of the instruction in industrial and vocational subjects, experimental science, and manual instruction in day trade-preparatory schools and other secondary schools which have adopted the department's program in these subjects, as mentioned in the preceding paragraph.

The National Board of Commissioners has been in existence since 1845; the Intermediate Board since 1878; the Department of Agriculture and Technical Instruction since 1900. Most of the industrial and vocational work in Irish schools has been introduced since this later date, although several well-known schools of industrial or vocational character, such as the Albert Agricultural College, were already in existence before 1900. Most of them were turned over to the department on its establishment.

Cooperation among the three boards is attempted through a "consultative committee on education," composed of the vice-president (the active head) of the Department of Agriculture and Technical Instruction; the Resident Commissioner of National Education; one person appointed by the Intermediate Education Board; and two others appointed by two advisory boards to the two divisions of the Department of Agriculture and Technical Instruction, known as the agricultural board and the board of technical instruction.

As the various institutions for special education in agriculture and rural arts and industries are under the control of the Department of Agriculture and Technical Instruction, an outline of the activities of the department is included here. Information concerning its creation and organization is given later. It has oversight and control of several central institutions:

1. The Royal College of Science.
2. National Museum of Science and Arts.
3. National Library of Ireland.
4. Royal Botanical Gardens.
5. Metropolitan School of Arts.
6. Geological Survey of Ireland.

The department is divided into two divisions, a "division of agriculture" and a "division of technical instruction." The division of agriculture engages in four principal operations:

- A. Agricultural instruction.
- B. Live-stock improvement schemes.
- C. Special investigations, including experimental work in soils, fertilizers, crops, and animals, etc.
- D. Control functions relative to plant and animal diseases, the sale of impure foods, drugs, fertilizers, forestry operations, fisheries, etc.

The agricultural instruction is given through—

1. The Royal College of Science, Agricultural Department, located in Dublin.
2. Albert Agricultural College, located at Glasnevin, near Dublin.
3. Three agricultural stations schools—at Athenry, Ballyhaise, and Clonsilla.
4. Three other agricultural schools—at Antrim, Mount Bellew, and Strabane.
5. Eighty-four winter agricultural classes, each from 15 to 20 weeks in duration.
6. Two Agricultural Schools for Girls, the Munster Dairy Institute, at Cork, and the Ulster Dairy Institute, at Cookstown.
7. Nine schools of rural domestic economy.
8. One hundred and ninety-five winter dairy and poultry classes in the various counties, each from two to four weeks in duration.
9. Itinerant instruction in agriculture, through 45 county agricultural instructors or agents.
10. Itinerant instruction in agriculture in the "congested districts," through 56 agricultural "overseers."
11. Itinerant instruction in horticulture and beekeeping, through 41 county instructors.
12. Itinerant instruction in butter-making and poultry, through 52 county instructors.

The department has the entire management of the Royal College of Science, the Albert Agricultural College, and seven of the eight agricultural schools mentioned, and partial management in co-operation with local authorities of the Mount Bellew Agricultural School, the nine rural domestic economics schools, and of all the itinerant instruction and classes.

The work of the division of technical instruction includes among other functions the control of the various technical schools receiving aid from the imperial grant:

1. Royal College of Science, Technical Department, Dublin.
2. Metropolitan School of Arts, located at Dublin.
3. Irish Training School of Domestic Economy, at Kilmacud, near Dublin.
4. Killarney School of Housewifery, at Killarney.
5. Londonderry School of Housewifery, at Londonderry.
6. Training School for Lace and Sprigging Teachers at Enniskillen.
7. "Industrial Annex," for training of manual instructors at Dublin.

¹ See appendix.

8. Technical schools and other centers where supplementary training is given for public-school teachers in experimental science, domestic economy, rural science, school gardening.

9. Fifteen day trades-preparatory schools, located in 15 different cities.

10. Ninety-one urban technical schools.

11. Technical education in rural districts through itinerant schools of domestic economy, including cookery, laundrywork, home sewing, housewifery, hygiene and home nursing, and schools of manual instruction in wood, in lace and crochet making, sprigging, and embroidery.

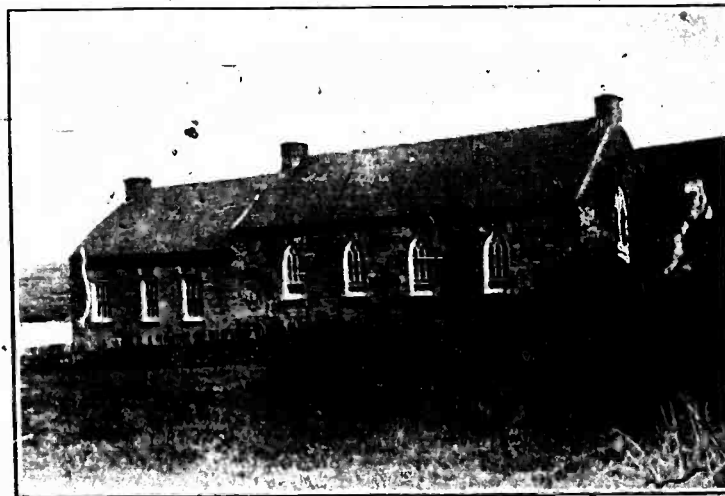
The conduct of the day trades-preparatory schools, urban technical schools, and rural itinerant schools are cooperative schemes of the division of technical instruction with local city or county authorities. Of the activities of this division, only those for the rural population are described in this bulletin. These include, in addition to the itinerant schools in domestic economy and carpentry, the Irish Training School of Domestic Economy, where the teachers for the rural itinerant schools of domestic economy are trained, the "Industrial Annex," where manual instructors for the rural itinerant schools of manual instruction are trained, and the Training School for Lace and Sprigging Teachers.

The department is supported by funds received from Parliament, an annual continuing appropriation known as the department's "Endowment fund," and special appropriations for administrative expenses and agricultural development schemes. The "Endowment fund" includes £166,000 annually provided under the act creating the department, and £24,000 under other acts, or approximately \$921,500. The special Parliament appropriations for the fiscal year ending March 31, 1914, for the administrative expenses of the department, and to provide for research and control work, amounted to £207,457; for expenses connected with the maintenance of the various schools and institutions in whole or part under the control of the department, £141,887. It will be observed that these two appropriations and the endowment fund make a total of over \$2,600,000.

The money is used for many purposes, including the following: Support of the department schools mentioned above; assisting schools which adopt the department's program for experimental science, drawing, manual instruction, and domestic economy; aid to technical schools, and science and arts schools and classes; support of the National Museum of Science and Arts, the National Library of Ireland, the Metropolitan School of Arts, and the Royal Botanic Gardens; agricultural research and advisory work, experimentation, control of plant and animal diseases, afforestation and forestry operations, fishery development, improvement of live stock; administration of the act for pure foods and drugs, weeds and agricultural seeds; support of local county schemes for agricultural betterment under the oversight of the county advisors; and maintenance of the



A. TYPICAL RURAL SCHOOL IN THE SOUTH OF IRELAND.



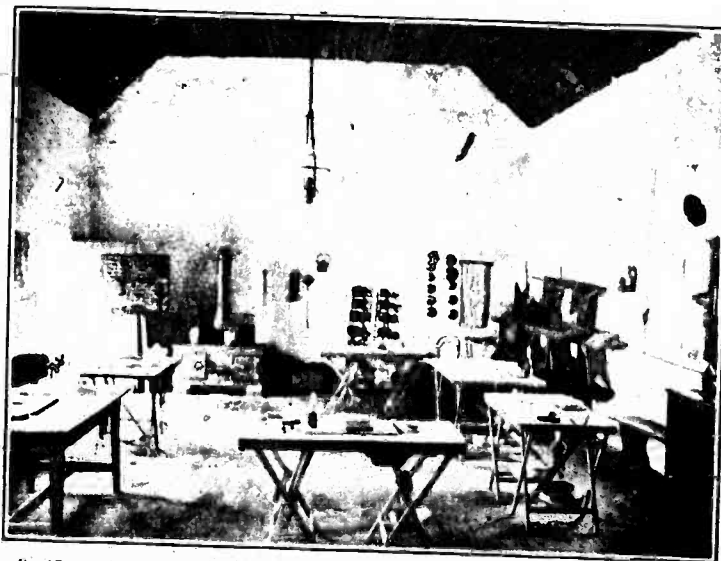
B. ANOTHER SOUTH OF IRELAND RURAL SCHOOL.

This and the school shown above are over 100 years old.



A. CLONASLEE, QUEENS COUNTY: REACHED BY ITINERANT INSTRUCTION IN DOMESTIC ECONOMY.

Spent 1 hour in the room at the house of the woman who had been instructed in the use of the needle, butter-making, and other domestic economy and health.



B. ITINERANT INSTRUCTION IN DOMESTIC ECONOMY. INTERIOR OF THE SAME HALL FITTED UP AS A CLASSROOM.



A. CENTRAL TECHNICAL INSTITUTE, WATERFORD, COOKERY CLASS.



B. CLASS IN PRACTICAL MATHEMATICS AND MECHANICS, SUMMER COURSES
OF INSTRUCTION FOR TEACHERS.



I. IRISH TRAINING SCHOOL OF DOMESTIC ECONOMY, KILMACUD, NEAR DUBLIN.



J. IRISH TRAINING SCHOOL OF DOMESTIC ECONOMY; ONE OF THE KITCHENS.

geological survey of Ireland. By far the larger part is expended for agricultural purposes.

AGRICULTURAL INSTRUCTION IN COLLEGES AND SCHOOLS.¹

In the following pages is given a brief description of the principal types of agricultural schools, both for males and females.

For men, the most advanced school is the Royal College of Science, an institution with four-year courses similar to those of the standard State colleges of agriculture in the United States. Below this is the Albert Agricultural College, a farm-practice school giving a one-year course; and below this several agricultural "stations" and schools, in reality farm apprenticeship institutions. Lower still are the winter agricultural classes described in a later section of this bulletin.

