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AGRICULTURAL EDUCATION IN POST-PRIMARY SCHOOLS

being

An Investigation into Agricultural Courses in the Post-Primary Schools of Canterbury, Otago and Southland.

A Thesis

Presented to the University of New Zealand.

In

Partial Fulfilment of the Requirements

For the Degree of Master of Arts in Education.

by

John E. Watson

University of Otago

1949.
My interest in post-primary agricultural education arises from my own schooling. As a farmer's son, it was my good fortune to attend one of the District High Schools covered in this investigation, during the years 1938 to 1941. During this period my school acquired a farm, and a very commendable effort was made to establish an agricultural course. I hope that this recent experience as a pupil has, in part, compensated for my lack of teaching experience in this field.

It is pleasant to record the willing assistance, advice and interest that has been met with on almost every hand. I must express generally my indebtedness to those in all walks of life who have provided information and encouragement.

My especial thanks are due to Dr. F. W. Mitchell, whose patience and quiet encouragement has made my study a happy one; and to Mr. S. P. Cameron for his ready assistance in the painstaking task of reading the draft copy.

John Watson
10, 10, 49
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SECTION I.

THE INTRODUCTION
CHAPTER I

THE PROBLEM

The major social problem is to improve the quality of life rather than raise the standard of living. To feed, clothe and shelter the people is easy enough if we want to do it; how to cultivate their minds and refine their spirits is another and more urgent problem. The sooner we attend to it the better. (1)

BASIC ASSUMPTIONS

Agriculture is the basic industry of New Zealand. In a final analysis, the conditions of life enjoyed by the people of New Zealand depend upon the conditions of life enjoyed by the farming community. Ultimately, the most fundamentally important matter concerning agriculture, in common with other industries, is the quality and well-being of the people engaged in it. This quality of life is conditioned by enriched and happy living, and nothing is so important in this process as a liberal education and a sound training for life's work. Education carries with it a promise, to teach us how to live, and inculcate standards of integrity and an appreciation of values, without which the individual, lacking graciousness, finds life barren and void.

The farming community is a section of the population which should receive the benefits that may accrue from a sound cultural and technical education. From the very nature of the land settlement pattern in this country, the farmers and the rural workers are obliged to find within themselves the resourcefulness which in towns might be stimulat-
ed by contact with fellow workers. Education, conceived in its broadest sense, can, and should enable the farmer to perform his work efficiently, and with full knowledge of the best practices to be followed. To permit this knowledge to be acquired through the slow dissemination of scraps of information in conversation, by occasional reading and demonstration, is to deny the farming community its right for cultural and technical enlightenment. Efficient farming under modern agricultural methods requires some knowledge of the science of soils, fertilizers and crops, the construction and repair of machines and buildings, and over and above this, the ability to plan for both the present and the future.

Therefore, it is evident that the formal educational institutions of an agrarian society must accept some of the responsibility for preparing the entrants to the agricultural vocations. However, education for farming is a deeper problem than merely preparing children for a vocation. It rests as much with the school as with the country as a whole to invest rural life with attractiveness, to reveal its advantages, to show it without sentiment as calling for a high degree of skill and ability, to take as great pains to give an adequate preparation for it, as for any other occupation.

For half a century, in this country, educationists, agriculturalists and social thinkers have, at various times, deplored the inadequacy of the agricultural courses offered in the post-primary schools. Various solutions and schemes have been advanced by numerous commissions, conferences and committees. But the criticism is still levelled at the post-
primary schools today. There appears to be a good deal of uncertainty and confusion at the present time in regard to the actual provision that is made for these courses.

The Chief Inspector of Post-Primary Schools in his Annual Report for 1947 states that "there is some instability in the position of agricultural courses. They have, in general, declined in the district high schools." (1) Dr. Hamilton, writing in 1944, directs attention to the need for a careful review of the educational status of recruits to agriculture. (2) Professor Hudson, Director of the Lincoln Agricultural College, also writing in 1944, concludes that the present provisions for agricultural courses in secondary schools "are inadequate, and that their limitations display a lack of the appreciation of the magnitude and importance of the problems involved." (3) The recent Royal Commission on the Sheep-Farming Industry in New Zealand endorses these views. (4) The Government in agreeing recently to the principles of a Land Settlement Scheme proposed by the New Zealand Federation of Young Farmers' Clubs promised full state financial aid for that scheme. The assistance would be conditional, in that applicants must provide evidence of sufficient education and farm training to ensure that only capable and experienced young men were placed on the land. No indications were given as to where or when this training might be given. (5) There has also been considerable discussion on this problem at numerous farmers' conferences, and in farmers'

(1) E - 2 (1948) p.16
(3) E.R.Hudson, The Future of Farming. Reconstruction Series No.6 (1944)p.15
(4) H.46A 1949 p.153
(5) N.Z. Journal of Agriculture YFC Supplement, Vol.6 No.4 1949 p.52
journals, during the last few years.

STATEMENT OF THE PROBLEM.

The present investigator has set himself the task of enquiring into the provision for agricultural courses in the post-primary schools of Canterbury, Otago, and Southland. The investigation has been limited to these three provinces because it is in these areas that the investigator has experienced at first hand his knowledge of farming, farming problems and life in rural areas.

The purpose of this investigation is:-

(a) To examine, and in some measure to describe, and discuss the development of agricultural courses, in all types of post-primary schools existing in the three provinces.

(b) To reveal some of the problems associated with the introduction and development of these courses.

(c) To offer some conclusions and suggestions as a result of this investigation.

ORGANISATION OF THE THESIS.

The investigation consists of three major sections:-

1. An introduction to the investigation, consisting of an historical survey, a review of related investigations, and a review of some recent developments in overseas countries.
2. A presentation of the provisions made at the present time for agricultural courses in the three provinces, with a discussion of some of the factors affecting the success of these courses.

3. A consideration of conclusions formulated, and suggestions for further investigations.

This survey is based on the premise that detailed, up-to-date and authentic information on the functioning of educational institutions can best be obtained from those engaged in, or connected with, or having an interest in, the effective operation of educational programmes. Wherever possible, information collected in this way has been checked with a variety of official reports, related surveys, unpublished material and books on the subject. There were some matters upon which it was found impossible to obtain the information required. Either:

(a) Certain official statistics (social, educational and demographic) were for the Dominion as a whole, and it was found impossible to abstract the data relating to the three provinces studied, or

(b) The abstraction of such material demanded a much greater technical competence than the investigator possessed.

Inadequacies arising in this way have been indicated in the text, or else they have been omitted altogether.
CHAPTER II

THE HISTORICAL DEVELOPMENT OF POST-PRIMARY AGRICULTURAL COURSES IN THE THREE PROVINCES.

GENERAL SURVEY

It has been stated that the early settler in New Zealand was concerned with surrounding himself with the institutions and ideas that formed the background of existence in the homeland. Perhaps nowhere in New Zealand has this principle of maintaining and fostering cultural activity been more clearly evident than in the growth of the social institutions in Canterbury, Otago and Southland. Faced with the many insecurities of life in a new settlement, it is not unnatural that colonists with such strong affiliations with the homeland, as the early emigrants to Otago and Canterbury, should have feelings of nostalgia for aspects of the social pattern of their birthplace. Hence, those social institutions which evolved in the three provinces are incomprehensible, unless one appreciates the influence of the social and religious views current in England and Scotland during the middle of the last century. This is equally as true of educational development as of any other kind of social progress.

Some writers claim that in the development of certain aspects of secondary education Otago, at least, has shown some degree of adaptation to local needs. (1) It will be shown later that in the field of Agricultural Education this assumption must be accepted with caution. On at least one occasion this "adaptation" might be regarded as a recognition

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that certain aspects of the education system of the Scottish Highlands were suitable for local conditions. Therefore it is advisable to have some knowledge of agricultural education in the homeland during this early period, before embarking on a history of post-primary agricultural courses in the three provinces.

In 1840, and the years immediately following, there were many notable developments in agricultural education in England. The scientific basis of crop husbandry, interest in which had developed on the Continent, was becoming more widely known. In 1840, the English Agricultural Society, founded two years earlier, was given a Royal Charter and became the Royal Agricultural Society, taking as its fundamental purpose the application of scientific theory to agricultural practice. During this period too, Lawes began the classical experiments that led to the establishment of the Rothamsted Experimental Station: the Chairs of Agriculture at Edinburgh and Oxford and the lectureship at Aberdeen became more effective. In 1845 the Royal Agricultural College was established at Cirencester. It is understandable that those who were interested in the colonizing schemes for New Zealand would be influenced by these developments. The new colony would be almost entirely dependent upon agriculture. Appreciating this fact, the Canterbury Association stressed in their aims the importance of agricultural education, and planned to establish an agricultural college in the new colony. (2) However, the difficulties of the early settlement period were many, and it was not until the 19th

(2) Canterbury Papers. No. 4 pp. 97, 101-2
July 1880, when Canterbury Agricultural College was opened at Lincoln, that these far-seeing ideas were realised. (3)

While these developments were gaining strength in England, renewed interest was being aroused in Scotland. In October 1844 the Agricultural Education Committee of the Highland Agricultural Society was appointed to promote the study of agriculture in the elementary schools. About the same time, the parochial schoolmasters of Scotland, at an Edinburgh conference, urged the introduction of this branch of science into the course of school instruction. It is significant to note that even at this stage the subsequent development of the movement was impeded by the unwillingness of schoolmasters to adopt the subject, by the lack of knowledge on the part of the teachers and by the indifference of the general public. (4)

Although there is no specific reference to agricultural education in the early educational policy of the founders of Otago, many of the schoolmasters, who moulded the education of Otago, received their early training, education and experience in this Scottish system. In at least one Otago secondary school, which taught agricultural subjects in the early period, the syllabus of instruction resembled very closely that of the parochial schools of the Highlands.

From the very beginning, many of the leaders of the new settlements saw the need for education. It is a tribute to their energy and vision that they were actively concerned with making provision for it.

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(3) Lyttelton Times. 22nd July 1880.

But difficulties, physical, social, and economic, in the young colonies were sufficient in themselves to limit adventurous thought likely to produce educational adaptations to the new environment. Nevertheless, the records show clearly that the people of Otago and Canterbury were very interested in agricultural education. The proceedings of the Provincial Councils (5) and the transactions of learned societies (6) illustrate the widespread interest, and the deep appreciation of the future needs of the colony. These interests prompted the moves to establish the Schools of Mines and Agriculture, to promote the study of the Natural Sciences, in the early development of Canterbury and Otago Universities.

However, this review is concerned with the development of agricultural education at the post-primary level. It is at this level that the early education system showed less inclination to adapt to local conditions than at any other section of the educational ladder. Undoubtedly this was related to the group within the early settlement, for whom the secondary schools catered at that time. This section of the community were probably the least critical of the social structure of the land of their origin. For them, the best school was one which resembled as closely as possible the standard models of England. This judgment must not be pushed too far. There were exceptions. For instance, Christ College (1851), which was the first high school to be established in New Zealand

(5)(a) Journals of Proceedings of Canterbury Provincial Council Session XXIX 1873 pp.28-9
(b) Votes and Proceedings of the Otago Provincial Council Session XXIV 1868 Select Committee Section pp.9-20
featured the claims of agricultural studies in its first prospectus. Nevertheless, those schools that followed, Otago Boys' High School (1862), Lyttelton High School (1858) and the Christchurch Boys' High School (1858) accepted the "classical curriculum" as the only road to culture, and the most suitable preparation for life.

Developments were soon to take place in Otago which represented a new departure in secondary education, even if the resultant institutions closely resembled similar schools in Scotland. In 1869, the Provincial Council of Otago resolved that the district schools of Tokomairiro, Lawrence, Port Chalmers and Oamaru should be advanced to the position of Grammar Schools. (7) Actually, this only required the addition of another room to these schools. In this respect, they resembled the grammar schools of the Scottish Highlands. The reports of John Hislop, Inspector for the Otago Education District, commented favourably on the progress of the new schools. Their curriculum illustrates the importance attached to the classical studies (Latin, Euclid, Algebra, French), but Hislop expressed the hope that, as the attendances increased, the range of subjects would become wider. (8) Even at this stage teachers regretted the number of the pupils who attended secondary schools for only a short period. This has been a perennial problem, that still exists today. + The education systems of Otago and Canterbury continued to make steady progress. There does not appear to have been any attempt to establish similar institutions to the Otago Grammar Schools.

(7) Votes and Proceedings of the Otago Provincial Council Session XXIX 1871
(8) Reports of the Otago Education District (1871)
+ Note. See page 57.
in Canterbury during this period, but none the less solid foundations for future educational development of the province were laid.

In 1877, there was passed "for the better education of the people of New Zealand" the Education Act. (9) This act gave to all children of the colony the boon of free, secular and compulsory education. The provisions of the Act recognised the value of five Grammar Schools of Otago and bestowed upon them the title of District High Schools. In many respects these Otago schools served as models for similar institutions in other parts of the Dominion. The Act empowered the various Boards to set up District High Schools and, with the sanction of the central authorities, High Schools proper. Moreover, the Education Act itself laid down the subjects that district high schools might teach as "all branches of a liberal education comprising Latin and Greek classics, French and other modern languages, and such other branches of sciences as the advancement of the colony and the increase in population may from time to time require." In the high schools that existed in the three provinces, "the other branches of science" were, generally speaking, neglected.