For women, there are the Munster Institute, the Ulster Dairy Institute, the Schools of Rural Domestic Science, and the itinerant butter-making and poultry classes. The itinerant classes are described under a later section on itinerant instruction in agriculture.

The work of these schools is arranged so that a student may progress directly from one to the next. Each, however, is complete as far as it goes, to provide for students not going on to higher instruction. As all of the institutions, both for males and females, are under the immediate direction of the department, such correlation is very easily arranged.

A large number of scholarships are awarded annually to all the schools, except the itinerant classes, for which none are needed. In awarding scholarships to the farm-apprentice schools, preference is given to boys who have shown proficiency in the winter agricultural classes. In awarding scholarships to the Albert Agricultural College those who were the most satisfactory apprentices in the apprentice schools have the first claim, and in awarding scholarships to the Royal College preference is given to the graduates of the course at the Albert Agricultural College. A similar recognition in awarding scholarships exists in the various agricultural schools for girls.

Royal College of Science, Dublin.—This institution is located in Dublin, in new buildings erected especially for it and equipped for three departments—agriculture, applied chemistry, and engineering. In its work it corresponds somewhat to the State colleges of agriculture.

¹The representative of the Bureau of Education visited Ireland in 1914. This report was prepared during 1915, and the data used were the latest available at that time, covering the school year 1913-14.

culture and mechanic arts in the United States. The course is four years in length. There were 133 students in attendance in 1913-14, of whom 48 were agricultural students, 20 science students, and 16 prospective science teachers who were taking some agricultural training. In addition to the 133 regular students, there were 397 others who attended special courses of instruction organized in the college during the summer.

The principal function of the agricultural department of the Royal College is the training of teachers of agriculture and of county instructors to carry out the programs of the department. Seven of the nine graduates in June, 1914, obtained employment in connection with the department's educational work. Of the 96 graduates of the agricultural courses of the college up to the close of the 1913-14 session, 39 are engaged as county instructors in agriculture, 15 as teachers at agricultural schools and stations, and 15 on the department's central staff.

Admission to the Royal College is by examination, candidates 18 to 30 years of age being eligible. The entrance requirements in academic subjects are very similar to those of the standard American college, but somewhat lower. Each applicant for admission to the agricultural courses must have had substantial experience in practical work in connection with either farming, gardening, the management of woodlands, or dairying and creamery management. This requirement is rigidly enforced. Free scholarships are awarded to a certain number of students specializing in agriculture, horticulture, forestry, and creamery management upon competitive examinations. Each scholarship includes railroad fare to and from Dublin each session, board and room at one of the department's institutions, tuition, and a small grant to cover the cost of books and apparatus. Scholarships are awarded for one year, but are renewed if the student's work is satisfactory. All of the 48 students in the 1913-14 sessions were holders of scholarships.

In the agricultural department there are seven instructors, one in each of the following subjects: Agriculture, agricultural biology, agricultural chemistry, forestry, botany, geology and mineralogy, and zoology. The exercises consist largely of classroom and laboratory work. The farm of the Albert Agricultural College, which is located at Glasnevin, on the outskirts of the city of Dublin, and is easily reached by street car, is used for observation and demonstration. The majority of the agricultural students at the Royal College have already attended the Albert Agricultural College and completed the course given by the institution, so that they are familiar with the experiments and demonstrations conducted at Glasnevin and are familiar also with farm practices as carried out by the college.

Albert Agricultural College, Glasnevin.—The college is located on a farm of 180 acres at Glasnevin, a suburb of Dublin, and is equipped with classrooms, lecture rooms, and laboratories, a residence for about 60 students, farm buildings, and sufficient stock for instructional purposes. Two distinct courses are given—an agricultural course and a horticultural course. The agricultural course is intended for young men who desire a technical and practical knowledge of agriculture to fit them for farming, for creamery management, or for any other occupation which requires technical training in the sciences underlying agriculture or for entrance to the Royal College of Science. It includes instruction in agriculture in the classroom, farm yard, and fields, supplemented by lessons in dairying, horticulture, poultry management, beekeeping, and veterinary hygiene. The course includes instruction in the elements of physics, chemistry, botany, zoology, entomology, bookkeeping, surveying, literature, mathematics, and drawing. It requires one school year of 10 months to complete. The 1913-14 session began on October 14, 1913, and ended August 14, 1914. A diploma is awarded upon the completion of the course, together with certain prizes for acquiring a high standard of skill in practical farm work. The cost of attending the agricultural course in the school is £15 (\$72.75) for students whose parents or guardians derive their means of living mainly from farming in Ireland. This amount covers tuition, board, residence, laundry, and ordinary medical attendance for the entire session. For other students the charge is £50 (\$242.50).

Admission to the regular agricultural course of the college is conditional upon passing entrance examinations and furnishing evidence of good character and health. Candidates must be at least 17 years of age and not over 30. They are examined in English, arithmetic, algebra to simple equations, and agriculture. Both written and oral examinations are set on agriculture, the questions being framed with a view to testing information acquired by practical experience in farm work.

During the 1913-14 session there were 27 students enrolled in agriculture. Of these, 8 obtained scholarships in agriculture tenable at the Royal College of Science for the session beginning in the fall of 1914.

The horticultural course is for men of four or five years' experience in fruit growing or gardening. Candidates for admission must be from 20 to 30 years of age; they must pass examinations in elementary English and arithmetic, and in practical fruit growing and gardening. The course extends over a year, beginning the middle of October and ending the first of the following October. Students are furnished lodging and allowance to cover board and incidental expenses. The course consists of a large amount of practical work in

the gardens, with supplementary classroom instruction. During the 1913-14 session nine students were enrolled; at the close of the session three of these found employment as county instructors, one qualified for employment in connection with the department's fruit-plat work, and three were retained for a second year's course. Thirty-four men trained in this course are now employed by the department in connection with horticultural schemes, either under local authorities or immediately under the department.

An opportunity is also given at the college for a limited number of young men to secure positions as farm apprentices through a period of training of 12 months. These apprentices must keep such hours as the work of the farm, including the care of the live stock, necessitates. They are required to attend special classes formed for them evenings and at other times when farm work is not pressing. They are furnished board and lodging and on the conclusion of their apprenticeship are paid a bonus at the rate of £1 per month, provided their work has been satisfactory. The general plan of instruction is similar to that of the agricultural station schools described later.

The teaching staff of the Albert College is composed of the principal, an agriculturist, and one instructor in each of the following: Chemistry, botany, zoology, veterinary hygiene, horticulture, dairying, poultry keeping, bee keeping, and woodwork. A drill instructor gives physical training twice a week, and clergy of the various denominations visit the college to hold weekly classes in religious instruction.

Agricultural station schools.—Three "Agricultural station schools" have been established. One, located at Athenry, in County Galway, in the west central part of Ireland, is an apprenticeship school on a farm of 600 acres, with modern farm buildings and equipment for diversified farming, including dairying, beef and mutton production, and fruit growing. On the farm is a residence for the principal of the school, who is also superintendent, and a dormitory building accommodating 30 boys. In this building are a dining room, two or three classrooms, and a laboratory.

The farm is conducted as nearly as possible on commercial lines as a model farm and as a demonstration not only for the boys in attendance, but for the farmers from the surrounding country who attend various institutes held during the year. A limited number of field experiments in fertilizers, tillage, etc., are being conducted, as well as feeding and breeding experiments with cattle, sheep, swine, and horses.

At the station each year about 30 young men who intend to become farmers are admitted for one year of practical training in farming, with supplementary instruction in the principles of the sciences un-

derlying ordinary farm practice. The technical instruction is given in the class room on part of each working-day during the winter, and during the spring and summer at times when the weather is unsuitable for outdoor work.

The course extends from October 15 to October 15. The boys engage in the regular farm occupations from 9 to 10 hours a day and attend classroom instruction from one to three hours, depending upon the season. During the year, they are required to assist in all the various farm operations, and at the completion of the year are familiar with the ordinary farm practices as carried out on a scientifically conducted model farm. Practically no other laborers are employed on the farm, except the apprentices and one or two who may be retained for a second year to act as foremen over squads of workers.

Two salaried instructors are employed, the superintendent and one assistant, a graduate of the Royal College of Science, who conducts most of the classroom exercises. The superintendent, in addition to the general management of the farm and school, gives personal oversight and instruction to the farm apprentices in the field, barn, or dairy.

There were 26 apprentices during the 1913-14 session. Applicants for admission must be over 17 years of age and must give assurance that they intend to follow farming in Ireland as an occupation. Preference is given to boys and men who have attended a course of instruction in one of the county winter agricultural classes. They must possess good character and health, and have a good elementary school education. At the completion of the year, those whose work has been satisfactory receive small payments proportionate to the value of their work, the maximum being the equivalent of about \$25.

The *Clonakilty Station*, at Clonakilty, in County Cork, is very similar to the *Athenry Station*. The classroom work, however, includes several subjects in addition to technical agriculture not given at the *Athenry School*: English, arithmetic, surveying, and bookkeeping. The session is 10 months (October 15 to August 15), instead of 12 as at *Athenry*.

The *Ballyhaise Station*, County Cavan, conducts a system of farm apprenticeship similar to those at *Athenry* and *Clonakilty*, and in addition a creamery course for men intending to become creamery managers. The work for the farm apprentices is divided into two terms, a winter term of six months and a summer term of four months. Apprentices whose services are needed at home during the summer are accepted for the winter term. During this winter term a large part of the work is in the classroom. In the summer term it is nearly all practical farm work.

The creamery course is five months in length, beginning each year about the middle of October, and consists of practical work in butter-making, creamery management, etc., with classroom work in dairy bacteriology, dairy technology, dairy engineering, and business methods. At the close of the course at Ballyhaise, a limited number of the best students are placed in commercial creameries for the summer for further practical work and are allowed 10 shillings (\$2.43) a week for living expenses.

There were 88 pupils in attendance at these three stations during the 1913-14 session—76 farm apprentices and 12 apprentices in creamery management. Of the 76 farm apprentices, 45 had taken a course of instruction in winter agricultural classes before entering the station; 66 were sons of farmers whose holdings did not exceed \$200, and only 2 were not sons of farmers.

Agricultural schools.—There are three agricultural schools for boys, located at Antrim, Strabane, and Mountbellew. The *Antrim Agricultural School*, in the north of Ireland, is intended principally for students from County Antrim and from County Down. It has accommodations for 25 resident pupils. The school is under the general control of the Antrim County committee of agriculture and is situated 1 mile from the town of Antrim. The farm contains 187 acres, of which 130 are tillable. There is also a large garden and orchard, in which instruction in horticulture is given. The farm is managed by an experienced agriculturist, under whose direction the students are required, as at the agricultural stations, to take part in the work of the fields and of the farmyard, whether in connection with seasonable operations or permanent improvements. It is the aim of the school to give the students technical knowledge of agriculture, horticulture, and also farm practice to fit them for practical farming.

The school course is 10 months in length, running from the middle of October to the middle of August. Applicants for admission must not be less than 17 years of age, must declare their intention to become farmers in Ireland, and must produce evidence of a sure prospect of obtaining a farm of their own or bona fide occupation on a farm. In the general arrangements the school is very similar to the agricultural station schools.

The *Mountbellew Agricultural College* is under the management of the Order of Franciscan Brothers and is located in County Galway. It is well equipped with laboratories for all modern requirements, a model farmyard, and farms and gardens. Students are required to take part in all farm operations, as in the other schools described, but devote more time to classroom work.* The course of instruction includes (1) practical farming, which, in addition to assisting in the regular farm operations, includes the keeping of a

farm account of outlays and incomes for farm operations, livestock, and dairying, as if the college farm were the student's home; (2) a course in physics, chemistry, and biology with particular relation to farming; (3) farm calculations, surveying of land, values of manures and feeding stuffs; (4) study of seeds, grasses, weeds, and pasture; (5) use of natural and artificial manures; (6) management of live stock, winter dairying; (7) veterinary hygiene; (8) fruit growing; (9) bee keeping; (10) farm accounting.

Applicants for admission must be 16 years of age and over and must pass examinations in all of the elementary school subjects. Many of the students are scholarship students who have taken winter agricultural courses in the county and have been awarded scholarships by the county committee of agriculture. There were 27 students in 1913-14.

In addition to conducting the farm and teaching agriculture to the resident students, the college carries on outside activities in assisting farmers in improving their methods. Members of the college staff give lectures to farmers at the college on all phases of agricultural work. In the year 1913 they held 20 such meetings. During the year 56 neighboring farmers conducted manurial experiments on their own farms with roots and potatoes, and others carried out a series of simple cattle-feeding experiments, all under the supervision of the college agriculturists.

The *Northwest Agricultural School*, located at Strabane, in north-west Ireland, opened for pupils for the first time on the 27th of January, 1914, and gave a six weeks course for young men actually engaged in farm work. The course included agriculture, veterinary science, and practical gardening.

This course was followed by three residential courses for young women, which commenced on the 24th of March, 12th of May, and 30th of June, respectively, and lasted six weeks. Instruction in poultry keeping, cookery, sewing, and housewifery was provided. This school is intended primarily for students from the counties of Donegal, Londonderry, and Tyrone. Twenty-seven young men attended the winter school, and 54 young women took the work in the three residential courses. Residence for all of these students was provided at the school. Practically all were holders of scholarships awarded by county committees on agriculture from the counties from which they came, entitling them to free instruction, board, and residence.

The school buildings were erected and equipped by the Department of Agriculture and Technical Instruction, by whom the staff of instructors are appointed and paid. The management is in the hands of the department, aided by an advisory committee appointed by the committees of agriculture of the three counties named above.

Agricultural schools for girls.—Two of these, the Munster Institute and the Ulster Dairy School, are central institutes managed by the department and open to resident pupils only. There are nine other schools somewhat similar, but of lower grade, known as schools of rural domestic economy, working under local private management, but aided and supervised by the department.

The *Munster Institute* is located in County Cork, in the south of Ireland, on a farm a mile outside of the City of Cork. Four terms are held during each year, with approximately 56 students, the number the school has accommodation for, in attendance each term. The objects of the school are as follows: (1) To provide instruction for girls who wish to learn improved methods in regard to their own work in the dairy, poultry yard, etc.; (2) to enable suitable pupils to qualify for work as dairy maids; (3) to provide special instruction to suitable candidates for teachers in dairying and poultry either as county itinerant instructors or instructors in agricultural schools. The full course in preparation for teaching, either as county itinerant instructors or in agricultural schools, occupies six or seven terms. During 1913-14, 17 pupils completed the course for itinerant instructorships for teachers, 12 of whom found employment in connection with department's work. The total number of graduates of the institute so employed now amounts to 63, of whom 27 act as county instructors in both dairy and poultry keeping, 5 as county instructors in dairying, 8 as county instructors in poultry keeping, and 23 as teachers in agricultural schools.

Each of the four terms is of 11 weeks' duration, commencing, respectively, in January, April, July, and October of each year. Young women between the ages of 17 and 35 are admitted upon producing certificates of good health and character and evidence that they have received such general education as will enable them to follow the course to good advantage. Applicants who have attended local classes in the various counties in butter making and poultry keeping and whose attendance and progress at such classes have been satisfactory are given preference in regard to admission to the institute.

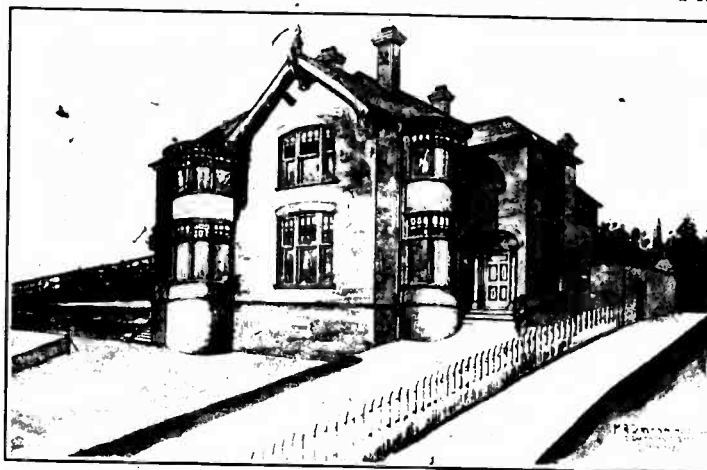
Students are eligible for admission to a second consecutive term if they attain the required standard at the examination at the conclusion of their first term. Students who have attended two terms and desire to qualify for teaching or for itinerant instructorships are admitted to a third term, provided they attain the required standard at the end of the second term and satisfy the department as to their general fitness for the work. If their progress during the third term is satisfactory, they may be admitted to further training. Attendance at the institute during at least six terms (1½ years) is necessary



A. TECHNICAL SCHOOL, BALLYMONEY.



II. WORKSHOP IN THE MUNICIPAL TECHNICAL SCHOOL, BANGOR, COUNTY DOWN.



A. NORTHLANDS SCHOOL OF HOUSEWIFERY, LONDONDERRY.



B. KILLARNEY SCHOOL OF HOUSEWIFERY, KITCHEN.

to qualify for positions to teach in the department schools or for county instructorships.

Girls who desire to become dairymaids in creameries and who have attended two terms at the institute and attained a satisfactory standing may be admitted to a third term; on the completion of which they are placed in selected creameries in Ireland for practical work as dairymaids. Students so selected are allowed 10 shillings per week for subsistence and free instruction at the creamery for a period of 20 weeks.

The school is located on a farm with model buildings and sufficient stock to produce milk necessary for instruction purposes in butter making, cheese making, etc. The farm contains also a poultry plant, with flocks of the different breeds of hens for use in poultry instruction. All of the work in caring for the stock, feeding, milking, etc., is done by the girls. On the farm is a large building used as a residence for the instructors and students, and containing classrooms and laboratories for instruction in dairying and the household arts.

The course of instruction includes (1) the practice of dairy work, the treatment of milk and the making of butter on a large and on a small scale with the most modern machinery and implements, as well as with the appliances generally used in farm dairies; (2) instruction and practice in the feeding and management of cows, calves, and pigs; in the keeping of small gardens and in the care of bees; (3) instruction and practice in poultry work: breeds and suitability for different purposes in different localities; housing, feeding, and management; grading and packing of eggs; hatching and rearing of chickens; fattening, killing, plucking, and preparing for market; trap-nesting and keeping of laying records; (4) instruction and practice in domestic work, embracing plain cookery, plain needlework, laundry work, and home nursing.

The *Ulster Dairy School* is located at Cookstown, County Tyrone, in the north of Ireland, on an extensive tillage and dairy farm. In terms of admission and course of study the school is similar to the Munster Institute, except that no provision is made for advanced students. Those who desire to qualify for the work of teaching in agricultural schools or as county itinerant instructors are sent to the Munster Institute for their final courses.

The four terms held at the school during the year 1913 were attended by 191 pupils, or an average of 48 each term. One pupil passed the final examinations for a teachership in an agricultural school, two were transferred to the Munster Institute for further training as county instructor, and two were given facilities for receiving special training at commercial creameries as dairymaids.