The allegiance to the classical curricula is all the more interesting in view of the interest that was being taken in science and scientific developments emanating from, and promised by, the early professors of Otago and Canterbury, Universities. Learned societies and institutes displayed keen interest in the study of the natural sciences. The addresses

(9) A. G. Butchers. Education in New Zealand. Dunedin, Coull & Somerville Ltd. 1930 p. 9
and writings of men like Professors Parker, Sale and Murphy and Mr. Josiah Martin (Auckland) attracted widespread interest. In the light of the importance attached to education in science and agriculture today, the remarks of these men showed a visionary and appreciative grasp of the importance of agricultural education to New Zealand. During the years that followed the passing of the Education Act (1877), a great wave of enthusiasm for the need for agricultural education swept the colonies. There is no doubt that the opening of the Canterbury Agricultural College on the 19th July 1880 sounded a note of optimism, and stimulated the people of Otago and Southland to emulate the people of Christchurch. Agricultural Associations, local bodies and other interested parties, through their Members of Parliament, asked the Government to establish Agricultural Colleges in Southland and Otago. They asserted that the time was ripe for such institutions. Further, between 1881 and 1884, numerous articles in connection with science, agriculture and allied subjects appeared in the two periodicals entitled "The New Zealand Schoolmaster" and "The New Educational and Literary Monthly." For instance, in 1881 a "School Committeeman" writing in the New Zealand Schoolmaster, explained that some boys would become farmers. For this reason they should be given the opportunity of acquiring at least an elementary knowledge of the chemical processes incidental to germination and growth, such as the composition of soils, the suitability of certain soils to

(10) Otago Daily Times. 5th July 1884
(11) Hansard Vol. 42 pp. 6 - 7
certain plants, and the fundamental principles of crop rotation and so on. (12)

Contemporaneous with those efforts to arouse the people to the urgent need for education in agriculture, came the proposals of Mr. M. Murphy F.L.S., Secretary to the Canterbury Agricultural and Pastoral Association. Judged in the light of present developments and requirements, his ideas must be considered to be those evolved from a mind of more than ordinary perspicacity. Addressing a meeting of the Canterbury Educational Institute on August 9th 1884, Mr. Murphy pointed out that the professions and the positions in the towns were becoming overcrowded. He urged that the education that boys received in schools should be calculated to give a leaning towards rural life. He thought it regrettable that the promoters of the education system of New Zealand should have forgotten, or ignored, the necessity for including rudimentary agriculture among the subjects to be taught, and suggested that some agricultural subjects should be substituted for some of the existing syllabus. He exploded the idea, current at that date, that any fool could be a farmer, and urged the people to recognise that "science in practice" must be the motto of the farmer who was to succeed in the future. (13)

Despite this widespread interest, the high schools of Canterbury, Southland and Otago, were loath to introduce any changes, however slight, in their traditionally classical syllabus.

In face of the apathy shown by the secondary schools of the three provinces towards these proposals, the solution that was being sought at one school in Otago was all the more momentous. In 1880 James Reid, a Forfarshire

(12) The New Zealand Schoolmaster. November 1881 p.58

(13) Lyttelton Times 11 Aug. 1884
Scot, was appointed Headmaster of the Tokomairiro District High School, Milton. Reid had received his early education and teaching experience in the parochial system of the Scottish Highlands where, as it has already been pointed out, agriculture was an integral part of the curriculum. Coming to New Zealand in 1865, he spent the first few years in the colony, teaching, working in the Thames Goldfields, and studying science and philosophy under Professors Shand and Black at Otago University. His broad knowledge of life, deep appreciation of the beauties of English and French literature, and intimate understanding of the young minds he was to mould, allied with his scholarly interest in science and natural history, marked him out as an ideal teacher.

Almost as soon as he had settled in Milton, the new rector began formulating ideas for the introduction of agricultural chemistry and carpentry, in order to put into practice his own views of the educational needs of his district. Before a special meeting of the school committee (13th March 1885) Mr. Reid outlined his proposals. (14) He urged that a trial in a small way should be made by commencing classes for the purposes of teaching the principles of agriculture, and also for a little carpentry. He stated that he already had a class of eleven boys learning the principles of agriculture, for two hours a week. Reid performed the experimental work himself with his own apparatus. He asked the committee to apply to the Otago Education Board for a grant of £10, to enable him to purchase enough

(14) G. H. Schofield. The History of Tokomairiro District High School 1856-1931. 1931 Whitcombe & Tombs p. 19
equipment to make a beginning, and to allow the boys to carry out the work for themselves. The committee adopted the suggestion, without dissent, and applied to the Board for funds. The Board agreed to the granting of £10 for equipment, and no time was lost in starting public lessons in Agricultural Chemistry and Carpentry. Mr. Reid's activities were not confined to the schools, for at the same time he commenced lecturing to farmers on agricultural topics.

Just what the public thought of this emphasis in education at the time is evident from a complaint in the Tapanui Herald, (15) that there seemed plenty of money available to "squander" on so-called technical education. Another leading article in the local paper asserted that Reid had gone too far. The editor pointed out that agriculture was a trade, and questioned whether it was wise or fair that the State should single out one trade from another, and assist that particular trade by giving boys an education in it. (16) Despite the fact that, as President of the Otago Educational Institute, Reid attracted the interest of other teachers in Otago and Southland, and notwithstanding the interest of the Prime Minister and others in his schemes, no attempts were made to introduce agricultural subjects into other secondary schools of the three provinces during this period.

In response to the widespread interest throughout the country, the Government began inquiries about agricultural education in other countries. Mr. R. Laishly was commissioned in 1883 to investigate the state of

(15) Ibid. p. 21
(16) Bruce Herald. 17 March 1885
agricultural education in Europe and America. The report, submitted by Laishly in 1886, stated pithily that what the government wishes to have in its nation it must put into its schools. If farming was to be the primary occupation of New Zealand, then agriculture should be taught in the schools. (17) No action was taken on this advice in the three provinces, except of course at Tokomairiro. Indeed, it was considered that the introduction of science had not always been a success, and in many cases it was regarded as an intruder. (18)

A period of stability might have been favourable to the development of a policy indicated by popular interest, but the economic depression which encompassed the colonies during the years 1885-91, with the consequent retrenchment in education, caused public agitation to subside. However, the aims and ideas of the earlier men were kept alive by increased activities by the Government who, thoroughly alive to the importance of agriculture, took advantage of every overseas visit by any Government official, by asking him to investigate agricultural education abroad.

A new era in the history of education in New Zealand, and in truth in agricultural education in the three provinces, dawned, when George Hogben succeeded W. J. Habens as Inspector-General of Schools. Hogben's philosophy of education was as broad as it was penetrating, and among his many aims he sought to give schools a much more realistic and practical outlook. Heedful of the reports of such observers as Laishly, T. W. Kirk

(17) E - 12 (1886) p. 1
(18) Otago Education Board. Annual Report 1889 p. 38
and A. W. Riley, Hogben was quick to appreciate the value of agricultural subjects in liberalizing the inert formalism of the unrealistic curriculum existing in the high schools. (19) He soon realized that the courses in many of the District High Schools were not as intimately related to rural pursuits as they might be. (20) He introduced special grants for science, manual instruction and agriculture, but ironically enough the schools contrived to turn these subjects into their reactionary mould too. Indeed, inspectors commented at the time "we are seldom satisfied with the treatment of the 'elements of agricultural knowledge.' What is learnt is for the most part learnt from textbooks, and arouses no interest in rural life or occupations." (21)

In an address to a Conference of Inspectors and Training College Principals on this topic in 1907 (22), Hogben urged that a good practical and theoretical course in agriculture should be taken in every one of the District High Schools, and also in many of the secondary schools. He drew attention to the fact that his school visits had confirmed his opinion, that courses in many schools bore little relation to the life of the district. At times they had no relation. In advocating the development of these courses Hogben's convictions were educational, rather than vocational or economic. As such, they reflected the new educational philosophy emerging in Europe and America during this period. Like the early realists, Hogben saw that the high schools in the first decade of the twentieth century were too remote from life, and too abstract in their methods.

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(19) E - 1 (1902) p. XVI (20) E - 5 (1903) p. 97
(21) Otago Education Board. Annual Report 1903 p. 97
(22) Butchers, op. cit. p. 204
Believing that a country's education system should be relevant to the social and economic pattern, he stressed that the study of agriculture was inadequate. Further, it was a valuable educational resource that was not being tapped. For Hogben, the study of agriculture meant more realistic and meaningful methods, than did the established sciences. The same points were stressed by W. J. Anderson, Hogben's successor. (23) Anderson, while admitting that agriculture was not a pure science, held that because of this it should not be discredited, for it held advantages over the more systematized and exact sciences. "The fact that agriculture is based on several sciences causes the inter-relation of the latter to be emphasized. The result is that the student of agriculture really gets a wider scientific training than is given by intensive study of one science, and specialization in any one science is perhaps best postponed until after the secondary course is finished." (24)

Hogben's views were further endorsed by Mr. Frank Tate, Director of Education in Victoria. Tate considered that the District High Schools should be able to solve many of the problems of agricultural education.

With a strong sense of purpose, Hogben legislated to give meaning to his convictions. In 1908 he introduced special capitation grants (£5.10.0) on account of each pupil taking an approved course of agricultural education. After his return from America and Europe, he outlined a

(23) E - 2 (1918) p. 3
(24) Ibid. pp. 3-4
scheme for agricultural education covering all sections of the education scale. (25) He considered that education was a continuative, unbroken process - a view that was not common or popular in those days. He pronounced that all District High Schools should have a junior course in agriculture. The system of free places, inaugurated by Hogben, was inter alia, an attempt to extend the opportunity for education to all, and so perhaps force the high schools to adapt their syllabuses to the less specialized needs of the wider group. A notable increase in the number of District High Schools, serving the secondary school population, took place.

Hogben's vigour was not entirely unrewarded. His views were accepted by the Otago and the South Canterbury Education Boards, even if the reception was somewhat lukewarm. A number of schools in the three provinces had introduced the study of the natural sciences, (+) and the reports of the inspectors at the time reflected Hogben's convictions. Both the Otago and the Canterbury Boards stressed the desirability of starting such courses in instruction. With the introduction of the special capitation grant to encourage rural courses, the matter was taken up enthusiastically by the South Canterbury Board. Otago and Canterbury were also interested. At times, however, the interpretation of the proposals was somewhat barren. The Otago Board claimed that it is "the most important advance in education for years." Rural courses in the three provinces were first attempted in 1911 at the Temuka and Waimate District High Schools.

(25) E - 15 (1908) p. 61
(+) Note: During this period Botany was taken at Timaru Boys' High School, Southland Boys' High School, Christchurch Boys' High School and at the District High Schools of Palmerston, Tapanui, Naseby and Balclutha. Agricultural Chemistry was taken at Tokomairiro District High School.
and met with the enthusiastic response of local bodies, Agricultural and Pastoral Associations and Board members. (26) Otago was soon to follow, and in 1912 reported that rural courses have been fairly launched at Balclutha, Tokomairiro, Lawrence and Mosgiel and Tapanui, with partial courses at Palmerston and Alexandra. (27) Canterbury reported that full rural courses were in operation at Lincoln and Kaikoura, while three other schools in the province were taking agricultural subjects.

Neither were Hogben's efforts to liberalize the courses offered in the secondary schools unsuccessful. In 1910 Waitaki Boys' High School and Christchurch Boys' High School established classes in Elementary Agriculture and Dairy-work. Timaru Boys' High School (where Hogben had formerly been Headmaster), Southland Boys' High School and Rangiora High School were teaching some of the natural sciences. Waitaki later developed its agricultural course with some distinction. Moreover, the Technical Schools which were established during the period paid due attention to the needs of rural children. The Christchurch Technical High School offered an agricultural course in 1907 and the Invercargill Technical High, when it opened in 1912, included such a course in its first prospectus. (28)

To those interested in agricultural education a new era seemed to have dawned: the visions of the agriculturalists appeared likely to materialize. But all was not well. Skilled teachers in agricultural subjects were scarce. The courses were, in many cases, inelastic and weighted down

(26) E - 5 (1908) p. 2
(27) Otago Education Board. Annual Report 1912. p. 9
with subjects. Thoroughness was often forsaken for variety. A typical course of the period included Agriculture (theory and practice), Agricultural Botany, Agricultural Chemistry, Dairy Science, Agricultural Zoology, Physics, Pure Botany, Surveying and Woodwork. (29) Further, the courses had degenerated into a capitation earning scheme, rather than an attempt to satisfy an educational need. South Canterbury inspectors pointed out that most of the pupils were preparing for the Public Service and professional examinations. With the staffs available it was not easy to provide agricultural courses. Nevertheless, the itinerant instructors in agriculture employed by the Boards (+), to supervise agricultural instruction in the primary schools, organized and carried through some ambitious and worthwhile schemes in District High Schools, with commendable enthusiasm. But the handicaps were great, and progress was slow. It is interesting to note that, in comparison with the rest of the country, the three provinces were slower to adopt rural courses, and itinerant instructors, than the northern Boards, some of whom had made these reforms several years earlier.

Some witnesses at the Cohen Commission (1912) were disappointed with the policy that had been instituted. Neither agriculturalists or educationists were satisfied. Hogben, while critical of the efforts of the schools, pointed out that perhaps the greatest handicap was the lethargy and apathy of the farming community itself. Another major obstacle mentioned by the instructors was the unsympathetic attitude of many of the

(29) E - 5 (1914) Syllabus of Instruction at Pleasant Point and Temuka District High Schools.
(+ ) Otago Education Board. Annual Report 1912 p. 9
Note: The Canterbury Education Board appointed Mr. Rennie in 1906 and appointed an assistant in 1910. The South Canterbury Board appointed John Brown in 1910.
teachers. A Board of Agriculture set up in 1913 was instrumental in furthering the claims of agricultural education until it ceased to function towards the end of 1926. The Council of Education, established 1914, displayed an active interest and, throughout the following decade, kept the claims of agricultural education to the forefront of educational commissions, conferences, and committees throughout the country.

It was, nevertheless, evident at this period that some schools of Otago, Canterbury and Southland were trying to give a rural bias to their curriculum. Rangiora regarded the agricultural course as a means of a good general education. Waitaki treated the course more from the economic and the vocational aspect. The history of the Gore High School illustrates some of the difficulties in introducing agricultural courses. In 1912 the principal attempted to institute an agricultural course. He drew up a complete course which, to his chagrin, only three pupils elected to take. Yet Gore was the centre of an agricultural district. In 1914, however, the course was commenced, although the numbers were still small. The course established at Ashburton High School used advantageously the 130 acre block supervised by the Department of Agriculture in that district.

In general, however, the courses in all schools were handicapped by the shortage of trained teachers and the restrictions imposed by the Public Service examination. It was pointed out repeatedly by teachers that those courses should not be regarded as ends in themselves: they were not a direct vocational course for an agricultural occupation. They were rather
introductory courses, preparing pupils for courses on farm schools, which it was hoped the Department of Agriculture would set up. The problem of pupils who remained only a short period at secondary school was very evident in the reports of the period. The economic conditions resulting from the rise of prices of primary products during the Great War period and immediately after, activated an increased interest in all things agricultural, not excluding agricultural education. Although the hypothesis must be accepted cautiously, it does seem apparent that during less prosperous periods farmers' sons have less inclination to take up agricultural courses: a point not without significance to teachers.