Schools of rural domestic economy, as has been previously stated, are nine in number. Day and resident pupils are received at six schools, day pupils only at two, and resident pupils only at one. The course of instruction is framed with a view of teaching girls of the farming class of 15 years of age and over improved methods of work which they can apply in their own homes, but the training is also availed of by girls whose purpose is to qualify themselves for positions as dairymaids, cooks, housekeepers, etc. The full course for resident pupils consists of two sessions covering a year's training. Promising pupils are eligible for admission to further training at the Munster Institute and the Ulster Institute, and may ultimately qualify for instructorships or for teaching in agricultural schools or as creamery dairymaids. The schools are located at Westport, Claremorris, and Swinford in County Mayo; at Portlanna and Cliden, in County Galway; Killeshandra, County Cavan; Ramsgrange, County Wexford; Loughglynn, County Roscommon; and Benada, County Sligo. The total attendance at these nine schools for 1913-14 was 358 day pupils and 274 resident pupils, making a total of 632 girls. The first of the schools, three in number, were opened in 1905 with an enrollment of 268.

The *Loughglynn School* is situated in one of the "congested" districts. It was established in order to provide women and girls of the neighborhood with practical training to enable them to increase the comfort of their homes and improve the conditions under which they live. The training aims to make them efficient rural housewives and to counteract the tendency to despise farm work and to abandon rural life. It does not aim at the preparation of girls for domestic service. The course of instruction includes (1) dairying, making cheese and butter, and caring for cows and calves; (2) poultry keeping, the rearing and management of hens, ducks, turkeys, and geese; (3) pig rearing and feeding and general management of pigs; (4) gardening, the cultivation of such vegetables, fruits, and flowers as may be grown in the cottage garden; (5) beekeeping; (6) sewing, knitting, and mending, including the making and repairing of garments of every kind worn in the districts; (7) washing and ironing; (8) cooking—especially the preparation with inexpensive and simple utensils of those dishes for which the materials are furnished by the products of the farm and the garden; (9) cleaning and decorating the home; (10) home industries which can be carried on in time not required for the farm or the household, such as lace making, embroidery, carpet weaving, and the making of artificial flowers. Pupils must be more than 14 years of age and live sufficiently near the school to permit of their returning home daily. There are no fees. In order to give the lessons direct practical application in the home life of the people, pupils bring with them to the school as far as

possible the material needed for the work—the cream or milk for dairy practice, the poultry to be killed or dressed, the materials for the dishes to be cooked, the cloth for new garments, the clothing to be repaired, washed, or ironed. The pupils take home with them in the evening the products of their day's labor, which serve as object lessons to those who can not be present at the classes. The school is equipped with stock, including dairy cattle, pigs, and poultry for instructional purposes.

Housewives and others in the neighborhood who are not in a position to attend the classes daily may avail themselves of instruction in any subject and come to the school for advice whenever they desire it, in connection with the home work. The teachers visit regularly the homes of the persons who desire their guidance in the difficulties of household management and visit regularly also the homes of their pupils to see how they are carrying out the instructions received at the school. They also distribute among their pupils settings of eggs of approved breeds, garden seeds, etc. During the potato-spraying season they superintend the use of spraying machines supplied to the school by the department for lending to farmers.

The Loughglynn School is located in Roscommon County, in west central Ireland, about 6 miles from the village of Castlerea, the nearest point to the railroad. It is located in a manor house purchased with a farm of 75 acres by an order of nuns, the Franciscan Missionaries of Mary, from the congested districts board. It was a part of a great estate which the board seized and divided into small holdings under the land-purchase act of 1899.¹ All of the instruction in the school is given by nuns of this order. The school is open to all who wish to enter, however, without restriction as to religious denomination.

In addition to these nine schools, there are a few residential schools of domestic science in Ireland in which instruction in butter making and poultry keeping is given, and for which special aid is provided by the department. Among these may be mentioned the schools of domestic training at Dumanway, County Cork; Dunderum, County Tipperary; and Drishane, County Cork.

ITINERANT INSTRUCTION IN AGRICULTURE THROUGH COUNTY INSTRUCTORS OR AGRICULTURAL AGENTS.

In each county in Ireland there is a "county committee on agriculture" or a "county committee on agriculture and technical instruction," which has charge of various agricultural development schemes or projects supported by county funds, and of schemes which have

¹ See appendix.

the approval of the department and are supported in part by department funds. Among these is the department's plan of instruction in agriculture, which requires the employment in each county of an agricultural instructor. Each person employed must be approved by the department and becomes its representative in the discharge of many of its functions.

The department is interested in several other projects—the schemes of instruction in poultry-keeping, butter-making, horticulture and bee-keeping, and for general instruction in farming in the congested districts. This last is administered by the department directly, the others by the county committees on agriculture, with the department's cooperation. For each of these the employment of special instructors is required. The instructors in poultry and butter-making are all women. The activities of the instructors are similar to those of the agricultural instructors given below. Special reference to each scheme is made later.

The department's plan of instruction in agriculture has been in operation each year since 1907-8 by every county committee of agriculture. During the year 1913-14, 45 instructors (dairy and poultry instructors not included) were employed under the scheme. These were appointed as follows: 5 in County Cork, an unusually large county; 2 in each of 8 counties; and 1 in each of the remaining 24 counties. With 5 exceptions, all these instructors had been trained in the agricultural department of the Royal College of Science.

The duties of the instructors embrace—

- (1) Teaching winter agricultural classes and giving lectures on agricultural subjects at different centers;
- (2) Carrying out of important field and live stock experiments, demonstrations, etc.;
- (3) Affording individual advice and instruction, either by means of visits to farms or by correspondence;
- (4) Acting as official samplers under the fertilizers and feeding stuffs acts and the weeds and agricultural seeds act;
- (5) Reporting on applications for the consent of the department, under section 32 of the Irish land act, 1909, to the felling of trees on holdings affected by that act;
- (6) Acting as judges under the department's scheme of prizes for cottages and small farms; and
- (7) Disseminating information generally regarding the department's agricultural schemes, and the department's institutions for the training of young men in farming, etc.

These duties bring the instructors into touch with all sections of the agricultural community and enable them to supply the department with valuable information on matters concerning the agricultural interests of the country.

Some idea of the activities of the county instructors may be gathered from the following data. In 1913-14, in addition to teaching

the 1,281 students in 84 winter agricultural classes; mentioned later, instructors delivered 750 lectures at 518 centers, with a total attendance of 37,250 persons. The number of visits paid to farmers was 19,000, approximately 422 visits to each instructor. The instructors laid down 787 field experiments and 2,132 demonstration plats and also supervised the carrying out of 90 experiments in the feeding of live stock. The experiments included principally manurial experiments and experiments with varieties of seed. The demonstration plats are intended to bring in a practical manner, to the notice of farmers, results obtained by using various manures, varieties of seeds, or methods of cultivation which experiments have shown to be the most profitable. The plats are situated, as a rule, in fields adjacent to public roads and are conspicuously labeled.

An annual general conference of the county instructors and of the department's agricultural staff is held at the Royal College of Science, and lasts four or five days. At this conference a series of lectures by specialists is arranged, and an opportunity is given for discussion of the problems met by each of the field workers. The department arranges annually an educational tour for a limited number of the instructors, extending over a fortnight, in which they are sent to England, Scotland, Wales, or to the Continent to observe the work of other men occupied in positions similar to their own, as well as to observe agricultural methods in the countries visited.

Agricultural schemes for congested districts.—In addition to the county instructors, the department employs 4 agricultural overseers, aided by 52 assistants, in connection with various schemes of agricultural instruction in the congested districts. These schemes are administered by the department directly and are supplementary to the ordinary agricultural schemes carried out by the county committees on agriculture. The work of the four overseers and their assistants is confined to the newly settled regions, instructing settlers how to perform ordinary farm operations, assisting them in securing implements, and advising them relative to conducting their farms. In addition to the 52 assistant overseers, special demonstrators in potato spraying are employed during the summer months, 11 being employed during the summer of 1914. The overseers also conduct demonstration plats to illustrate methods of cultivation, the advantages of good seeds, and suitable manures. The sites for the plats are provided by the farmers, the department supplying the seeds and manures at about one-half cost on condition that they agree to carry out the directions of the overseers in regard to cultivation. In selecting plats, overseers select as far as possible sites that may readily come under the observation of farmers in the district, land near public roads being generally chosen if otherwise

suitable. The plats are labeled conspicuously, so that passers-by may easily grasp the lessons intended to be conveyed. In 1906-7, the year when this work began, there were nearly 9,000 of these demonstration plats; in 1913-14 there were over 12,000.

The representative of the Bureau of Education visited a newly settled region near Castlerea, in county Roscommon, and saw at first hand the work of one of the local agricultural overseers who had under his supervision about 200 holdings of 40 acres each. Most of the land occupied by these holdings was formerly pasturage. Now it is being settled to a large extent. A description of the activities of this particular overseer is given in the Report of the Royal Canadian Commission on Industrial Training and Technical Education in the following words:

The local agricultural overseer spends his whole time among about 150 holders, there being about 50 holdings uncompleted at the time of the visit of the commission. The overseer helps them to begin the use of new implements and machines, such as chilled plows, cultivators, mowers, etc. The "colonists" were also given some assistance by the department, to enable them to obtain such machinery. When a new machine was to be started or put to use, a number of the neighboring farmers would come to one place to learn all they could. When there was no such work to do, the overseer would visit about 10 farms daily, offering counsel, answering questions, and helping the people to understand the difficulties of their occupation, and how to meet them successfully. This overseer had attended one winter agricultural course of 16 weeks, and formerly managed a large farm for some four years in the county of Cork. He began his work as overseer at a salary of £65 a year, and is now receiving the maximum for that class, which is £100 a year. The overseers are not used by the department to conduct winter classes, to hold meetings, or to give any other instruction than that imparted to the farmers on their own places.