During the period 1917 - 1925, the agricultural and science programmes in the District High Schools were supervised, and in many cases conducted, by the Board's itinerant instructors in agriculture. This was additional to their specific responsibility for this work in the primary schools. With wide areas to serve, difficulties of transport and often a lukewarm reception by teachers and headmasters, it is a fine tribute to the zeal of these men that, all things considered, the District High Schools made a creditable showing. Admittedly the courses were narrow, too slavishly modelled upon examination requirements, and textbooks were in many cases out-dated. Little attention was given to the cultural and aesthetic aspects, now considered necessary for a fully developed education for rural living. Nevertheless, there were men and schools who, with almost missionary zeal and devotion to duty, sought to show that many of the difficulties
could be overcome.

The period was notable for the launching, at one of the smallest high schools in the country, of one of the too few original contributions to New Zealand's knowledge of curriculum construction. In 1917 Mr. J. E. Strachan was appointed headmaster of the Rangiora High School. Although a young man when appointed, Strachan was steeped in the history and philosophy of his profession, but he had not allowed himself to be engulfed. The landmarks to him were clear. His views, and his subsequent development of them, are described admirably in his book "The School Looks at Life." (30)

Rangiora has become known as an agricultural high school, but agriculture was not a subject attached grudgingly to the curriculum. It came naturally as an outcome of Strachan's theory of curriculum building—"from a series of objective community-life studies of progressively widening range." Strachan considered that agriculture, as a subject, offered unrivalled advantages for the post-primary school. Because of its living contacts with so many studies, such as biology, chemistry, mensuration, geography and geology, it was the ideal subject for an integrated course, and Strachan may be regarded as the pioneer in New Zealand of the integrated course. The fact that Rangiora community is vitally agricultural was consideration enough to make agriculture a central theme of the Rangiora plan of study. All children took a general course, no matter what their

(30) J. E. Strachan. The School Looks at Life. N.Z.C.E.R. Educational Series No. 9, 1938
work was to be. The more specialized pre-vocational activities or, as Strachan calls them, "functional developments" emerge from this central theme. In an agricultural community, such as Rangiora, the main functional development was naturally the agricultural course. Rangiora has matured. Strachan would be the last to agree that is the final answer to the problem of providing agricultural courses in rural schools, but its proud wood is a living tribute to the work of this educational pioneer.

Meanwhile, the agricultural course at Waitaki was enthusiastically received by those in contact with it. (+) Realizing that a large proportion of those who partook of the boarding facilities offered by the school were lads from the rural areas, who were likely to return to the land, Mr. Milner resolved to include in their school studies technical subjects likely to be of use to these boys in after life. This was a notable departure from the ultra-academic curricula of the secondary schools of the period. A course covering agricultural science and technical subjects, and including a strong core of cultural and social studies, proved - and has continued to prove - popular. Similar developments took place at Ashburton High School, which continued to make effective use of a very large experimental area at the disposal of the school. Practical instruction and demonstrations thus carried out met with criticism from some teachers, who thought that too much valuable school time was wasted by practical farm demonstrations.

A conference on agricultural education held in 1930 revealed that

(+) This course was first established in 1910.
neither farmers or teachers had arrived at definite conclusions as to the best means of providing satisfactory courses of agriculture. Some considered that agriculture would never be satisfactorily taught in secondary schools, as long as they were handicapped by the popular demand for vocational training, as this required large areas of land and a waste of the pupil's time in mere routine field operations. This conference thought that the lack of trained teachers was due to the failure of the University, and the Education Department, to make adequate provision for their training. Many people felt that no encouragement was given to bright pupils who, having taken agriculture to matriculation standard, found themselves compelled to drop the subject on entering the University, if they were aiming at the usual Arts course. (31) Various conferences and committees thought that the University courses and degrees should be modified to permit those who had taken Agriculture as a subject, or as a course, to take up study for any degree without handicaps. (32) The unhappy insistence upon passes at the Matriculation Examination also had an adverse effect on the establishment of courses related to rural occupations and interests, particularly at District High Schools. It was suggested, too, that because headmasters had in the main received a more specifically academic training, they naturally influenced pupils into taking a Matriculation course.

Mr. Frank Tate, in his report on Post-Primary Education in New Zealand in 1925, considered the position of agricultural education was unsatisfactory. (33)

(31) E - 6 (1920) pp. 11-12  (32) H - 29a (1923) p. 3
(33) N.Z. Education Department. Special Reports on Educational Subjects No. 16 1925
He supported the view that the educational opportunities offered by agriculture as a school subject were so many that, on educational grounds alone, a determined effort should be made to include it on the course of study. Its economic importance to the nation was manifest. He was strongly of the opinion that there was an important place for agriculture in all rural school courses, and that the secondary schools, in spite of the discouragements evident at the time, should persevere in promoting agriculture courses. He suggested that the Government could help by a well-considered plan for land settlement for young men who had completed a satisfactory theoretical and practical course.

Immediately the Honourable H. Atmore assumed office as Minister of Education, in 1928, he began to preach, in and out of season, throughout the Dominion, the essential need for "an agricultural bias" to be given to our education system. The Parliamentary Recess Committee, set up in 1930, set out very clearly New Zealand's essential destiny as an agricultural country, and invited it deliberately to make its whole education system predominantly "agriculturally minded," rather than academically and commercially minded as hitherto.

The Committee regarded as imperative that "a fresh and definite orientation should be given to our educational curricula by the inclusion of agriculture as an integral subject of instruction in all schools, for it was regarded as of the utmost importance to the welfare and future prosperity of the Dominion that the city dweller, and the professional man, should become, though not agricultural workers, at least agriculturally minded members of the body politic, thoroughly seized of the country's
dependence upon its primary industries, and in a position as citizens and electors, to take a sympathetic and intelligent view of its land settlement, and allied rural problems .........

The object of teaching agriculture in the schools should therefore be twofold. In the first place, it should aim to give every pupil an adequate and vital conception of the country's dependence upon the farming industry, to elevate the vocation of agriculture to a position of dignity and respect second to none in the Dominion, and to inculcate a genuine love of the soil, and a reasonably sufficient theoretical and practical knowledge, of the broad fundamental problems that underlie its successful agricultural and pastoral exploitation and conservation. Such an aim, in the opinion of the Committee, is no less capable of realization in the urban than in the rural areas, and no effort should be spared to that end. In the second place, upon this general foundation, there should be organised in the Dominion a wide system of specialised agricultural education for those boys and girls who can be attracted from rural, as well as urban areas, to enter upon vocations connected with the soil. The day is past when farming could be considered the one occupation in life where specialized training is unnecessary." (34)

The inadequate provisions for agricultural education in the post-primary schools, which precipitated such recommendations, were no less evident in Canterbury, Otago and Southland. It can not be charged that agricultural education has been neglected since the Hogben period, but neither can it be argued that tangible progress had been made. And, although generalisations in inspectors' reports would seem to indicate a continual improvement year by year in agricultural education, many of these reports seem to be mere wishful thinking, super-imposed on an attitude of inertia and complacency. If one were to accept such reports in entirety, one would surely believe that agricultural instruction given

(34) I - 8A (1930) Report of the Parliamentary Recess Committee on Reorganization of Education in New Zealand - The Atmore Report p.31
in schools must have reached a position fulfilling our worthiest hopes. Yet the melancholy fact must be stated that, despite the efforts of the Department to popularize agriculture as a subject from the turn of the century, the courses had never had the popular demand hoped for.

The economic depression which shackled the Dominion from 1930-35 caused severe retrenchments and restrictions in the educational programme. Atmore attempted to secure economy and efficiency through reorganization, but as the economic position of the country became more acute, his successor, the Honourable R. Masters, was forced to extreme measures in his "unenviable task of reducing expenditure." It was not without some criticism that the recommendations of the Recess Committee were conveniently shelved.

Before his retirement in 1933, the Director of Education, Mr. T. B. Strong, paid a number of visits to schools throughout the area, to secure first hand information regarding the teaching of rural science. Except in a few cases he found the work to be unsatisfactory. (35) Despite his strong pleas (36), after his retirement, little was done to disturb the equanimity that prevailed in post-primary agricultural education in the three provinces. It was hoped that introduction of the School Certificate examination, in 1933, would assist in freeing the restrictions imposed on secondary schools by the Matriculation bogey. Consequent developments indicate clearly that it did not do so. In all fairness, it must be ad-

(36) Ibid. 1933 p. 53
mitted that the Education Boards and their officers were anxious to overcome these problems. Evidence of the Canterbury Board's desire for improved rural secondary education is contained in its recommendations to the Department. (37) These recommendations were not entirely without success.

During this period the Oxford District High School, where a socio-educational survey of the district was being conducted by one of its teachers, (38) reorganized its activities, in the hope that the school might fill some of the "needs" and some of the "lacks" of the rural district. The programme included a course in agriculture. Emphasis was laid on the broad educational development of the individual through agriculture and related studies. The Oxford experiment was one of the less well known, but none the less significant, attempts to meet the needs of the rural secondary school.

With the election of the Labour Government in 1935, and the rehabilitation of the country's economy, there began a vigorous programme of educational reform in general accordance with the recommendations of the Atmore Report. It is somewhat perplexing to observe that agricultural education did not receive the emphasis that had been placed on it in the Report. Conferences of specialists in agricultural education were held, but while the provisions were considered unsatisfactory no comprehensive administrative or professional changes were introduced.

(37) Conference of the Sub-Committee of Rural Education, Canterbury Education Board, Christchurch 25.2.33
In his Annual Report for 1937, La Trobe deplored "the relatively poor development of courses with a typically rural interest," blaming inter alia the situation whereby the Departmental policy did not provide those teachers with special qualifications in this field sufficient freedom to implement comprehensive programmes in their special subjects. (39) He also pointed out that the opportunity for any type of secondary education, for those entering the primary industries, was inadequate, and unjust in comparison with provisions for other occupations. Apart from not securing an education that would fit them for rural life, more children left primary schools to enter directly the rural pursuits than left for all other occupations combined. Although the years prior to the war did witness a wholesome ferment in the educational thought in this country, and further there was a notable increase in the number of District High Schools, the curricula remained all too academic, and unrelated to the "needs" and the "lacks" of the society to be served.

The outbreak of the second world war, with the consequent curtailment in the Government's vigorous educational programme, was the major check to any effort to meet these criticisms. Nevertheless, despite the disorganization caused by the war, the Government did pursue its sympathetic interest in the educational development of the Dominion. It was only to a limited degree that the Report of the Post-Primary School Curriculum Committee (1942) was concerned with problems of education in rural communities. It must be

(39) E - 2 (1937) p. 4
remembered that this Committee was only requested to review the problems of curriculum construction generally. It was not charged with deliberating upon the reorganization, or with provisions for a new post-primary structure. In so far as the Committee did make recommendations for the national curricula of post-primary schools, they did look upon agriculture as a specific subject to be compared with, or of equal value to, any other subject in the curricula. It is extremely doubtful, in the light of the more successful experiments in post-primary agricultural courses, or in view of the inadequacy of this approach in the past, whether any satisfactory solution can be sought in this manner. The increase in the school leaving age, the effect of accrediting and the changed attitude to secondary education shown by the Syllabus Revision (1944) present a complex series of problems in the organization and curriculum in secondary schools. The increased proportion of children attending high schools has demanded revised curricula instruction to meet the range of aptitudes now found in secondary schools. It is hoped that this investigation will give some indications as to how these problems and reforms are affecting agricultural education in post-primary schools.

Recently, a notable advance in the provision of secondary agricultural courses in the three provinces has been made with development of a comprehensive course at Mosgiel District High School in 1943. This course has been favourably received by farmers, agriculturalists and pupils, and promises to be an outstanding contribution.
IN RETROSPECT.

In presenting this review of the historical development of agricultural education in the secondary schools of Otago, the view has been taken that to confine this review to the strict geographical boundaries would necessarily distort the influence that national thought has had on developments in the three provinces. An attempt has been made to show that developments in these provinces has been related to the ideas existing in the thought of the country as a whole. This approach has its limitations. National reports and plans are available, but to trace their influence in a fixed locale is a difficult task. None-the-less, it is possible to distinguish certain broad features of this evolution.

Throughout this survey, it has been evident that the major advances in agricultural education have been the work of enthusiasts in the schools, rather than the ingenuity of the educational administrators. One must turn to the actions and thoughts of the Reids, Strachans, Milners and Somersets if one is to trace new developments and establish new principles. All too often, the message they have offered has been lost in apathy.

There have been few attempts to distinguish the sociological factors influencing the educational structure. The importance of these factors has not yet been given due consideration by the teachers of New Zealand. There is evidence to show that there has been a failure to appreciate the influence, direct and indirect, of the various stages of agricultural development through which this country has progressed. A study of the nature
of this agricultural development, and its influence on agricultural education, might well be profitable.

In spite of the lessons taught from the growth of experiments like Rangiora, Oxford and Fielding with integrated rural curricula, agriculture is still regarded as a subject that can be appended to an already prosaic and atomized curriculum.

To make effective use of history, it is necessary to distinguish the purposes and aims that have been advanced from time to time, illustrating the need for agricultural education. Evaluation of principles so deduced may serve as guide for future action. It is proposed now to distinguish from the broad stream of writings and thoughts on agricultural education through the years, some of the aims and purposes that have been advanced in its support.

Farming organizations, lay circles, and occasionally professional agriculturalists and educationists in this country have urged agricultural education as a possible means of retaining children in rural areas. Rural life may need men, the world may need food, and the open country is certainly the best place to live in. But, granting all this, it is the duty of education and, in particular, secondary education to acquaint children with life in its wider aspects, with its many opportunities, and its rich variety of interests and forms of human service. Education must prepare the child for a larger individual growth and social membership, and no man or group of men can justly limit the field of the child's opportun-
ity, if we wish to continue our democratic way of life. Therefore, the educational programme that sets out, deliberately, to retain the child in the rural area is as undemocratic as it is unsound.

Secondly, there are those who have most fully imbibed the urban economic attitude to the farming community, and see the child only as a potential producer. Their aim: for agricultural education becomes one of increasing the efficiency of the farming community. They determine the child's future by an accident of birth, and would use the institution dedicated to his larger growth as a means of improving his occupational efficiency. This efficiency may follow as a result of a sound education, but as a primary purpose it implies a misconception of the kind of life that is good and desirable in society. This aim was most evident in the writings early in this century. Possibly, it is related to the stage of agricultural development and the socio-political "ideals" and ideas existing at that time.

There is a third group, who while avoiding the commercial view of the individual, still commit the child to the occupation of his father. In the judgment of this group, rural children "need a preparation that will fit them to understand and carry out the problems of present day farming." This aim appears most evident in the 1918-35 period. If it was desired to design a programme for rural children of a peasantry, who were by social law "indigenous with the soil," this aim might be acceptable, but such social determination is not a worthy aim on which to base a sound philosophy of
rural education. It confuses the needs of an agrarian society with those of a rural child.

One of the more recent tendencies has been to educate by means of local educational resources, and to approach and interpret life through the idiom of familiar experiences. This approach has a good deal to commend it. Sheer economy of learning requires that we utilize the educational resources of rural communities, but there is a need to be heedful of those enthusiasts for whom "ruralization" becomes an "end". Rural life, rich in possibilities, is not an end in itself, but a means of bringing the child in contact with the wider and deeper problems of local, national and world experience that it is the duty of education to provide.

Each of the four aims here outlined do not, in isolation, form a satisfactory basis of a sound philosophy of rural education. But, it must be remembered that, although they may appear inadequate in the light of present views on social progress, they were precipitated by conditioning social factors operating through the various stages of agricultural development, through which this country has passed. The improvement of these social determinants requires a sound policy of rural development, in which rural secondary education has an important part to play. It is considered that education for rural life is merely education with a rural setting. The principles that control its activity and purposes are those that govern the growth of the individual in society anywhere. Any differences will surely be due to a local approach, or to different needs to be supplied,
in order that the rural boy (or girl) may realize through his environment the growth that is justly his: and in order that society may realize from him the contribution it has a right to expect.
CHAPTER III

A REVIEW OF RELATED INVESTIGATIONS.

Systematic research in the field of education is fundamental to the development of a sound educational philosophy. Too often, in the past, stocktaking of New Zealand's educational system has depended upon conferences, consultative committees and officers appointed by offici-governmental agencies. It is pleasing to witness the vigour with which the New Zealand Council of Educational Research has set about the many important tasks of surveying the educational agencies of this country.

In this section it is proposed to review briefly those independent investigations to date which have a bearing on the problems under review. It is regretted that a good deal of information, collected in theses, reports and surveys of local areas, is no longer traceable. But, the following may serve as a useful introduction to data present in Chapters VI and VII.

In a survey of the provisions for agricultural education at all levels of the education system of the Canterbury Province, Innes (1) found that the opportunity for agricultural education in Canterbury was, to some degree, related to the socio-economic status of the parents. He concluded that it was the sons of the well-to-do farmers who were receiving an agricultural education that was in any way adequate. This investigation presents an excellent outline of the work being done in the major secondary

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schools, but tends to overlook the contributions made by the District High Schools. The writer traces the development of agricultural education in Denmark, and attempts to delineate the features of national life that make for its success in that country, as opposed to its unpopularity in New Zealand. The writer deplores the situation, wherein schools are seldom the centre of community-cultural and educational activity. The latter point was taken up in a study by Barltrop, (2) who seemed to conclude that the lack of local interest in the activities of the rural school could be attributed to the bureaucratic administration of education by a central Department, which makes little provision for local adaptation or local control.

A most comprehensive and painstaking survey of the history of agricultural education in this country was presented by Mr. L. E. Richdale in 1935. (3) This work represents a systematic and exhaustive account of offico-governmental interest in the subject, and the extensive bibliographic references are of incalculable value to all interested in agricultural education. Richdale was not concerned with a critical evaluation of the principles underlying the facts, and to this extent the value of the investigation is limited. However, valuable pioneering work was done in bringing together, with all the tenacity of an enthusiast, references and guides to the many and varied streams of thought that have poured forth on the topic.

These investigations have treated the subject broadly.

(3) L. E. Richdale. The History of Agricultural Education.
The first intensive social survey of a rural district, indicating the relation of education to the socio-economic pattern, was undertaken by Mr. H. C. D. Somerset. (4) In a penetrating, yet sympathetic, manner he portrays the life of the people of a rural community - an element not always considered by educational writers and administrators - and shows very clearly what a busy life it is. Starting with a brief history, he goes on to an analysis of the economic pattern, and excels in illustrating details of home life. Reviewing the history of education in the district, Somerset comments

"... until recently, the school had very little understanding of the individual, or contact with the community for which it was preparing its pupils. This is not to be wondered at. The development of a philosophy of rural community education is still very much in the future as far as New Zealand is concerned." (5)

Somerset's concluding remarks are worthy of the fullest attention of teachers in New Zealand:

In 1938 he wrote

"... the country is starved of educational opportunity, but it more than makes up for this deficiency in community solidarity. Its social life may have little direction; it may be dissipated in service of unworthy aims, but underlying it all are forces that are the educator's opportunity. This study of Littledene has convinced the writer that the new education, with its emphasis on the social nature of man, need go no further than the country to establish itself, and demonstrate the true meaning of all that has been said and written on the subject of man and the community." (6)

A quite different approach to the problems of rural sociological

(5) Ibid. p. 72
(6) Ibid. p. 98
development was made by W. T. Doig. (7) This investigator conducted a survey with one group of rural people, viz. dairy farmers, in an endeavour to find how the standards of life and conditions of living were related to such factors as hours of work, expenditure, consumption, leisure time activities, education etc., and provides much that would be of interest in the study of other occupational groups. His evidence shows that there is a relation between schooling and standards of living, but in this study no relation between schooling and output of farm produce. This should not lead to the conclusion that education is of no importance in the training of farmers: it does, perhaps, point to a need for caution in placing too much emphasis on formal schooling. It may be an indication that the type of schooling normally received is not well-suited to the requirements of rural life. For a country so dependent upon primary production, it is a sad reflection that the interest in sociological problems of rural life is so slight that this survey is the only investigation published that gives some indications of the educational attainments of our rural adult population.

Further evidence that the entrants to the farming industry are, on the average, less well schooled than entrants to other occupations is offered by W. N. Hamilton. (8) In a review of the courses taken, and the destinations of pupils leaving schools, Hamilton concludes that, of the 10% who leave secondary schools each year, only 1% take an agricultural

course, and only 1% complete a farming diploma course at an agricultural college. He asserts strongly that

"this problem must be met if the farming industries are to progress, for progress in the future, as in the past, will depend in a large measure on the rapidity with which improved techniques and results of research can be incorporated in farming practice. Such advances can most readily be achieved by a farming community already provided with a sound knowledge of scientific principles underlying current practice." (9)

These investigations lead to but one conclusion. There is an urgent need for a careful review of the educational attainments of the entrants to agricultural occupations in New Zealand.

(9) Ibid. p. 133
CHAPTER IV

A REVIEW OF RECENT DEVELOPMENTS OVERSEAS.

This chapter is not intended to give an exhaustive survey of the provisions for post-primary agricultural education overseas, but sets out to show, rather, that in the ferment of educational reconstruction, education for rural living is attracting increasing attention. The crisis in the world food situation, supplemented by the pressing problems of soil erosion, rural depopulation, agrarian reform and the superficialities of urban culture, have precipitated a wholesome interest in the problems of life in rural areas, in almost every country. Evaluation of educative influences has figured prominently in the ferment of plans for the new society, and in this movement education for rural living has been no less evident. There has been a flood of reports, books, programmes and plans promising a new future for rural areas.

There is difficulty in presenting a picture of agricultural education in Britain today, in that more changes in the existing scheme are now being made, or are pending, than at any time previously.

In 1941, the Minister of Agriculture appointed a committee under the chairmanship of the Right Hon. Lord Justice Luxmore, to make recommendations for amending and improving the system of agricultural education in England and Wales. This committee's Report, (1) recommending some drastic changes, was presented to Parliament in April 1945. It is interesting to note that this committee suggested that all children, urban and rural alike,

(1) Report of Committee on Post-War Agricultural Education in England and Wales - Lord Luxmoore (Chairman) H.M.S.O. Qmd. Paper 6435 (1943)
should have some knowledge of the principles underlying the life and work of the countryside; they considered that no form of vocational training should be given before the age of fifteen; they repeatedly stressed that the establishment of any sound system of agricultural education was dependent for its success upon the improving of the conditions, and increasing the attractiveness of the farming industry. Further, they insisted that any scheme for agricultural education should be firmly based on a sound general education. The committee recommended inter alia, a vast expansion of the farm institutes, to provide one for each county, and suggested that in their activities these institutions should not confine themselves to vocational interests; they should also act as germinating cells for increasing cultural activities by rural people. Many of the recommendations, particularly the recommendation to establish a National Advisory Service, are - with some modifications - being adopted.

The views expressed by this committee were further endorsed by the Joint Advisory Committee on Agricultural Education to be provided by Local Education Authorities, who presented their Report in 1945. (2)

The Scott Report, presented in 1942, was chiefly concerned with regional planning, and was prepared by a committee on land utilization in rural areas. Many quarters regard it as the "blue-print" for rural development in the future.

In July 1944, the Minister of Agriculture appointed a committee

(2) The Provision in Secondary Schools of Courses Preparatory to Agricultural Employment. Dr. Loveday (Chairman) H.M.S.O. 1945 N.N.
under the chairmanship of Dr. T. Loveday, to consider the needs of higher agricultural education in England and Wales. (3) The Report of this committee was presented in January 1946. The recommendations were comprehensive and visionary, and stressed that the quality of education to be given should be the guiding principle in the planning of a coherent and flexible system of higher agricultural education. A further Joint Advisory Committee, also under the chairmanship of Dr. Loveday, was appointed to consider the needs of elementary agricultural education in England and Wales, and issued an interim report in March 1947. Moreover, the Education Act of 1944 in itself places an obligation on the local authorities in England and Wales to provide an appropriate scheme of agricultural education. As yet, few schemes have been worked out fully. Recently, the National Joint Committee on Rural Education, under the chairmanship of Mr. Denis Brown, was set up, and is at present making a comprehensive survey of the provisions for, and the needs of, education for rural living.

The Secretary of State for Scotland, in February 1944, appointed a committee, under the chairmanship of Lord Alness, to make recommendations concerning agricultural education in Scotland. The very comprehensive and exhaustive Report of this committee was presented in January 1946.

In Australia, the Rural Reconstruction Commission was appointed in 1943. (4) In their Sixth and Seventh Reports, presented in 1945, the Commission were impressed by the widespread dissatisfaction with existing

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(4) Rural Reconstruction Commission.
educational machinery. The commission endorsed the view that the present educational facilities were inadequate in country areas, and that a considerable revision of the curriculum was highly desirable. They urged that there should be a greater emphasis on the understanding of the essential features of country life, during the general educational course. Strong recommendations covering agricultural education from primary schools to Universities, and featuring proposals for a reform in the organization and curricula of country high schools and agricultural colleges, were made. The Seventh Report is chiefly concerned with pointing out the disparities in the educational opportunities at the secondary level, that are available to children in rural areas as compared with urban areas. Investigations into the provision of rural education must needs deal with a complexity of problems and conflicting opinions. Much of the data reviewed by this commission depicts a different stage of rural development to that portrayed by the English Reports. Differing circumstances will necessarily lead to differing solutions, but the underlying principles are constant.

Disparities in the education offered to children in rural areas is claiming increasing attention in the United States of America. There is considerable diversity in the facilities for rural education in the various States of the Union. However, the United States Office of Education, and the Agricultural Extension Service, the College and University Extension Departments in many States are engaged in active programmes of rural education. The agricultural high schools of the United States are placing
strong emphasis on the need to improve the qualities of life in the rural areas as an indirect means of improving agricultural efficiency. They are encouraging a renaissance in rural arts and crafts, and through civics, community enterprises and services, the Americans are attempting to give children a realistic understanding of the workings of society; they aim at the greatest development in the cultivation of leisure-time activities. This, incidentally, is also the aim of American adult rural education. The Americans aim not only at increasing efficiency, in order to give increased production, but also at providing the rural dweller with a more infinitely rich and meaningful life.

The recent Langevin Commission in France did not overlook the needs of rural France. In spite of the fact that agricultural education is, and always has been, a feature of the French education system, this Commission envisaged new developments in "L'enseignement pratique et l'enseignement professionnel a la campagne", particularly for the age group 15 - 18 years.

New Zealanders already know a good deal of Denmark's unique contribution to a philosophy of education for rural people. The example that the Danish people have set western civilization, during its recent years of turmoil, confusion and conflagration, is a worthy tribute to her educationalists, and well might New Zealand profit by a study of her lessons. There is considerable variation in the education system of rural Denmark: the Folk High Schools are not the only contribution to
education made by the Danes. Her agricultural high schools deserve very careful consideration by New Zealand teachers. The Folk High Schools, by inspiring their pupils in a vision of excellence, have encouraged them to farm well, and have so stimulated a desire for knowledge of agriculture subjects. The need for agricultural education is clearly recognized by the Danish people, and her agricultural high schools are an important factor in meeting the need. Denmark's education and social system suffered immeasurably during the recent war. With courage and vision, the Danes are setting about their problems of reconstruction. They do not pretend to have found all answers to the rural problems. In striking contrast to the provision for cultural development in other parts of the world, Denmark has now to devise means of providing an institution whereby her townsmen can continue their cultural education equally with the country-man - the harmonious development of the two is essential for Denmark's future security and happiness.

During recent years there have been, in almost every country, significant and far-reaching reforms in secondary education. The main reasons for these developments have largely been a matter of justice, in providing greater facilities for secondary education for all those capable of profiting thereby. Reforms in content, administration and structure are evident everywhere. Because of the differing needs required to be served by the larger group, there have been some sweeping reforms to meet these needs. In these reforms the claims of secondary agricultural
education have figured prominently.

In Alberta (Canada) three courses of agriculture (both theoretical and practical) are being developed as high school options, under qualified instructors in four high schools. There is evidence of similar developments in other parts of Canada. There has been a growing interest in agricultural high schools in Bulgaria and Czechoslovakia. Interest is strong, but economic conditions preclude the development of these institutions in Greece. Italy appears to be chiefly concerned with the education of rural craftsmen. Luxembourg is experimenting with continuation courses centralized in places situated in rural areas. There is evidence that Poland and Portugal are deeply concerned with the problem of rural secondary education.

Throughout the world scene, there has been an awakening of interest in secondary education, and in the subsequent plans, programmes and reports, the importance of agricultural education has featured prominently. Peoples the world over realize that provision of adequate education for rural areas is imperative for the continued and balanced development of the natural resources of the earth’s surface. There is a realization too, that the people concerned with the soil have a right to expect, and to receive, the benefits, cultural, spiritual and material, that our civilization can offer.