Poultry-keeping and butter-making schemes.--The department's scheme of instruction in poultry keeping has been in operation in every county since 1909. In 1909, the first year, 23 instructors were employed; 39 instructors were employed in 1913-14. Of the 39 instructors, 23 act in the dual capacity of instructors in poultry keeping and butter making.

The instructor in poultry helps to establish poultry stations for direct improvement in the quality of poultry stock, and gives instruction through special poultry classes and by personal visits at the houses of poultry keepers. There are now 1,103 stations for the distribution of settings of hen, duck, and goose eggs, and 779 turkey stations. The total number of classes held was 139, with 1,800 students in attendance.

The butter-making scheme was in operation in 1913-14 in 29 counties, and 36 instructors were employed, of whom 23, as already stated, also gave instruction in poultry keeping. The most important work of the instructor consists in conducting practical classes in butter making at selected centers. These classes are held for a

period of from two to four weeks, with daily instruction of not less than two hours. All pupils take part in the practical work. During the year (1913-14) 19½ classes were held, with 2,623 pupils in daily attendance. The instructors, when not engaged in class work, visit dairies and give demonstrations in the making of butter by means of the equipment actually in use at the places visited. During the year, 6,754 demonstrations were held and 110 lectures were given, with an attendance of nearly 2,000 persons.

Horticulture and beekeeping schemes.—In the 33 counties 41 instructors were employed, 35 of whom gave instruction in both horticulture and beekeeping, 3 in horticulture alone, and 3 in beekeeping alone. The duties of the instructors consist principally of visiting and giving instruction at gardens and cottage plots. Wherever possible, demonstrations were arranged and conducted for the benefit of local residents, 360 being conducted during the season.

Summary.—During 1913-14 there were employed 138 persons by county committees on agriculture in connection with the four principal schemes of itinerant instruction: 45 county instructors in agriculture were employed, 41 in horticulture and beekeeping, 23 in poultry and butter making, 16 in poultry, and 13 in butter making. In addition, 2 tillage demonstrators were employed by one county committee; 3 instructors in home-bacon curing, 1 in each of three counties; 2 plowing demonstrators, 1 in each of two counties; and 1 agricultural overseer for congested districts in one county. This is a total of 116 separate persons employed for agricultural instruction by the 33 county committees in cooperation with the department.

In connection with itinerant instruction in agriculture, administered directly by the department, there were employed 4 overseers, with 52 assistants, giving instruction to small farmers in the congested districts of the west; 20 instructors in flax growing in districts where flax is the staple crop; and 8 instructors in creamery management to assist in the improvement of the management of the creameries.

RURAL EXTENSION SCHOOLS IN AGRICULTURE, POULTRY, AND BUTTER MAKING.

The "rural extension schools" are itinerant schools under the direction of the county committees on agriculture, which decide upon the number and the locations and appoint local committees to secure suitable rooms and make the other necessary local arrangements. They are supported in part by county funds and in part by department funds. Whatever equipment is needed in the schools is purchased by the county committee and is carried from one location to

the next. Very little is needed for the agricultural classes or for the poultry classes. The regular instruction is given by the county agriculturalists and by the county instructors in butter making and in poultry keeping. The classes are held in central buildings provided by local committees and approved by the county committee. It may be an unused dwelling, a town hall, courthouse, or any suitable place.

Winter agricultural classes.—Winter agricultural classes were operated in 1913-14 in 84 centers in 29 counties, with a total enrollment of 1,281. This number does not include the similar classes in poultry and butter making. Each class is held not more than four nor less than two days weekly during a period of from 15 to 20 weeks, between the middle of October and the middle of March. Classes meet both morning and afternoon and are taught by county itinerant instructors in agriculture, assisted where necessary by special teachers. This plan has been in operation since 1909-10, when 70 classes in 26 counties were held.

For admission to the classes, candidates must be 16 years of age and engaged in farming work in the county. No fee is charged for the course, but students must provide their own supplies. Those who reside at a distance greater than 3 miles from the class center are allowed their railway expenses. Students whose attendance and progress have been satisfactory receive special preference in connection with the Department of Agriculture apprenticeships at the agricultural stations and agricultural schools.

The course of instruction includes soils, tillages, manures, seeds, grasses, weeds, farm pests, treatment of pasture, cropping, management of live stock, winter dairying, valuation of manures and feeding stuffs, simple farm-account keeping and farm calculations, mensuration, elementary chain surveying, and elementary science explanatory to the principles underlying ordinary farm practice. So far as possible, the lessons are illustrated by practical demonstration.

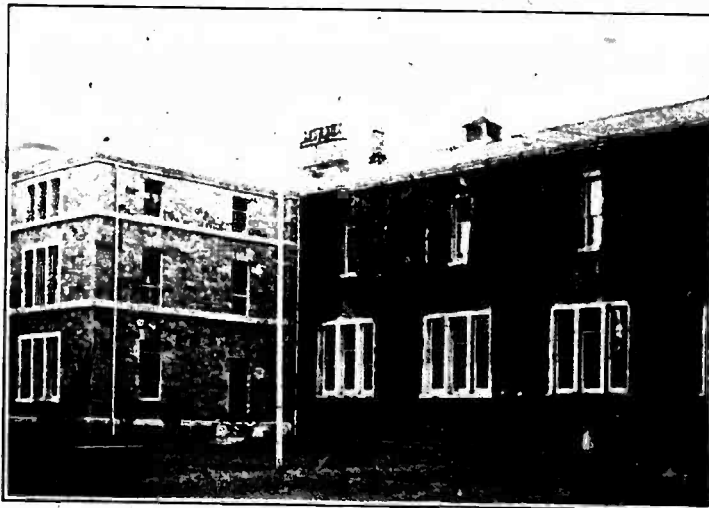
Winter butter making and poultry keeping classes.—The classes are separate and are either in butter making or in poultry keeping. They are for girls only. Teaching these classes is a part of the work of the county instructors in these subjects. During the year 1913-14 the 36 butter-making instructors previously mentioned held 195 classes, the 39 poultry instructors 139 classes. The classes met in all cases two hours a day for five days each week for from two to four weeks. The work is all practical. In the butter-making schools a churn is provided for every two girls. In the poultry-keeping schools, girls bring their own poultry for lessons in killing, dressing, and preparing for market. The poultry classes are held in com-



A. MOUNTMELICK, SHOWING THE COTTAGE (MARKED X) FITTED AS PERMANENT HOME FOR ITINERANT SCHOOLS OF COOKING AND HOUSEHOLD ARTS.



B. COUNTY ITINERANT INSTRUCTION; MANUAL INSTRUCTION IN WOODWORK.



A. ADMINISTRATION BUILDING, ALBERT AGRICULTURAL COLLEGE, GLASNEVIN, NEAR DUBLIN.



B. DRESSMAKING CLASS, URSULINE CONVENT, SLIGO.

munities where poultry is available for demonstration purposes and study.

In the butter-making schools the instructor gives a lesson the first day on butter making, followed by a demonstration. Each following day the two-hour period is devoted to butter making by the girls themselves, except a short period each day during which the instructor lectures on such subjects as sanitary housing of dairy cattle, milking, treatment of milk, construction of dairy, cream separation, ripening, churning, milk records, and calf rearing. The pupils take notes, which the instructor corrects. An examination is held at the close of the session.

The equipment for a class of 12 girls costs approximately \$250. It includes 6 end-over-end churns, 6 butterworkers, and 6 sets of small equipment, such as measures, skimmers, scoops, sieves, brushes, thermometers, buckets, cream pans, etc., and one pair of scales with weights, Gerber butter-fat tester, hand separator, portable boiler, lactometer, butter trough, 20-gallon "railroad" can, etc.

In the poultry-keeping classes lectures and demonstrations are given on breeds and breeding, rearing and management, housing, chicken rearing, feeding, winter egg production, selecting and testing eggs, marketing and packing eggs, preservation of eggs, preparation and marketing table poultry, and poultry diseases. Pupils take part in practical work in packing and testing eggs, making a hatching nest and setting the hen, fattening, killing, plucking, and preparing for market, use of incubator and brooder.

The equipment for the course costs approximately \$65. It includes tables, trussing boards, knives, folding coop for sick hens, buckets, brushes, plucking baskets, spring-hook weighing machine, egg tester, toe punch for marking chickens, setting nest, incubator, brooder, dissecting instruments, etc.

Girls who have satisfactorily completed either the butter-making or poultry-keeping classes are given preference in awarding scholarships to the Munster or Ulster Dairy Institute.

Itinerant schools taught by county instructors employed by county committees on agriculture and the department, 1913-14.

	Agriculture.	Horticulture and bee keeping.	Poultry.	Butter making.
Number of instructors.....	45	51	139	138
Miscellaneous lectures given.....	757	126	163	110
Number of short courses conducted.....	84		139	196
Length of courses, in weeks.....	15 to 20		2 to 4	2 to 4
Number of students.....	1,281		1,801	1,681

* 23 of these are duplicates.

RURAL EXTENSION SCHOOLS IN HOUSEHOLD ARTS,
HOME INDUSTRIES, AND FARM CARPENTRY.

The division of technical instruction of the Department of Agriculture and Technical Instruction is cooperating with the division of agriculture in certain forms of technical training, both for men and women, to supplement the extension teaching in agriculture. The work for men is largely farm carpentry. The work for women is of two kinds—the teaching of industries which seek to provide for the home itself what the home needs, and those which may aid chiefly in increasing the family income. The first includes such activities as better housekeeping, and knitting, spinning, and sewing for the family; the second includes lace making, crochet making, sprigging, embroidery, shirt making, hand spinning, etc. The latter kind of work has been encouraged in the congested districts more than in other places on account of the difficulties of securing a satisfactory living without income from outside.