New Zealand is even more dependent upon her primary production than many of these countries. There seems to be no reason to suppose that
rural people in this country are already supplied the benefits necessary and desirable for a rich and happy life. There has been no major survey of the "needs" or lacks of New Zealand's rural folk. Our secondary school curriculum has been re-designed. There has been no close examination of the place of the rural secondary school in New Zealand's education system. There are indications that in some parts of New Zealand active interest is being taken in these problems (viz. the Auckland Province). There is no evidence of a similar movement in Canterbury, Otago, or Southland.
SECTION II.

THE DATA.

"The first farmer was the first man, and all historical nobility rests upon the possession of the land." - Emerson.
There are sixtytwo post-primary schools in Canterbury, Otago and Southland. These comprise schools officially described as secondary schools, endowed and registered private schools, and the secondary departments of district high schools. The areas served by these schools vary from large cities to very small and isolated rural communities, and in so far as the historical associations, traditions, environment and control of schools differ, so conditions existing in any particular school may be in a sense unique.

In carrying out this investigation into the present provision for agricultural education in the post-primary schools of the three provinces, recourse has been made to the regular official reports, school magazines, prospectuses and other related material. However, most of the material in this section has been collated from notes made in discussion with teachers, headmasters, farmers, inspectors, some pupils, and as a result of a fiftyeight item questionnaire distributed to all schools. Questionnaires are perhaps one of the most unsatisfactory methods of research, but to ensure that the questionnaire used in this survey would be as adequate as possible, within the limits imposed by the nature of the investigation, several minor sample surveys were made first, in order to find possible discrepancies or ambiguities. These preliminary measures were amply repaid, in that seventy per cent of the replies were received
within the requested period, and that the replies indicate that headmasters and teachers were able to understand clearly what was required in answer to each query.

To supplement facts so collected, and to assist in their interpretation, some fifteen schools of different types were visited - it is regretted that time and finance precluded these visits from being more extensive. They have been most valuable. On all occasions the friendliness, enthusiastic co-operation and patience shown by teachers and headmasters has been most stimulating. Opportunity was also taken, during some of the visits, to discuss rural life and living with pupils, and with local inhabitants. Further, the problems of educating the future farming community were discussed with officers of the Department of Agriculture, leaders of farmers' organizations, school inspectors, lecturers and instructors in agriculture, numerous farmers and many citizens who have special knowledge of agricultural education.

Much of the material so collected and systematically recorded does not lend itself readily to statistical abstraction. Moreover, striving after objectivity in the presentation of generalizations of educational statistics can be somewhat misleading. The investigator has deliberately refrained from including statistical summaries where the interpretation of the 'specifics' is open to question. Furthermore, although the aim in presenting the data is essentially factual, opinions are nevertheless expressed. It is hoped that views thus humbly offered may assist interpretation and lead more easily to conclusions.
CHAPTER VI

THE PROVISION FOR AGRICULTURAL COURSES
IN POST-PRIMARY SCHOOLS.

An examination of the numbers engaged in agricultural courses in secondary and technical high schools of the three provinces for the ten year period 1937 - 1947 (+) shows that, of the total roll of boys in these schools, an average of 7% pursue an agricultural course. The following table gives an indication of the relative stability of this average.

**TABLE I.**
SHOWING PERCENTAGE OF BOYS ENGAGED ON AGRICULTURAL COURSES IN SECONDARY AND TECHNICAL SCHOOLS 1937 - 1947.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Rolls of Schools</th>
<th>Number on Agricultural Courses</th>
<th>Percentage of Total Roll</th>
</tr>
</thead>
<tbody>
<tr>
<td>1937</td>
<td>4818</td>
<td>299</td>
<td>6.2</td>
</tr>
<tr>
<td>1939</td>
<td>5162</td>
<td>261</td>
<td>5.0</td>
</tr>
<tr>
<td>1943</td>
<td>5140</td>
<td>368</td>
<td>7.1</td>
</tr>
<tr>
<td>1944</td>
<td>5635</td>
<td>415</td>
<td>7.0</td>
</tr>
<tr>
<td>1945</td>
<td>6098</td>
<td>431</td>
<td>7.0</td>
</tr>
<tr>
<td>1946</td>
<td>6057</td>
<td>475</td>
<td>7.8</td>
</tr>
<tr>
<td>1947</td>
<td>5879</td>
<td>491</td>
<td>8.3</td>
</tr>
<tr>
<td>TOTALS</td>
<td>39,039</td>
<td>2,740</td>
<td>7.0</td>
</tr>
</tbody>
</table>

An inspection of the national figures for the destination of boys leaving these schools, over a similar period, discloses that approximately 17% of boys leave these schools each year to enter the farming

(+ Note: Figures are not available for the District High Schools or private schools for this period. The 1947 figures are the latest official figures available as this goes to the typist. See Appendix A for further details.)
industry. The figures may be interpreted to indicate that the majority leaving these schools to enter farming have not had the benefits that may accrue from an agricultural course. The situation is but little improved by the addition of the figures for district high schools and private secondary schools. For this year, 1949, it is disclosed that of the 8,282 boys in all types of post-primary schools in the provinces, some 710 are studying on agricultural courses, i.e. slightly more than 8%. The following table discloses the percentage entering farming in comparison with those taking an agricultural course for the various types of schools during the period 1940 - 1947.

**TABLE II.**

<table>
<thead>
<tr>
<th>Type of School</th>
<th>Percentage Leaving to Take up Farming (+)</th>
<th>Percentage on Agricultural Courses (++)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary</td>
<td>17.0</td>
<td>7</td>
</tr>
<tr>
<td>Technical</td>
<td>17.0</td>
<td>7</td>
</tr>
<tr>
<td>District High</td>
<td>39.0</td>
<td>21</td>
</tr>
<tr>
<td>Private</td>
<td>-</td>
<td>6.8</td>
</tr>
<tr>
<td>All Schools</td>
<td>21</td>
<td>8.5</td>
</tr>
</tbody>
</table>

It might be noted at this juncture that the numbers receiving higher agricultural education at an agricultural college are also regrettably few. The farming diploma course at Canterbury Agricultural College, Lincoln, is a fairly general course designed to cover all aspects

(+) Figures in this column are for Dominion as a whole (official).

(++) Figures in this column are for the three provinces (investigator's data).
of farming, and the numbers attending are approximately thirty to forty a year. (1) The figures for those engaged on similar courses at Massey College are approximately twelve to fifteen a year. In other words, of the total of 2,437 (+) entrants to agricultural industries in the Dominion in 1947, less than 2% completed a full-time farming course at a higher agricultural college. Ten to fourteen students a year enter upon courses leading to the degree of agriculture, but very few of these men become farmers.

Further to the 21% leaving all types of secondary schools to enter agriculture, must be added the 7% (approximately) of primary school leavers and 5% (approximately) of intermediate school leavers who enter agricultural occupations each year, without preparation. Happily, the numbers in these groups have decreased appreciably over the last decade (due in part to the raising of the school leaving age), but nevertheless, even at the present time, those in this category, who enter farming, heavily outnumber those entering any other occupation. A summary of the relative educational status of those entering farming, compared with those entering other occupations, is more clearly indicated by the following diagram.

(+ Note: A recent Report by the Director of Agriculture indicated that 3,000 entrants to the farming industries per annum were necessary to maintain the present "efficiency" of agriculture. To increase production, many thousands are needed. The small number of entrants in 1947 is perhaps partly explained by the low birthrate of the depression period 1931-35, which is beginning to take effect in the general labour shortage. Clearly, a careful review of the situation is required.
Fig 1: Graphic representation of the educational status of entrants to agricultural occupations compared with other occupations, for 1947.
An important criterion, in judging the efficacy of education, is also the length of schooling. It is generally agreed that the effect of post-primary education is limited, if the child leaves before or during the second year. The percentage of children leaving the various types of post-primary schools in the first or second year, for the Dominion as a whole, is as follows:

**TABLE III.**
SHOWING PERCENTAGES OF PUPILS LEAVING VARIOUS TYPES OF SCHOOLS WITHIN THE FIRST TWO YEARS (1943 - 1947)

<table>
<thead>
<tr>
<th>Type of School</th>
<th>1943</th>
<th>1944</th>
<th>1945</th>
<th>1946</th>
<th>1947</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary</td>
<td>36.2</td>
<td>37.4</td>
<td>35.4</td>
<td>34.6</td>
<td>34.0</td>
</tr>
<tr>
<td>Technical High School</td>
<td>65.6</td>
<td>63.8</td>
<td>68.6</td>
<td>63.8</td>
<td>66.8</td>
</tr>
<tr>
<td>District High School</td>
<td>37.7</td>
<td>60.6</td>
<td>38.5</td>
<td>36.1</td>
<td>36.1</td>
</tr>
</tbody>
</table>

When this Table III is compared with the numbers of pupils leaving the different schools and entering the farming industries (Table IV), it is possible to gain some idea of the length of schooling of entrants to this occupation.

**TABLE IV.**
SHOWING PERCENTAGES LEAVING VARIOUS TYPES OF SCHOOLS TO TAKE UP FARMING (1941 - 1947)

<table>
<thead>
<tr>
<th>Year</th>
<th>Secondary</th>
<th>Technical</th>
<th>District High</th>
</tr>
</thead>
<tbody>
<tr>
<td>1941</td>
<td>13</td>
<td>17</td>
<td>33</td>
</tr>
<tr>
<td>1945</td>
<td>17</td>
<td>19</td>
<td>43</td>
</tr>
<tr>
<td>1944</td>
<td>19</td>
<td>17</td>
<td>43</td>
</tr>
<tr>
<td>1947</td>
<td>15</td>
<td>17</td>
<td>33</td>
</tr>
</tbody>
</table>
A high proportion of those leaving District High Schools go farming, and it is in these schools that there is an increasing tendency for boys to leave within the first two years. The historical survey (Chapter II) indicated this has been a problem for many years. It has recently been accentuated by the raising of the school leaving age in 1945, thus increasing the number of pupils desiring only a short term post-primary career. This is a problem of major importance in the organisation of the District High School; moreover, as 75 - 85% of pupils in District High Schools do eventually find their employment in the locality served by the school, (+) it will be seen that an increasing number of those entering rural life (apart from those entering farming) have only the benefit of up to two years post-primary education. These figures are not absolutely conclusive evidence, because there are no figures available, which give the actual figures in years of schooling of individuals who actually enter farming, but it does seem safe to suggest, however, that those going into agriculture, do so with a shorter average post-primary life than those going into other occupations.

The facts quoted hitherto in this Chapter have, in the main, given indications of national tendencies. It is proposed now, to discuss more closely the provisions in the sixty-two post-primary schools of the three provinces, Canterbury, Otago and Southland, for those boys who wish to enter farming. The areas served by these schools vary from cit-

(+). Note: The investigator has arrived at this conclusion as the result of an examination of the Entrance and Withdrawal Registers of ten District High Schools.
ies to very small and often isolated rural communities. Five of the secondary schools, five of the technical schools and eight of the private secondary schools, are situated in city areas. The remainder of the secondary schools and technical schools are situated in the smaller "rural-urban servicing towns," and many of the schools have adopted features of the combined schools, being co-educational and multi-course. The District High Schools are mainly situated in the rural and semi-rural towns, and vary greatly in size and environment. One District High serves a city suburban area, and one is situated in a rural area, where there is no town. An indication of the small numbers of boys attending many of these District High Schools is given in the following summary:

Three District High Schools have rolls of more than 50 boys.
Two " " " " " " " " 40 - 50 "
Eight " " " " " " " " 30 - 40 "
Ten " " " " " " " " 20 - 30 "
Seven " " " " " " " " less than 12 "

THE AGRICULTURAL COURSES PROVIDED

There is a total of 8,282 boys enrolled in the sixtytwo schools, of whom 710 are engaged on agricultural courses.

The various courses offered in fortyeight of these schools is indicated by Table V.
TABLE V.
SHOWING VARIOUS COURSES OFFERED IN THE DIFFERENT TYPES OF SCHOOLS.

<table>
<thead>
<tr>
<th>Course</th>
<th>Type of School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic (One of more foreign languages)</td>
<td>11</td>
</tr>
<tr>
<td>Commercial</td>
<td>8</td>
</tr>
<tr>
<td>General</td>
<td>8</td>
</tr>
<tr>
<td>Agricultural</td>
<td>7</td>
</tr>
<tr>
<td>Industrial</td>
<td>4</td>
</tr>
<tr>
<td>Home Life</td>
<td>5</td>
</tr>
</tbody>
</table>

An interesting point shown in this table is the dominance of the academic, commercial and general courses offered in District High Schools, which in this respect resemble the big city schools. The industrial, home life, agricultural emphasis in column one (secondary) is largely the influence of the schools situated in the "urban-rural" towns - Gore, Ashburton, Rangiora, and Oamaru.

The following table gives the number of boys taking agricultural courses in the schools where these courses are established. Table VI also gives an indication of the number of boys in each school coming from farm homes.

(*) Note: The figures in parenthesis refer to the number of schools of each type for which information is available.
### TABLE VI.

**SHOWING THE NUMBER OF BOYS ON AGRICULTURAL COURSES, IN EACH SCHOOL, AND THE NUMBER OF BOYS ON EACH SCHOOL WHO COME FROM FARM HOMES (1949)**

<table>
<thead>
<tr>
<th>School</th>
<th>Total Boys on Roll</th>
<th>Number on Agricultural Course</th>
<th>Number of Boys Who Came From Farm Homes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rangiora H.S.</td>
<td>145</td>
<td>39</td>
<td>40</td>
</tr>
<tr>
<td>Ashburton H.S.</td>
<td>110</td>
<td>8</td>
<td>24</td>
</tr>
<tr>
<td>Timaru B.H.S.</td>
<td>381</td>
<td>72</td>
<td>N.A. *</td>
</tr>
<tr>
<td>Waimate H.S.</td>
<td>108</td>
<td>18</td>
<td>40</td>
</tr>
<tr>
<td>Waitaki B.H.S.</td>
<td>491</td>
<td>118</td>
<td>200</td>
</tr>
<tr>
<td>Otago B.H.S.</td>
<td>455</td>
<td>-</td>
<td>60</td>
</tr>
<tr>
<td>Gore H.S.</td>
<td>194</td>
<td>30</td>
<td>41</td>
</tr>
<tr>
<td>Southland B.H.S.</td>
<td>390</td>
<td>55</td>
<td>60</td>
</tr>
<tr>
<td>Ashburton T.H.S.</td>
<td>155</td>
<td>27</td>
<td>57</td>
</tr>
<tr>
<td>Timaru T.H.S.</td>
<td>207</td>
<td>21</td>
<td>29</td>
</tr>
<tr>
<td>Invercargill T.H.S.</td>
<td>375</td>
<td>65</td>
<td>N.A. *</td>
</tr>
<tr>
<td>Geraldine D.H.S.</td>
<td>26</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>Methven D.H.S.</td>
<td>25</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>Pleasant Point D.H.S.</td>
<td>21</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>Kurow D.H.S.</td>
<td>12</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Mosgiel D.H.S. +</td>
<td>100</td>
<td>65</td>
<td>19</td>
</tr>
<tr>
<td>Wyndham D.H.S.</td>
<td>23</td>
<td>23</td>
<td>12</td>
</tr>
<tr>
<td>John McGlashan (Private)</td>
<td>60</td>
<td>17</td>
<td>N.A. *</td>
</tr>
</tbody>
</table>

* N.A. denotes not available.
+ This school draws a considerable proportion of its pupils on the agricultural course from the Dunedin city area.

There is a considerable variation in the subjects offered in these courses, according to the type of school, facilities available, and the capabilities of the staff. All courses include the "common core" of subjects, as prescribed by the 1945 Regulations. These basic subjects usually occupy more than half the time allotted to the course. Technical schools that provide for agricultural courses include those
subjects such as engineering and manual work, for which they have teaching facilities. These subjects are also offered in one District High School (Methven) and one secondary school (Gore). Although teaching the rudiments of engineering and woodwork, these schools do not neglect the teaching of agricultural science and allied subjects. All schools offering agricultural courses teach agriculture and/or animal husbandry, as set out in the 1945 Syllabus Regulations. In the District High Schools agriculture and/or animal husbandry, plus the "core subjects", in the main, constituted the agricultural course. Two secondary schools, two technical schools and two District High Schools provide for wool-classing as a subject. Three secondary schools, two technical schools, and one private secondary school include commercial practice. (+)

However, there are numbers of District High Schools where the size and capabilities of the staff, and the small number of boys wishing to take up agricultural work, make it exceedingly difficult, and perhaps inadvisable, to institute an agricultural course. In many cases, the staffs of these schools have attempted to overcome the difficulties imposed by a small number of entrants, with many diverse interests, by introducing into their "General" course such subjects as horticulture and botany. It is hoped that, in this way, all boys will develop an interest in, and an appreciation of, the soil, and their living environment. (++) Furthermore, one District High School (Temuka) refrains from calling its "General Course"

(+)Note: See Appendix A VII for full details of courses and times allotted for various schools.
(++)Note: Horticulture is the basic science for all boys in the District High Schools at Fairlie, Geraldine, New Brighton, Akaroa and Harwarden.
(which includes agriculture, dairy science and wool-classing), an agricultural course, because the headmaster feels that as at present taught this general course is not an adequate agricultural course. It might be added that a visit to this school created the impression, that boys taking this option (even with the handicap that the headmaster points out), do receive a more adequate agricultural course than that offered in some other high schools visited, which feature agricultural courses, as such, in their syllabus.

A well known authority considers that agricultural courses have suffered in the past, because a narrow and instructional conception of the purpose of agriculture as a subject, has been taken (2) There has been a failure to realize the immense educational possibilities offered by the subject, and an unwillingness to explore its importance as a media for an integrated course. Twentyone headmasters gave their views on this assumption. Fifteen thought that agriculture should be a subject in an integrated curriculum because:-

(a) "The opportunity it offered for an integrated and co-ordinated course of study" (4 answers).

(b) "The soil is our heritage and there is a need for all children to know and appreciate this fact." (2 answers)

(c) "The importance of agriculture as New Zealand's basic industry." (5 answers)

(d) Rural districts should have a rural basis in all subjects. (3 answers)

(e) It enabled the school to make better provision for the educational

"needs" of the district served, and facilitated the use of the educational resources offered by the rural community. (6 answers)

Six headmasters thought that it was inadvisable to integrate agriculture with other subjects on the curriculum, because:—

(a) General science was better suited as a general educational subject, and was more liberal (3 answers),

(b) It was wrong to impose agriculture on all children (1 answer),

(c) Integration was impossible, except with such subjects as general science, (1 answer)

(d) The needs of the district did not call for a study of agriculture (from a mining area).

The answers given show that a liberal interpretation of the question asked was taken by many headmasters. The replies, in many cases, appeared to be related to the needs of the district served by the school, and hence can hardly be regarded as snippets of the educational philosophy of headmasters. Despite the expression of opinions by headmasters, further evidence suggests that in most schools, Murdoch's conclusion is still valid today. Teachers appear to suspect the new emphasis, and the freedom given in the recent syllabus changes. Timetables, stereotyped textbooks, matriculation examinations and the science bench, may be, or may have been, shackles, but they have become by now quite friendly shackles, and teachers have learned to bear them comfortably. There is data to support the suggestion that many teachers neglect, in fact are oblivious to, the almost inexhaustible fund of inspiration that surges around the District High School, with the vigour of life itself.
The agricultural course in a post-primary school usually extends over three years of schooling. Several headmasters thought it was desirable that such a course should progress towards a final examination (e.g. School Certificate), but this opinion was by no means enthusiastically supported in those schools where successful courses were being conducted. Thirteen schools have three year courses. Three schools offer three year courses, that can be readily extended to a four year course, if boys wish to remain at school. One school offers a four year course, and one has a two year course (Wyndham D.H.S.). Rangiora High School, which is well fitted materially to conduct such courses, offers a two year general course in agriculture, and a three year course designed to prepare those who wish to take School Certificate at the end of the course. Rangiora, in addition to providing these courses, is also conducting at the present time, a farm cadet course of one year. This scheme is organized in co-operation with the Canterbury Youth Farm Advisory Council. After a year's training at the school the Advisory Council undertakes to place the boys on approved farms, for further training and experience. Prior to the syllabus revision (1945), it was the practice for many boys taking academic courses in District High Schools to present agriculture as their examination science. Only one school now provides this option.\(^{(+)\} \)}

Although three year courses seem to be the most popular and practicable, the average duration of schooling for boys on agriculture

\(^{(+)\} \) Pleasant Point D.H.S. has three pupils on an academic course who take agriculture.
courses is slightly less than two years. Six schools state the average is two years, while another six state that the average is between two and three years. Three schools find that pupils remain, on the average, from eighteen months to two years, while one school suggests that the average was between two and a half and three years. "Short-leavers" have been a problem in organizing agricultural courses ever since these courses were first introduced, and the above evidence, supported as it is by tendencies shown for the Dominion as a whole, indicate that the problem is still present. It has already been stated that the problem has been accentuated in District High Schools by the raising of the school leaving age. Statistics taken over recent years indicate that there has been a considerable increase in the numbers taking post-primary education, but it should not be overlooked that this apparent improvement is due largely to the fact that boys have to attend post-primary schools, until they attain the legal leaving age. Teachers have not, as yet, fully explored the needs of the new groups, which the post-primary schools are called upon to serve. Not only are the District High Schools losing the majority of their pupils within the first two years, but they are also losing their better pupils, and the potential leaders of the schools, through the accrediting system. Comprehensive records are not available for all schools, indicating this trend, but Table VII illustrates this tendency in three schools. The figures quoted are the averages for the number leaving in each category for the years 1944-45. They illustrate the importance of the group leaving to go
to the larger high schools from the District High Schools, as compared with the bigger high school.

**TABLE VII.**

**SHOWING DESTINATIONS OF PUPILS LEAVING THREE HIGH SCHOOLS**

(1944-48 AVERAGES)

<table>
<thead>
<tr>
<th>School</th>
<th>Alexandra D.H.S.</th>
<th>Roxburgh D.H.S.</th>
<th>Wainate High School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average roll of boys in the school</td>
<td>49</td>
<td>26</td>
<td>101</td>
</tr>
<tr>
<td>Average number leaving to work in district (not farms)</td>
<td>8</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Average number leaving to work on farms in the district</td>
<td>7</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>Average number leaving to attend other high schools</td>
<td>10</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Average number leaving to work out of district</td>
<td>3</td>
<td>1</td>
<td>7</td>
</tr>
</tbody>
</table>

**TOTALES**

|                  | 28 | 9 | 28 |

**NOTE:**

These figures have been calculated from an inspection of the Admission and Withdrawals Register in these schools for the years 1944-48.

With these factors existing in the District High Schools, there is an increasing tendency for these schools to adopt, administratively at least, some of the features of American Junior High Schools.

From the point of view of administration, the Education Department has regarded the provision of agricultural courses as a nec-
ecessary function of all District High Schools. In this survey, the local-
ities served by schools display a good deal of diversity. In many schools,
only a small proportion come from farm houses, and in a number of districts
where schools are situated, the principal occupations of the parents are
not farming. One District High actually serves a city suburb, while two
others serve localities where the principal industry is mining. So it is
suggested that the function of the District High School is really one of
meeting the needs of rural adolescent, rather than providing a pre-vocat-
ional course in agriculture. There is little evidence to show that teach-
ers have fully considered what should constitute the "educational meal" for
these adolescents, whom Somerset considered were "educationally starved."
Although the figures may mean little without a knowledge of the underlying
social factors, of the 641 children in twentyone District High Schools, 182
came from farm homes. An idea of the relative importance of this group
in the total number of boys, for respective schools, can be deduced from
the following summary.
### Table VIII.

**SHOWING THE NUMBER OF BOYS FROM FARM HOMES, AS COMPARED WITH TOTAL ROLLS FOR TWENTY-ONE DISTRICT HIGH SCHOOLS.**

<table>
<thead>
<tr>
<th>School</th>
<th>Roll of Boys</th>
<th>No. from Farm Homes</th>
<th>School</th>
<th>Roll of Boys</th>
<th>No. from Farm Homes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geraldine D.H.S.</td>
<td>26</td>
<td>11</td>
<td>Lawrence D.H.S.</td>
<td>19</td>
<td>7</td>
</tr>
<tr>
<td>Harwarden</td>
<td>51</td>
<td>12</td>
<td>Hotgiel</td>
<td>100</td>
<td>19</td>
</tr>
<tr>
<td>Hokitika</td>
<td>70</td>
<td>3</td>
<td>Palmerston</td>
<td>47</td>
<td>8</td>
</tr>
<tr>
<td>Kaikoura</td>
<td>42</td>
<td>10</td>
<td>Roxburgh</td>
<td>23</td>
<td>17</td>
</tr>
<tr>
<td>Methven</td>
<td>25</td>
<td>10</td>
<td>Strath Taieri</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Pleasant Point&quot;</td>
<td>21</td>
<td>13</td>
<td>Tokomairiro</td>
<td>28</td>
<td>8</td>
</tr>
<tr>
<td>Temuka</td>
<td>54</td>
<td>11</td>
<td>Nightcaps</td>
<td>21</td>
<td>1</td>
</tr>
<tr>
<td>Alexandra</td>
<td>46</td>
<td>12</td>
<td>Queenstown</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Clutha Valley&quot;</td>
<td>7</td>
<td>6</td>
<td>Tuatapere</td>
<td>14</td>
<td>5</td>
</tr>
<tr>
<td>Cromwell</td>
<td>17</td>
<td>5</td>
<td>Wyncham</td>
<td>23</td>
<td>12</td>
</tr>
<tr>
<td>Kurow</td>
<td>12</td>
<td>3</td>
<td>TOTALS</td>
<td>641</td>
<td>182</td>
</tr>
</tbody>
</table>

It is not intended that these figures should be interpreted as an argument against the study of agriculture and allied subjects, in these schools, but rather, to give some indications of the problems confronting these schools, with small numbers often showing very diverse interests and ambitions, necessitating therefore small classes. With only one or two teachers, isolated from the stimulating educational discussions and thought that may emanate from larger population centres, the problems of these schools are as many as they are complex. Their importance demands the fullest attention. It is true, that as yet, New Zealand has not developed an adequate educational philosophy to cope with the needs, opportunities, or difficulties of her rural District High Schools. Their problems should provide a spur to intensified effort, rather than an excuse for taking no action.
FACTORS AFFECTING THE SUCCESS OF COURSES

1. **Staffing.**

   In a short two or three year course, during which most of the pupil's time is occupied with basic and cultural subjects, it is impossible to give more than an introduction to the immense field that the term "Agriculture" denotes. The quality, vitality and lasting interest engendered by such a course is largely dependent upon the quality of the teacher in charge. It is an observed fact, that those teachers without the benefit of an adequate training in agriculture, to fit them for such teaching, seem unwilling to adopt a sufficiently bold and realistic approach towards the subject.

   This investigation indicates that adequacy of the agricultural course provided is closely related to the provision of trained graduates in agriculture. Of the seven secondary schools, which have established courses, five have University graduates in agriculture in charge of their courses. All technical schools offering these courses have trained agriculturalists on their staffs. One secondary school with an agricultural course has no agricultural specialist on the staff. An Arts graduate, with considerable experience and enthusiasm, is in charge of the biggest agricultural course in the three provinces. This course, at Waitaki Boys' High School, is the longest established and one of the most successful in the country. Both the private schools with agricultural courses have trained men in agriculture in charge. There are no grad-
uates in agriculture on the staffs of the District High Schools. A successful agricultural course provided by Mosgiel District High School is conducted by an Arts graduate, whose experience and practical experience of farming largely overcomes the restriction of inadequate training. In all other District High Schools, the teaching of agriculture is dependent upon the energy, enthusiasm and breadth of interest of teachers who have had no special training to fit them for this work. In the smaller District High Schools, the teaching of agriculture is further handicapped, owing to the small staff. Teachers must be "general subjects" teachers, rather than specialists. They must be able to teach all subjects falling within the post-primary syllabus. (+) If a teacher has to teach up to half a dozen subjects, he can hardly be blamed for becoming somewhat apathetic to a subject such as agriculture, which demands a great deal of organization, preparation and enthusiasm.

Today, there exists the ironical situation that the best agricultural courses are usually given in the urban secondary schools and technical high schools, who have secured the services of agricultural graduates. It certainly does not seem logical to bring country boys to the city in order to train them for rural occupations.