For rural districts as a whole the department desires to exert its influence to assist in providing for the home what the home needs rather than in increasing the family income through the manufacture of products for sale. Its attitude is guided by the following principle:

The true conception of home industries amongst an agricultural population, namely, that they shall be the handmaid of agriculture and not its rival, the means of occupying agreeably and profitably in the home the time which can not be given to the cultivation of the soil. And by profitable occupation is meant not merely or simply the making of things which can be exchanged for money, but the making of things which would otherwise have to be bought with money. * * * It is well to emphasize this fact and to point out that home industries indiscriminately pursued, like other good things, have their dangers. They can lend themselves to two mischievous tendencies, among others: (1) Sweating in the home, a way of engaging all the members of the family to the very youngest in a feverish struggle to increase the scanty earnings of the industry, to the neglect of sanitation, of the education of the children, and of the general comfort and happiness of the home; (2) neglect of agriculture through the temptation to give more time to these industries than proper care of the farm justifies.¹

The Irish Department of Technical Instruction has attempted to avoid the evils referred to by insisting that wherever money is given from public funds to schools in aid of home industries, it is on the condition that domestic economy shall also be taught.

The activities of this division have taken several forms: Affording free expert advice relative to the establishment of an industry and during its growth, the training of masters and foremen for the rural industries, and conducting rural extension schools in domestic economy, the home industries, and elementary farm carpentry.

¹ From the Report of the Recess Committee.

The rural-extension schools are run cooperatively with the county committees on technical instruction. Instructors are employed by the county committees, with the approval of the department, which pays five-ninths of the salary of each. The county committees purchase the necessary equipment for instruction and this is transported from one school to the next. The county committees also make general arrangements for the itinerary of the instructors and decide where schools shall be held. Local communities desiring schools must take the initiative and make application to the county committee. The committees, as a rule, are able to grant only a fraction of these applications; however, they act favorably on as many as possible. In determining which to grant, they take into consideration an equitable distribution about the county, the number of people who desire to attend in each community, and similar factors.

The county committees require a local committee to be formed wherever schools have been awarded, the local committees being charged with the duties of finding buildings suitable for the classes and making all local arrangements. The building may be a vacant dwelling house, a schoolhouse, village hall, court room, or any other suitable place. Usually the building or room is rented, but in several instances buildings have been purchased as permanent quarters for these itinerant schools, being used at different times for the cooking school, the carpentry school, and the winter agricultural classes under the county instructor in agriculture. When the time comes for the school in one of the communities selected, the equipment is brought by the instructor from the last school, and with the help of the local committee is placed in the room provided and arranged for work. The equipment generally remains eight weeks in each location, and there are two classes each day for five days in the week, one from 4 to 6 in the afternoon, the other from 7 to 9 in the evening. To these classes are admitted persons beyond the school age who are engaged in farm or farmhouse work. If the afternoon classes are not too full, boys and girls over 14 years of age attending public schools are admitted. The standard classes are from 16 to 20 students; there are seldom more than 20 admitted. Each complete course includes approximately 40 lessons of two hours each, the larger part of the time being taken up with practical work.

The subjects of instruction in the schools for women are the ordinary household arts, including cookery, laundry work, home sewing, home nursing and hygiene, and various home industries. The cooking lessons consist of instruction and practice in preparing plain and ordinary dishes, and include such useful information as the management of the cook stove, choice and selection of foods, utilization of scraps of food, recipes for sick persons, etc. The course also includes simple instruction in hygiene and simple household accounts. The

course in home sewing covers lessons in darning, mending, patching, etc., making patterns and cutting out, principally garments worn by children. The equipment for a cooking school includes a kitchen range; five folding work tables, each large enough for four girls; and a kitchen cabinet containing a supply of ordinary kitchen utensils for 20 girls. It costs approximately \$200. The equipment for a sewing school costs much less. It includes sewing tables, patterns, a sewing machine, and other minor articles needed.

The carpentry schools resemble the schools of domestic science in their plan of organization. The equipment consists, as a rule, of eight carpenter benches and the tools necessary for elementary carpenter work. The course includes the making of simple pieces of furniture or equipment needed in the farm home or about the farm.

The cost of maintaining the itinerant schools of domestic science and of carpentry is not great, outside of the salaries of the instructors. A small fee is charged to pupils both in the domestic science schools and in the manual schools, to pay in part for the supplies used. The things made are given to the students for use at home. The fee amounts to the equivalent of 25 cents in some schools and 50 cents in others for the entire course. This hardly pays for the material used. The total cost of each school, the rent of the building included but salary omitted, is from \$15 to \$25, or from 50 cents to \$1 per pupil. The cost of transportation from one location to the next is very little, as the distances are not great and the roads are good.

Mountmellick may be given as an illustration of a village which has secured a permanent house for the annual itinerant schools of domestic science. This village of 250 persons has a cottage fitted up for the school and for a permanent demonstration in good house-keeping. The building is a typical stone cottage, with slate roof, one story in height, about 20 feet long and 14 feet wide, used several years as a private dwelling. After several improvements and renovations had been made, such as providing a new door, new window frames, and whitewashing the walls, the building was furnished with such furniture as is used or might be used in the neighboring homes. The equipment was all purchased in local stores, and the cost of furnishing was made one of the lessons of the course. In this particular school classes were held in the cottage in the afternoon from 2 to 5 p. m. The lessons were not formal in character, each student being assigned some duty for the day, such as cleaning, dusting, cooking, etc. Included in the course of instruction was bread making; baking; cooking meats, soups, vegetables; preserving and pickling; laundry work; plain sewing; and lectures on sanitation and hygiene. As the cottage was small only 9 pupils could be enrolled in the class, and to the 9 was given a course of 10 lessons or a total of 30 hours of work.

Teachers for these extension schools are trained by the department in two special schools established for this purpose—women for domestic science at the Irish Training School of Domestic Economy, at Kilmacud, a suburb of Dublin; men for manual instruction and carpentry at the department's "Industrial Annex," in Dublin.

The Irish Training School of Domestic Economy.—This is a residential institution housed in what was formerly a large private residence, with 3 acres of land. The house provides ample accommodation for the teachers and students, in addition to class and recreation rooms. On the land is a fruit and vegetable garden. The school gives two courses, first a course extending over one year in household management, the object of which is to train girls for the management of their own homes. Those who have satisfactorily completed this course may be admitted to a two-year course of training for teachers of domestic economy. Only those who show themselves particularly well equipped for teaching are selected.

The course in household management includes instruction in cookery and kitchen work, laundry work, home sewing and dressmaking, household routine, and the keeping of household accounts. It also includes instruction in elementary science, home hygiene, sick nursing, and in business methods and simple bookkeeping.

The additional two years provided for those training for teaching include the study of the principles of practical elementary science involved in domestic work, cookery, laundry work, dressmaking and home sewing, and housewifery. Much of the work is practice. In addition, practical instruction in home hygiene, sick nursing, and horticulture is given, and instruction in the theory and practice of education.

Admission to the school is by examination in academic subjects and in cookery and needlework. The examination in academic subjects includes English, one modern language, and arithmetic. The examination in cookery includes simple exercises in the preparation of dishes to illustrate primary methods in boiling, stewing, roasting, frying, baking, etc.; in needlework and tests to show ability to sew on ordinary underclothing. A fee of approximately \$100 a year is charged each student, which includes tuition, residence, and board during the 40 weeks of the session.

The school session begins each year in September and ends in June. During the 1913-14 session 33 students were enrolled, 13 in the lowest class, or the class in household management, and 20 in the teacher-training course.

The department's industrial annex.—The institution provides an eight months' course to train artisans to give instruction in woodwork, as county itinerant instructors, or as instructors in technical or day secondary schools. The course consists mainly in practice

in woodworking and mechanical drawing, but includes lessons on timbers, tools, and the management of classes. Students are required to attend certain designated classes for two hours three evenings each week in the Metropolitan School of Art and the City of Dublin Technical School. Admission is by competitive examination open only to qualified carpenters, joiners, pattern makers, and cabinetmakers of from 21 to 30 years of age. The examination includes written tests in English composition, arithmetic, and working drawings, and a practical test in carpentry.

The department grants each year to successful candidates 16 scholarships entitling the holders to free instruction, a maintenance allowance of approximately \$7.20 per week during the eight months of the session, and railroad fare to Dublin and return.

Special classes or itinerant schools in lace making and sprigging are held in several parts of Ireland. Fermanagh County has the largest number of these schools. The county committee on technical instruction, in cooperation with the department, employed in 1913-14 eight lace-making and sprigging teachers. These teachers give instruction in various centers fixed by the county committee, with the approval of the department, of at least 6 hours per week throughout a 12 weeks' session. The instructors also spend part of their time in visiting homes where lace is made and in giving personal instruction.

For training teachers the county committee, in cooperation with the department, maintains the *Training School for Lace Teachers* in connection with the county technical school at Enniskillen, the county seat. To this school are admitted each year by the county committee a number of young women from the county, 20 years of age and over, who possess special ability in lace making and sprigging for a 12 months' course, which includes lace making, sprigging, laundering, drawing and design, English, commercial arithmetic, and hygiene. A number of women selected by the department are admitted to the school from other parts of Ireland. They are awarded scholarships after being selected by competitive examination and must show that they have a satisfactory general education and proficiency in crochet work and sprigging. The scholarships are of approximately \$121 in value and are sufficient to pay for tuition, residence, and board.

THE ESTABLISHMENT OF THE DEPARTMENT OF AGRICULTURE AND TECHNICAL INSTRUCTION.

The Department of Agriculture and Technical Instruction of Ireland was organized in 1900, in accordance with an act of Parliament passed in 1899.