However, the Education Department is attempting to overcome these deficiencies. The provision of bursaries for prospective post-primary teachers to specialize in agriculture, and the re-institution of

(+ Note: One teacher in a District High School informed the investigator that he had taught nineteen different post-primary subjects. Many District High School teachers state that at different times they have taught more than a dozen different subjects.
third year specialist courses in agriculture are evidence of official sympathy. Further, by the unification of the staffing schedules for all post-primary schools, it is hoped that some of the more promising young graduates will take up work in District High Schools.

There are grounds for the belief, in those schools where the agricultural course is strongest, that the headmaster and teaching staff as a whole are sympathetic towards rural pursuits. In such an atmosphere there are no misunderstandings between members of the staff in regard to academic or agricultural interests. It is doubtful if this state of affairs could be secured in District High Schools, if the procedure was merely to add an agricultural specialist to an otherwise academic staff. The provision of all possible material facilities in the way of school buildings, equipment, farms and hostels is of limited value, unless teachers are capable and enthusiastic, regarding the aims of this type of education.

In view of the circumstances, it might be suggested that small rural high schools enlist the services of the officers of the Department of Agriculture, farmers and other qualified people residing in the locality of the school. Such people have a practical and, very often, a learned knowledge of agricultural factors in their localities. Features of strawberry clover, or the granular structure of chernozem soils, seem best taught on the actual farm situation, and few people are better quali-

(+ Note: The investigator studied agriculture as a pupil in a District High School (1937-41), where this suggestion was adopted. It was most popular with pupils.)
ified to teach boys these facts than agriculturalists who are dealing with them daily. All headmasters report that these services are readily available if required. Department of Agriculture field officers and specialists are enthusiastic and willing to assist if they are asked to do so. In few schools is the assistance accepted. Moreover, it appears that it is the urban schools (technical and one private school) that make use of the opportunities thus offered. Many of the others have not even considered this aspect of the educational resources available in the locality they serve.

2. Facilities.

It is generally admitted that the provision of adequate equipment, books, hostels, and facilities for training in, and demonstration of, farming practices and techniques, are necessary material conditions for a satisfactory course in agriculture. In his Annual Report for 1937, La Trobe defined the characteristics that he looked for in the agricultural course of a school, equipped with both a farm and a hostel. Prime desiderata were that the teachers should have an intimate and up-to-date knowledge of farming, and that the pupils should be surrounded, as far as possible, by the equipment and environment pertaining to the farming industry. (3) There has been considerable controversy in regard to the best method of giving an agricultural course a practical emphasis. Educationalists contend that a thorough grounding in the underlying scientific principles should be the view rather than the provision of a narrow

(3) A - J 1938 E 2, p. 12
vocational course, calculated to produce practical farmers at the end of two or three years. Agriculturalists on the other hand assert that an effective agricultural course must be predominantly practical, with a minimum of theoretical work, and suggest that laboratory work in schools has little relation to practical farming. It is possible to find balance between these conflicting aims.

Murdoch (4) quotes an article by L. J. Wild which sets out the arguments for a school having a farm of its own: "(1) animal husbandry is an essential part of land utilization, (2) the staff must have absolute control of the land, (3) farm atmosphere (sounds, smells etc.) is necessary, (4) a self-controlled farm provides opportunities for observation, investigation, research and unified instruction, (5) instructors must keep in touch with the land, or they become academic."

However, the problem is not merely one of attaching farms to high schools. The management of a school farm calls for special administration, staff, finance, and a clear understanding of its function in education. Some schools in the three provinces have, in the past, made many and varied attempts to overcome these difficulties. Some have acquired and operated farms large and small. Some have extended garden activities on a large scale to meet the need in part. But the problems of such organization often create difficulties in multi-course schools that we have no right to impose.

At the present time, one school in the three provinces has a

school farm. (+) This farm, of 130 acres, extending over a variety of soil types, is conducted by the agricultural master, and the farm manager, and is fortunate in that it has a considerable range of implements, livestock, and the sympathy of official sources. Difficulties are experienced, but nobody, not even the agricultural master, claims that adequate solutions have been made. Yet the educational advantages and opportunities offered are immense. The boys do receive actual instruction and practice in farm operations: they co-operate in the use and maintenance of implements, they experience first-hand the treatment and care of livestock. Independence, initiative and industry are encouraged by extending, as the boys become competent, responsibility for all aspects of farm work. The possession of land and equipment does not necessarily determine the quality of an agricultural course, but nevertheless, in the words of the agricultural master, "materially, at least, the stage is set at Rangiora, to offer a satisfactory course in agriculture." (++)

It must be admitted that many agricultural courses owe their strength to the provision of hostel facilities, enabling them to draw pupils from far distant localities. Furthermore, hostel facilities enable schools to overcome many of the difficulties associated with such courses. Boarding facilities, in the form of school hostels, are avail-

(+). See Appendix B.I for a full description.

(++) Note: Ashburton High School owned its own, very adequately equipped farm until 1946. Pleasant Point D.H.S. owned its own farm 1937-43. St. Bedes private secondary school has a 20 acre farm, with implements and livestock managed by a caretaker. It appears to be used only for supplying food to the hostel. Waitaki Boys' High School has, in the past, operated its own farm of 4-10 acres.
able at six of the secondary schools (four of these provide agricultural courses). One technical school and five private schools have boarding school hostels. Two of these private schools offer agricultural courses. Many of the District High Schools and city schools make arrangements for pupils to board privately in the locality of the school. One headmaster outlined the possible development of his school as an educational centre for a wide district, if boarding accommodation could be provided. There is ample proof that a goodly number of urban boys take agricultural courses with a view to entering farming or related occupations. Nevertheless, it is established that it is the boarding pupils coming largely from the rural areas who constitute, in the main, the agricultural group in secondary schools. Relative numbers can be gauged from the Summary Table IX.

**TABLE IX.**

**SHOWING RELATION OF THE PROVISION OF BOARDING FACILITIES WITH NUMBERS ON AGRICULTURAL COURSES.**

<table>
<thead>
<tr>
<th>School</th>
<th>Number of Boys Boarding in Hostel</th>
<th>Number on Agricultural Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rangiora H.S.</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Christchurch B.H.S.</td>
<td>62</td>
<td>-</td>
</tr>
<tr>
<td>Timaru B.H.S.</td>
<td>161</td>
<td>72</td>
</tr>
<tr>
<td>Waitaki H.S.</td>
<td>270</td>
<td>118</td>
</tr>
<tr>
<td>Otago B.H.S.</td>
<td>78</td>
<td>-</td>
</tr>
<tr>
<td>Gore H.S.</td>
<td>34</td>
<td>41</td>
</tr>
<tr>
<td>Christchurch T.H.S.</td>
<td>31</td>
<td>64</td>
</tr>
<tr>
<td>John McGlashan College</td>
<td>60</td>
<td>17</td>
</tr>
</tbody>
</table>

**726**  **352**
When this data is compared with the provisions for agricultural courses, in schools without hostels, it is shown that there is a close relation between the provision of adequate hostel facilities and the size of courses. The educational advantages in the organizing of agricultural courses offered by such residential facilities is immense.

Provision of adequate laboratory facilities is essential, if the underlying principles of agricultural sciences are to be taught. There is a definite relationship between the size of the school, and the provision of laboratory facilities. The large schools, especially the urban secondary and technical schools, are reasonably equipped with laboratories of varying types. There is usually a General Science laboratory, which may serve as a satisfactory environment for the introduction of agricultural science. The District High Schools are not so fortunate. The usual provision is a combined class-room and general science laboratory. Six out of nineteen District High Schools regard their laboratories as antiquated, cramped and ill-equipped. This judgement was amply confirmed by subsequent visits to these schools. District High Schools have suffered, in the provision of these facilities. But, while many of the buildings, today, seem ill-designed and poorly equipped in comparison with city schools (+), there is a note of hopeful optimism and appreciation among the District High School teachers. Since the unification of the post-primary administration, the District High Schools have received much more

(*) Note: It must be admitted, in all fairness, that there are also a number of modern, well-designed District High Schools.
generous treatment in the form of books, equipment and teaching aids.

The survey has shown that in regard to library facilities and supplies, the position is not entirely satisfactory as yet. In seven of the District High Schools visited, the library consisted of very little more than a storeroom of books: and, in four cases, it was only a large cupboard. None of these libraries were large enough to provide room for a group of students to study. In the provision of these facilities, there seems to be an almost complete failure to appreciate the true educative significance of a library of books. Only two District High Schools regarded their stock of thirty to forty books on agriculture as adequate to meet the needs of the teachers, pupils and - if required - the local inhabitants.

Twentyeight schools returned information on their school libraries:

14 considered them adequate for teaching purposes (4) +
10 " " inadequate " " " 9"
15 " " adequate for pupils' needs (-)
10 " " inadequate " " " 9.

Most schools receive the Journal of the Department of Agriculture. In many schools it is the only periodical received, and in two schools it constitutes the agricultural section of the library.

"A school without an ample supply of books is a poor place."

The value of small scale garden activities to boys on agricultural courses is a matter for debate. These boys profit by observation of large

+ Note: The figures in parenthesis refer to the number of schools in each category offering agricultural courses.
scale projects, in which they show a genuine interest. Nevertheless, as a living museum, the school garden may serve as a valuable teaching aid. Further, the love of nature, and the appreciation of its beauty, not to mention practical knowledge of horticulture, is something from which all pupils and the community may well profit. Gardens in city high schools and technical schools are small and serve to beautify the school environs. Waitaki Boys' High School has a four acre garden which, while it graces the school environment, also serves as an area for demonstration. The average garden in a District High School consists of one eighth of an acre, often of poor soil, used for ornamental and experimental purposes. To varying degrees, this is the practice in all the District High Schools studied. However, one District High School supervises its own five acre block of forest, and another is carrying out its own afforestation project on a piece of waste land adjacent to the school.

Accepting the view that any worthwhile course in agriculture necessitates actual experience of farm operations, use and care of animals, tools and implements etc., many schools attempt to overcome their lack of facilities by arranging visits to farms, field days and demonstrations. The organizing of such excursions imposes many difficulties. Inter alia, schools must consider timetable re-arrangements, staff commitments, the availability and the quality of farms to which visits can be made, and methods of transport to these farms. These are difficulties in large high schools, but they are accentuated in the small District High Schools.
Here the factor of available time is of major importance. Excursions to a farm usually occupy half a day or a day, and if a group of boys is to be supervised by a teacher, then the school timetable suffers. Teachers in small one and two teacher schools consider that such an allotment of time is not warranted and is an injustice to other pupils in the school. Few teachers seem to have considered sending the boys out under the guidance of a qualified farmer, or the Field Officers of the Department of Agriculture. No teachers interviewed had considered organizing a full week's intensive socio-agricultural survey of a special agricultural locality with the boys living in a local hall, a disused school, or living on farms. Again, because a school is in a rural area, it should not be assumed that there suitable farms for study are available in all cases. Twentyfour schools indicated the availability of farms in their districts for these purposes. Twentytwo report farms are readily available, but many schools, especially those in urban areas, have to travel considerable distance (up to 20 miles) to attend demonstrations etc. The schools having difficulty were (a) Akaroa District High School, because of topographical conditions, and (b) Gore High School, where transport is available only at high cost. (*) However, most schools have suitable transport available in the form of bicycles, buses, and trucks. The Education Department have made arrangements, whereby the consolidated rural high schools, can use the Departmental buses for agricultural excursions up to

(*) Note: This school is anxious to own its own farm and suggests 10 acres as the optimum size.
Educationally, such excursions can be of distinct value. With due forethought, preparation and motivation they can be made as mentally vigorous as a good class-room lesson. They are an excellent method of overcoming the objections that insufficient contact with the farming industry is made by boys on agricultural courses. They can do much to arouse the interest, appreciation and sympathy of the farming community with the teacher's task. The boys themselves are appreciative. However, the value of these excursions is often nullified by inadequate preparation, the failure to set definite objectives, or the inability to follow up lessons with definite study in the school situation. Visits paid to farms by boys in agricultural classes often lack purpose, and became meaningless excursions. No definite and systematic records are taken on the farm, and the information gathered is too vague and haphazard to be of any value, other than a joyful break from school-room grind in a healthy atmosphere.

All schools in this survey state that the officers of the Department of Agriculture are exceedingly helpful when approached, but, they are mainly approached by the urban schools that are providing agricultural courses. Nowadays, the Education Board instructors in agriculture almost wholly confine their very valuable work to the primary school. Their visits to District High Schools, apart from a few isolated cases, seem to be chiefly courtesy visits.

A valuable adjunct to agricultural courses has been the develop-
ment of club facilities in schools. An important organization in this direction has been the Young Farmers' Club movement. This movement, in New Zealand, receives its membership from young men in farming areas between the ages of fourteen and thirty years. In this respect it differs from the Young Farmers' Club movement in Great Britain and the 4H. clubs of the U.S.A., who cater principally for school boys of an earlier age. Clubs have been established, however, in a number of high schools, and many are making commendable efforts to further the ideals, aims and objects of this extremely worthwhile organization. Clubs operate in the following schools:—

Southland Technical College, Invercargill (80 members)
Gore High School (30 members)
Mosgiel D.H.S. (a very live club) (72 members)
Timaru Boys' High School (63 members)
Temuka D.H.S. (a good club) (29 members)
Ashburton High School (19 members)
Ashburton Technical High School (first secondary school to establish a club in N.Z.) (28 members)
Christchurch Boys' High School (58 members)
Christchurch Technical College (41 members)
St. Andrews' College (Christchurch) (76 members)

The Dominion Secretary of the Young Farmers' Club movement especially commends the vigour of the two clubs in the District High Schools. However, the roll numbers of most districts are too small to permit the development of satisfactory school clubs. In these circumstances, it might be advantageous to encourage boys to join the Young Farmers' Clubs existing in the district where the school is situated. (+)

(+ Note: The investigator was a member of a Young Farmers' Club while a pupil at a District High School, and thoroughly enjoyed the association.)
As far as could be ascertained, there were, in the three provinces, nine boys who have joined under these circumstances.

A further club movement operating in four District High Schools is the Boys' and Girls' Agricultural Club organization. Sponsored by the Education Boards, through their agricultural instructors, this movement aims to foster, among primary and post-primary pupils, activities in relation to agriculture, dairying, wool-classing, stock-judging, pastoral, and animal husbandry and like interests, through projects and home activities. The movement receives considerable support in country primary schools, where it functions most adequately. Membership of post-primary pupils is not extensive.