Information concerning its history in the first few years of its existence is given by Sir Horace Plunkett in his book published in

1904, entitled "Ireland in the New Century." Sir Horace writes of the needs in Ireland for such a department as follows:

The story of the new movement begins in the year 1889, when a few Irishmen, the writer of these pages (Sir Horace Plunkett) among them, set themselves the task of bringing home to the rural population of Ireland the fact that their prosperity was in their own hands much more than they were generally led to believe. I have already pointed out that in order to direct the Irish mind toward practical affairs, and in order effectively to arouse and apply the latent capacities of the Irish people to their chief industry, Agriculture, we must rely upon associative as distinct from individual effort; or, in other words, we must get the people to do their business together, rather than separately, as the English do. Fortunately for us, it happened that this course, which was clearly indicated by the character and temperament of the people, was equally prescribed by economic considerations. The population and wealth of Ireland are, I need hardly say, so predominantly agricultural that the welfare of the country must depend upon the welfare of the farming classes. It is notorious that the industry by which these classes live has for the last quarter of a century become less and less profitable. It is also recognized that the prime cause of agricultural depression—foreign competition—is not likely to be removed, while that from the colonies is likely to increase. The extraordinary development of rapid and cheap transit, together with recently invented processes of preservation, have enabled the more favored producers in the newly developed countries of both hemispheres successfully to enter into competition in the British markets with the farmers of these islands. The agricultural producers in other European countries, although to some extent protected by tariffs, have had to face similar conditions; but in most of these countries, though not in the United Kingdom, the farmers have so changed their methods, to meet the altered circumstances, that they seem to have gained by improvement at home as much as they have lost by competition from abroad. Thus our farmers find themselves harassed, first, by the cheaper production from vast tracts of virgin soil in the uttermost parts of the earth, and, secondly, by a nearer and keener competition from the better-organized and better-educated producers of the Continent.

To remedy these conditions, the few men mentioned by Sir Horace Plunkett arrived at the conclusion that the introduction of the principle of agricultural cooperation was a vital necessity. They therefore made a study of the cooperative movements in England and other countries, developed a plan for Ireland, and conducted a campaign to create sentiment in favor of it and established a few associations. By 1894 the movement had gathered considerable volume, and a meeting was held in Dublin in April, at which the Irish Agricultural Organization Society (now commonly known as the I. A. O. S.) was formed. In the first instance it was to consist of philanthropic persons; later were included in its membership the societies which had been already created and others as they were established. Sir Horace Plunkett was its first president. He wrote in 1903:

"The growth of the movement in the last nine years under the fostering care of the I. A. O. S. is highly satisfactory. By the autumn of this year (1903) considerably over 800 societies had been established, and the number

is ever growing. Of these, 360 were dairy and 140 agricultural societies, nearly 200 agricultural banks, 50 home industries societies, 40 poultry societies, while there were 40 others with miscellaneous objects. The membership may be estimated—I am writing toward the end of the society's statistical year—at about 80,000, representing some 400,000 persons. The combined trade turnover of these societies during the present year will reach approximately £2,000,000, a figure the meaning of which can only be appreciated when it is remembered that the great majority of the associated farmers are in so small a way of business that in England they would hardly be classed as farmers at all.

These societies consist, as has been explained, of groups of farmers who have been taught by organizers that certain branches of their business can be more profitably conducted in association than by individuals acting separately. The principle of agricultural cooperation, with its economic advantages, will, as time goes on, be further extended by the combined action of societies. With this end in view federations are constantly being formed with a constitution similar to that of the societies, the only difference being that the members of the federation are not individuals but societies, the government of the central body being carried on by delegates from its constituent associations. The two largest of these federations, one for the sale of butter and another for the combined purchase by societies of their agricultural requirements, have been working successfully for several years. Federations, too, are being formed, as societies find that their business can be conducted more economically, for example, in dairying by centralizing the manufacture of butter, or in the egg export trade by the alliance of many districts to enable large contracts to be undertaken.

The organizations referred to above are buying and selling organizations. Another sort of organization undertaken by the I. A. O. S. is of particular interest. These are the agricultural banks, more properly called credit associations, which have been organized on the Raiffeisen system.

The exact purpose of these organizations is to create a means of introducing capital into the agricultural industry. They perform the apparent miracle of giving solvency to a community composed almost entirely of insolvent individuals. The constitution of these bodies, which can, of course, be described only in broad outline here, is somewhat startling. They have no subscribed capital, but every member is liable for the entire debts of the association. Consequently the association takes good care to admit men of approved character and capacity only. It starts by borrowing a sum of money on the joint and several security of its members. A member wishing to borrow from the association is not required to give tangible security, but must bring two sureties. He fills up an application form which states, among other things, what he wants the money for. The rules provide—and this is the salient feature of the system—that a loan shall be made for a productive purpose only; that is, a purpose which, in the judgment of the other members of the association as represented by a committee democratically elected from among themselves, will enable the borrower to repay the loan out of the results of the use made of the money lent.

Raiffeisen held, and our experience in Ireland has fully confirmed his opinion, that in the poorest communities there is a perfectly safe basis of security in the honesty and industry of its members. This security is not valuable to the ordinary commercial lender, such as the local joint stock bank.

Even if such lenders had the intimate knowledge possessed by the committee of one of these associations as to the character and capacity of the borrower, they would not be able to satisfy themselves that the loan was required for a really productive purpose; nor would they be able to see that it was properly applied to the stipulated object. One of the rules of the cooperative banks provides for the expulsion of a member who does not apply the money to the agreed productive purpose. But although these "banks" are almost invariably situated in very poor districts, there has been no necessity to put this rule in force in a single instance. Social influences seem to be quite sufficient to secure obedience to the association's laws.

Another advantage conferred by the association is that the term for which money is advanced is a matter of agreement between the borrower and the bank. The hard and fast term of three months which prevails in Ireland for small loans is unsuited to the requirements of the agricultural industry, as for instance, when a man borrows money to sow a crop and has to repay it before harvest. The society borrows at 4 or 5 per cent and lends at 5 or 6 per cent. In some cases the congested districts board or the Department of Agriculture has made loans to these banks at 3 per cent. This enables the societies to lend at the popular rate of 1 penny for the use of 1 pound for a month. The expenses of the administration are very small. As the credit of these associations develops, they will become a depository for the savings of the community, to the great advantage of both lender and borrower. The latter generally makes an enormous profit out of these loans, which have accordingly gained the name of "the lucky money," and we find in practice, that he always repays the association and almost invariably with punctuality.

The agricultural cooperative movement became very successful and exceedingly popular. From it, however, developed a feeling that something further was needed, and the opinion that Ireland should have a board of agriculture similar to those existing in other countries, with power to control certain features of the agricultural industries and to stimulate agricultural development through state aid. As a result there was formed, largely through the efforts of those most prominent in the I. O. A. S., the committee known as the "recess committee," which sat in the Parliamentary recess, consisting of Irish members of Parliament nominated by the leaders of the different sections and others selected by these members. This committee, which was formed in the fall of 1895, made an inquiry into the means by which the Government could best promote the development of the agricultural and industrial resources, making a first-hand study of conditions and progress in several European countries. Information was also obtained from the United States and Canada. Its recommendations were for a department of Government to be specially created, with a minister directly responsible to Parliament at its head, and financial support from the imperial treasury to be administered in aid to agriculture and industries in Ireland upon principles fully described. The report of the committee was issued in August, 1896, and public opinion in favor of its proposals grew rapidly. Before the end of the year 1896 a committee representing

all the agricultural and industrial interests of the country waited upon the Irish Government in order to press upon them the urgent need of the new department. As a result a bill was introduced before Parliament the following year, but withdrawn on account of other measures affecting Ireland before Parliament. In 1899 another bill was introduced and became a law, the new department being organized in 1900.

The department consists of the president (who is the chief secretary for the time being) and the vice president. The staff is composed of a secretary, two assistant secretaries (one in respect of agriculture and one in respect of technical instruction), as well as certain heads of branches and a number of inspectors, instructors, officers, and servants. The recess committee, it will be remembered, had laid stress upon the importance of having at the head of the department a new minister who should be directly responsible to Parliament; and, accordingly, it was arranged that the vice president should be its direct ministerial head. The act provided that the department should be assisted in its work by a council of agriculture and two boards, and also by a consultative committee to advise upon educational questions.

It was created to fulfill two main purposes. In the first place, it was to consolidate in one authority certain interrelated functions of government in connection with the business concerns of the people which, until the creation of the department, were scattered over some half dozen boards, and to place these functions under the direct control and responsibility of the new minister. The second purpose was to provide means by which the Government and the people might work together in developing the resources of the country so far as State intervention could be legitimately applied to this end.

To accomplish the first object two distinct Government departments, the veterinary department of the Privy Council and the office of the inspectors of Irish fisheries, were merged in the new department. The importance to the economic life of the country of having the laws for safeguarding our flocks and herds from disease, our crops from insect pests, our farmers from fraud in the supply of fertilizers and feeding stuffs and in the adulteration of foods (which compete with their products), administered by a department generally concerned for the farming industry need not be labored. Similarly, it was well that the laws for the protection of both sea and inland fisheries should be administered by the authority whose function it was to develop these industries. There was also transferred from South Kensington the administration of the science and arts grants and the grant in aid of technical instruction, together with the control of several national institutions, the most important being the Royal College of Science and the Metropolitan School of Art; for they, in a sense, would stand at the head of much of the new work which would be required for the contemplated agricultural and industrial developments. The Albert Institute at Glasnevin and the Munster Institute in Cork, both institutions for teaching practical agriculture, were, as a matter of course, handed over from the board of national education.

The newly created powers of the department, which were added to and coordinated with the various preexisting functions of the several departments whose consolidation I have mentioned above, fairly fulfilled the recommendation of the recess committee that the department should have "a wide reference and a free hand." These powers include the aiding, improving, and developing of agriculture in all its branches; horticulture, forestry, home and cottage

industries; sea and inland fisheries; the aiding and facilitating of the transit of produce; and the organization of a system of education in science and art, and in technology as applied to these various subjects. The provision of technical instruction suitable to the needs of the few manufacturing centers in Ireland was included, but need not be dealt with in any detail in these pages, since, as I have said before, the questions connected therewith are more or less common to all centers and have no specially Irish significance.

For all the administrative functions transferred to the new department, moneys are, as before, annually voted by Parliament. Toward the fulfillment of the second purpose mentioned above—the development of the resources of the country upon the principles of the recess committee—an annual income of £166,000, which was derived in about equal parts from Irish and Imperial sources, and is called the department's endowment, together with a capital sum of about £200,000, were provided.

The very nature of the work which the department was called into existence to accomplish made it absolutely essential that it should keep in touch with the classes whom its work would most immediately affect, and without whose active cooperation no lasting good could be achieved. The machinery for this purpose was provided by the establishment of a council of agriculture and two boards, one of the latter being concerned with agriculture, rural industries, and inland fisheries; the other with technical instruction. These representative bodies, whose constitution is interesting as a new departure in administration, were adapted from similar continental councils which have been found by experience, in those foreign countries which are Ireland's economic rivals, to be the most valuable of all means whereby the administration keeps in touch with the agricultural and industrial classes, and becomes truly responsive to their needs and wishes.

The council of agriculture consists of 2 members appointed by each county council (Cork being regarded as two counties and returning 4 members), making in all 68 persons. The department also appoints one-half this number of persons, observing in their nomination the same provincial proportions as obtained in the appointments by the popular bodies. This adds 34 members, and makes in all 102 councillors, in addition to the president and vice president of the department, who are ex officio members. Thus, if all the members attended a council meeting, the vice president would find himself presiding over a body as truly representative of the interests concerned as could be brought together, consisting, by a strange coincidence, of exactly the same number as the Irish representatives in Parliament.

The council, which is appointed for a term of three years, the first term dating from the 1st of April, 1900, has a twofold function. It is, in the first place, a deliberative assembly, which must be convened by the department at least once a year. The domain over which its deliberations may travel is certainly not restricted, as the act defines its function as that of "discussing matters of public interest in connection with any of the purposes of this act."

The second function of the council is exercised only at its first meeting, and consequently but once in three years. At this first triennial meeting it becomes an electoral college. It divides itself into four provincial committees, each of which elects two members to represent its province on the agricultural board and one member to represent it on the board of technical instruction. The agricultural board, which controls a sum of over £100,000 a year, consists of 12 members, and as 8 out of the 12 are elected by the four provincial committees—the remaining 4 being appointed by the department, 1 from each

province—it will be seen that the council of agriculture exercises an influence upon the administration commensurate with its own representative character. The board of technical instruction, consisting of 21 members, together with the president and vice president of the department, has a less simple constitution, owing to the fact that it is concerned with the more complex life of the urban districts of the country. As I have said, the council of agriculture elects only 4 members—1 for each province. The department appoints 4 others; each of the county boroughs of Dublin and Belfast appoints 3 members; the remaining four county boroughs appoint 1 member each; a joint committee of the councils of the large urban districts surrounding Dublin appoint 1 member; 1 member is appointed by the commissioners of national education, and 1 member by the intermediate board of education.

The two boards have to advise upon all matters submitted to them by the department in connection, in the one case, with agriculture and other rural industries and inland fisheries, and, in the other case, in connection with technical instruction. The advisory powers of the boards are very real, for the expenditure of all moneys out of the endowment funds is subject to their concurrence. Hence, while they have not specific administrative powers and apparently have only the right of veto, it is obvious that, if they wished, they might largely force their own views upon the department by refusing to sanction the expenditure of money upon any of the department's proposals until these were so modified as practically to be their own proposals. It is therefore clear that the machinery can only work harmoniously and efficiently so long as it is moved by a right spirit.

"For the purpose of coordinating educational administration there shall be established a consultative committee consisting of the following members:

- " (a) The vice president of the department, who shall be chairman thereof;
- " (b) One person to be appointed by the commissioners of national education;
- " (c) One person to be appointed by the intermediate education board;
- " (d) One person to be appointed by the agricultural board; and
- " (e) One person to be appointed by the board of technical instruction."

Now the real value of this clause, and in this I think it shows a consummate statesmanship, lies not in what it says, but in what it suggests. The committee, it will be observed, has an immensely important function, but no power beyond such authority as its representative character may afford. Any attempt to deal with a large educational problem by a clause of this kind, would have alarmed the whole force of uncoordinated pedagogy, and perhaps have wrecked the bill. The clause as it stands is in harmony with the whole spirit of the new movement and of the legislation provided for its advancement. The committee may be very useful in suggesting improvements in educational administration which will prevent unnecessary overlapping and lead to cooperation between the systems concerned.

APPENDIX.

THE ESTATES COMMISSION AND CONGESTED DISTRICTS BOARD.

The following is quoted from Senate Document No. 214 (1913), *Agricultural Cooperation and Rural Credit in Europe*.

The Estates Commission of three members, appointed for life, had its origin in the Windham Act of 1902, dealing with the division and purchase of estates by tenants. This commission now handles about £8,000,000 per year, all used for the purchase and division of estates.

These estates may be purchased at a voluntary sale from the owners or (within the area of the congested districts board) the sale may be made on compulsion. At present the sales are almost all voluntary. Since its inception the estates commission has purchased and resold about 8,000,000 acres, valued at £90,000,000.

The Congested Districts Board is a larger commission, also nominated by the Government, and has for its object the division and sale of estates in nine western counties of Ireland, where the congestion of tenants was such that the cottager was unable to make a living on his very small parcel of ground. This board has purchased land worth perhaps £3,000,000, of which it has sold about 100,000 acres to date.

The field of operations of the estates commissioner's covers all of Ireland; the board works in but nine counties in the poorer parts, but their purposes are similar. The Congested Districts Board has, however, many other activities besides the splitting up of land.

The procedure is about as follows: A large estate, perhaps entirely in pasture land, is put up for sale. The officials appraise it with reference to its productiveness. If the price asked by the owner is satisfactory, the estate is purchased and the owner is paid in Government land scrip or stock bearing 3 per cent interest. Hitherto the voluntary seller has been given a bonus of 12 per cent of the purchase price, but this bonus seems to have been withdrawn recently.

Estates sold under compulsion the Government must pay for in cash. As a matter of fact, there are three methods of paying for land: (a) In stock, the usual and immediate payment method; (b) In cash, an option which is rarely resorted to, since the prospective seller must in this case await his turn, for cash sales are often very long delayed; (c) or partly in cash and partly in scrip. . . .

Once purchased, the estate is divided into tracts of 25 to 30 acres; line walls are built, if necessary; a house is constructed at a cost of about £200; and the place is sold to a tenant, preferably a former tenant on the estate, sometimes a purchaser from some other district. Since there are frequently 25 to 40 applicants for each holding, it is not difficult to find honest, capable, industrious purchasers. Very often an estate is purchased by the tenants thereon by mutual agreement with their former landlord as to purchase price. The Government buys the estate, pays the landlord in stock or scrip, and sells it in small holdings to the tenants, who thus become the debtors of the State.

The land must be sold to the purchasing small holders at a price not to exceed the purchase price. Frequently it is sold for less. Or the land plus the house and improvements are sold at the actual price paid for the land.

The small holder, who may have no capital—and seldom has enough to stock the holding—pays at present 3 per cent interest on the purchase price and one-half per cent amortization, or a total of 3½ per cent, payable in semiannual instalments. This rate amortizes the debt in about 62 years. The purchaser is given a title to the land, pays the taxes on it, and may transfer his equity at any time if he chooses.

Out of £90,000,000 sold, the failures to pay the instalments promptly have been inconsiderable. In the County of Cork the defaults have been nil. In case of default or failure the instalments are paid out of the County exchequer; hence the tendency to pay promptly is warmly applauded and the slow payer is frowned upon. The results of this system seem to be excellent.

In the district about Roscommon and Castlereagh some 200 or more small holders have been established on the land, partly under the authority of the Estates Commissioners, partly under the Congested Districts Board. The lands here subdivided were formerly pasture or grazing land held in one or two very large estates. It appears that some 50 years ago this section was stripped of the small holders who then occupied it and who were hard pressed by the high rent charges, the whole consolidated into very large holdings—one of them nearly 20 miles in length—and turned into pasturage. When this land was purchased by the Government in 1906 and 1907, there was scarcely a tilled acre on the whole tract, almost no walls or fences, and a very few poor buildings, chiefly herders' cottages.

The Government divided the land into tracts of 25 to 40 acres, rebuilt the fallen walls, erected comfortable houses of various styles of architecture, some two-story and some single-story buildings, frequently put up other farm buildings, planted trees, and laid out gardens. The houses cost about £180 to £200 each, are built of stone, and seem very neat and comfortable.

After the new owners, who were obtained from a poorer district, had been established in their new homes the Department of Agriculture and Technical Instruction put into the field an instructor in agriculture. * * *

The committee drove over several miles of the district near Castlereagh and personally interviewed a number of farmers. They are uniformly hopeful, although some are much more intelligent and thrifty than others. All are paying their instalments. Only one vacated house was seen, the owner having transferred his equity to a larger holder. All the holders visited were married men with comparatively large families, and all seemed to have some relatives—children, brothers, or sisters—in the United States. The small-holdings movement has not stopped emigration, but it has made agriculture and rural life more hopeful. The contrast between the old thatched-roof, one-story cottage and the new two-story, slate-roofed home, with a large yard and flower garden, well laid out and inclosed by a substantial wall, is very marked. The new homes are much more comfortable, even if less picturesque, than the old white-washed cottage with the low roof and the unpleasant sanitary surroundings.

The Government in several instances has made loans to small holders for the purpose of enabling them to purchase tools, manures, stock or other capital to an extent of perhaps £50 per individual. These loans are made at 3 per cent; in general no repayment except interest is required for a few years, and the loan need not be entirely repaid until the expiration of 10 years.