Southland Technical High School also have active Naturalist and Gardening Clubs, while Waitaki Boys' High School and Timaru Boys' High School have Forestry and Gardening Clubs respectively.

If children have to travel some distance to attend schools, the development of such club activities, important as they might well be, is severely handicapped. Many of the most desirable activities of the clubs are carried on when the school day is finished. Children who have to catch buses, trains and other conveyances in consolidated District High Schools, are often denied the privilege of such activities.
FACTORS IN THE SELECTION OF AGRICULTURAL COURSES

It has been stated that the disappointing results, with which agricultural courses have met, are due to the poor material offering, and that very often boys take the course because it is a "soft option". This is a wretched slur on the intellectual ability of prospective entrants to agricultural industries, and demands closer examination.

Discussion of the differences in intelligence of rural and urban people would involve one in some of the important issues in psychological and educational research. These problems have received some attention overseas, but to date there has been no systematic study of their importance in New Zealand. (4) Investigation is urgently needed, in order to determine more exactly the nature of these psychological differences, and their effect on the attitudes and actions of people in rural and urban areas. With this knowledge, it might be possible to reveal the extent, causes and effect of selective migration between town and country. In view of the limited knowledge available at present there is no justification for dogmatic conclusions, based on a careless interpretation of the results of the one major investigation on the distribution of intelligence in New Zealand. The results of testing a nation-wide sample of children were summarized by Redmond and Davies and published by the N. Z. C. E. R. in 1940. (5) Although, in investigation, and presentation, the work was carried out with scrupulous care, the writers everywhere point out the

(4) Note: It is pleasing to record that some of these factors are receiving the attention of one research worker at the Education Department, University of Otago.

tentative and speculative nature of their interpretations. Whatever the results may mean, and however they might be interpreted, of one thing there is no doubt. The performance of rural children on the two intelligence tests used was definitely and considerably behind that of urban children.

The most representative group tested was the ten to eleven age group, and results of this group in terms of IQ were:

TABLE X.

<table>
<thead>
<tr>
<th>Groups</th>
<th>Boys</th>
<th>Girls</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10's</td>
<td>11's</td>
<td>10's</td>
</tr>
<tr>
<td>I - II (Rural)</td>
<td>96</td>
<td>94</td>
<td>99</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>95.5</td>
</tr>
<tr>
<td>III-VI (Urban-Rural)</td>
<td>101</td>
<td>99</td>
<td>101.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>101</td>
</tr>
<tr>
<td>VII (Urban)</td>
<td>105</td>
<td>103.5</td>
<td>106</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>105.5</td>
</tr>
</tbody>
</table>

Translation of these best performances into mental age equivalents, enables a comparison to be made with chronological ages for these groups.

TABLE XI.

<table>
<thead>
<tr>
<th>Groups</th>
<th>Boys</th>
<th>Girls</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10s</td>
<td>11s</td>
<td>10s</td>
</tr>
<tr>
<td>I - II (Rural)</td>
<td>Y</td>
<td>M Y</td>
<td>M Y</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>III-IV (Urban-Rural)</td>
<td>11</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>VII (Urban)</td>
<td>11</td>
<td>12</td>
<td>11.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

(6) Ibid. p. 58 Table 10. (7) Ibid. p. 58 Table 9
It will be seen that the 10's in the urban areas (four main cities) score as many marks as 11's in the country. Expressing this in terms of mental age, those observed differences between rural children and those in larger cities range from 9 months (girls of 11) to 15 months (boys of 10). There is a tendency for these differences to be extended, with advancing chronological age, and one might expect greater discrepancies for the post-primary school levels.

Few schools in the three provinces were able to give full information on intelligence testing. Results of mean tests scores for various courses, calculated in terms of IQ on the Otis Intermediate Intelligence Test, in six schools (+) are as follows:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Academic</th>
<th>Commercial</th>
<th>Agriculture or Manual</th>
<th>Trades</th>
<th>Engineering</th>
<th>General</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ashburton T.H.S.</td>
<td>105</td>
<td>97</td>
<td>90.7</td>
<td>92</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ashburton High</td>
<td>105</td>
<td>96</td>
<td>95</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Southland T.H.S.</td>
<td>102</td>
<td>98.5</td>
<td>94.6</td>
<td>93</td>
<td>98.7</td>
<td></td>
</tr>
<tr>
<td>Timaru E.H.S.</td>
<td>100.2</td>
<td>94.4</td>
<td>96.3</td>
<td></td>
<td></td>
<td>90-109</td>
</tr>
<tr>
<td>Rangiora High</td>
<td>110+</td>
<td>-90</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: These results are supported by the results of a battery of tests given in a District High School by a member of the staff, Education Department, University of Otago 1949.

In general, this evidence supports the tentative conclusions offered by Redmond and Davies. However, all headmasters stress the

(+): One school also uses Richardson Intelligence Tests, but mean scores have not been calculated.
need for caution in the interpretation of the results. They point out that there is considerable range in the test scores of boys on agricultural courses, and that many of the brighter boys do take up these courses. It should be pointed out, too, that many boys of more than average ability, who intend to return to farming, elect to take a general course. This is especially so in the large urban high schools. There is no conclusive evidence to suggest that all boys who take up agricultural courses are intellectually inferior to those taking up other courses. Headmasters comment that "they are just as good as those offering for other courses." Only one headmaster, who regards his agricultural course as a "soft option", supported the view that boys on the agricultural course were inferior. There were six boys on the course, and no factual evidence was supplied.

It is the general impression of all headmasters that it is the boys of lower mental ability who tend to leave school earlier. Two schools provided statistical evidence. In rural high schools, where 60% leave with two years of enrolling, it is questionable whether teachers have even begun to consider the "needs" of these rural children of lower mental ability.

Without doubt, the most important questions affecting boys entering upon agricultural courses are those relating to the availability of land. What will be the ultimate opportunity for such boys to become farmers? A land settlement survey has been conducted recently by the Young Farmers' Club movement (+) (secondary school clubs were excluded from the survey). Examination of the replies for Canterbury, Otago and Southland shows that

(+ Note: This survey was directed by Mr. L. W. McCaskill, Lecturer in Rural Education, Canterbury Agricultural College, Lincoln, 1949.)
in the 1141 replies, 97.2% of these young farmers stated they intended to remain on the land, and 95.6% thought a land settlement policy was necessary. Of those answering the survey, 6.4% were already farming on their own account, and 51% stated that their parents' farms would be available to them ultimately; 91% stated that they would like to take advantage of a land settlement scheme. As a result of subsequent representations to the Government by the New Zealand Federation of Young Farmers, the Government has announced that it will give full financial assistance to such a scheme, and further, has implied that evidence of adequate farming training will be required from applicants. The detailed scheme has yet to be worked out, but it promises well for the future. The prospects seem a little brighter for the urban and the country boy who hopes some day to own a farm.

Numerous headmasters do agree that many boys take agricultural courses in order to escape serious study of the more academic subjects. The blame for this state of affairs does not rest entirely with the boys. Any subject can be a "soft option", and there seems no reason why the study of agriculture should be any less rigorous than the study of Latin (if the study of Latin is rigorous). However, in the schools which have agricultural courses, headmasters state the most evident reasons influencing boys in taking up these courses are a genuine interest in the land, love of animals, and a liking for the rural way of life.
There is evidence to suggest that the boys appreciate the study of the living environment, which they can experience and comprehend daily. It was also mentioned that an interest in the land was often inspired by parental and teaching influence. Factors against the selection of courses were stated to be the deficiencies, handicaps and general unattractiveness of rural life. This reflects the status of the farmer in the New Zealand Society. Without more detailed research, it is impossible to indicate how far the attitudes and ideas of the farming community itself deter possible entrants to these courses. The argument is still heard that farmer can teach his son all about agriculture. Such knowledge spreads the effective practices of farming in a very slow and haphazard method, and is not conducive to furthering and development of progressive ideas necessary to continued advancement of farming techniques. However, such statements are rarely more than partly true, but unless the courses in agriculture command respect, no one can blame the farmer for ignoring them. Moreover, New Zealand rural life has accepted many of the standards and values of the urbanized community. It is impossible in the light of present knowledge to predict how far these urbanized standards and values discourage lads taking up agriculture. Although New Zealand is basically an agrarian society, there is no study of rural sociology.
RELATION OF SCHOOLS TO THE RURAL COMMUNITY.

A. E. Campbell observes that few schools in New Zealand have become definitely community centred. (8) It is perhaps a melancholy fact that this is equally true of the post-primary schools of these three provinces. In some schools, particularly in Otago, there is a suspicion of such relations, and in two schools visited it has degenerated into an open cynicism. On more than one occasion the investigator was informed that the people of the locality were "dull, uninterested, and refused to accept responsibility." Checking this information by interviewing local citizens, and inquiring into community plans and ambitions, led to quite the opposite point of view. Many of these "sleepy little country towns" were revealed as seething with a complex of activities. It might provide handsome returns for many teachers to take the lid off some of these human ant-hills, and observe the goings-on.

It was suggested to rural high schools in 1934 that they set up consultative committees of local citizens to assist them. From these working sub-committees, representing every branch of life and work in the rural community, acting in perpetual touch with the teacher, there could come information that would invigorate agricultural courses with the breath of practical life. Thus children might be helped to learn early in life the possibilities of success and happiness in their fancied occupations, and the assistance to teachers would be immeasurable. No school in the

three provinces makes use of such committees. Several schools admit their possibilities. In four country high schools in Otago, teachers were hostile to the idea. Three of the District High Schools, with agricultural courses, do make limited use of the farmers. Mosgiel District High School has particularly happy relations with some leading farmers of the locality, and teachers speak enthusiastically of the results. A group of District High Schools in South Canterbury recently arranged a group tour for a party of boys to study the agricultural life of another province, and the results suggest that such tours might well be extended. Some District High Schools arrange for all their children to visit a city for a week. This is undoubtedly a valuable educative experience. No urban school has taken its pupils on similar tours of country areas. One centre in Otago has organized very successful educational weeks, in which several District High Schools combine for a full programme of cultural and recreational activities, under the guidance of specialists drawn from city areas. They are an excellent innovation. The local community takes no part, except that of boarding the visiting pupils. The degree to which the school takes an interest in the life of the community, appears to be related chiefly to the educational ideals possessed, or not possessed, by the teachers. Many teachers are over-concerned with schooling - too few with education.

The use of local citizens in the work of the school carries as a corollary the use that local citizens can personally make of the school. Many of the sole-charge primary schools contribute outstanding service to this relationship.

(+ Note: In justice it must be admitted there are countless teachers who refuse to confine their work to the four walls of the school.
Only one school, a District High School, regards its agricultural library as adequate to serve the needs of the farmers of the district. There is no evidence that it is used. The contacts of parents, with only a few of the schools of Canterbury, Otago and Southland, are confined to an occasional parents' day, or displays associated with the Agricultural Club projects. Replies indicate that the recreational, cultural and educational societies and clubs in many districts are many and varied. There is little evidence that the schools participate in them.

If it is agreed that the school should accept some of the advantages, and some of the responsibilities, that might arise from furthering community relations, there will be much hard thinking to be done. In nine District High Schools visited, not one teacher knew if any of his or her children belonged to the local community library. No efforts have been made to cross-link the facilities and material available in community and school libraries. The development of a community library conscience is ultimately the result of education in the value of books, and therefore a school function. It has been said that the New Zealand farmer dislikes books, and distrusts book knowledge. It may be asked, what have the schools done to instil appreciation of reading and love of books? From the very insularity of the farm home in the New Zealand settlement pattern, books are perhaps a greater potential need of the farmer and his wife than of the urban dweller.

The nature of agricultural education demands that teachers make
full use of the educational resources available in rural communities. It is fair to suggest that those schools conducting agricultural courses have developed the interest of their communities to a greater degree than those schools where only academic or general courses are provided. There is much to be done yet. Through the fostering of these relations, the farmer, and the rural dweller, will come to know more of the running of the school, and its problems in providing the best individual instruction, with the minimum of staffing and equipment, and the impossibility of satisfying completely a child's vocational needs at school. A knowledge of these things, drawn from the co-operation between school and community, is the quickest way of advancing the claims of agricultural education to greater interest, greater freedom and greater support.
CHAPTER VII

SOCIAL DETERMINANTS OF AGRICULTURAL EDUCATION

Sir Fred. Clarke quotes an eminent authority, who gives expression to the view, "that no educational activity or research is adequate at the present stage of consciousness, unless it is conceived in terms of sociology of education." (1) There is a tendency in New Zealand to overlook the social milieu in which the education system is placed. There is little hope of success in agricultural education if the sociological factors affecting the agricultural industry itself are overlooked.

"Agriculture is, and is likely to remain, our basic industry, and the conditions within the industry must in the long run set the standards of conditions enjoyed by the rest of the community."(2)

These conditions are worthy of the fullest attention of teachers and of the nation. For, if it is proposed to establish a wider and better system of agricultural education than exists in this country at the present time, it is essential that the conditions of the farming industry be sufficiently attractive to induce young people to enter it. To expect young people to enter the industry by the provision of new opportunities for, and methods of education, is to put the cart before the horse. To be successful it is necessary to create the demand for the new opportunities and methods, by making the farming industry attractive as a livelihood, and interesting and satisfying as a way of life. If this attraction is not present, it is suggested that the educational facilities will be but little used.

It is a saddening thought that, for a country so dependent upon an agrarian economy as New Zealand, there has been so little systematic study of rural sociology.

Technological changes in methods of production have been accompanied by striking changes in the social fabric of the farming communities. For instance, New Zealand's methods of agricultural development have produced different patterns of rural settlement to those of the older countries, and these patterns have brought with them new and interesting problems. New Zealand's rural settlement depicts a predominantly "dispersed" pattern. We have not developed the "agglomerated" farm villages of older civilizations. New Zealand farmers live on their farms and the rural towns are primarily "service" towns. Even so, it is interesting to note in passing, that during recent years there has been a tendency for some of the more strategically placed of these towns to develop at the expense of the smaller rural communities. This movement has, no doubt, been aided by the increasing speed and ease of communications. There is also a growing tendency for farms to become less self-supporting. Nowadays, many farmers depend upon the servicing towns for their supplies of fruit, butter and vegetables. And thus, in becoming more reliant upon the contractual forms of money economy, New Zealand farm units have become more sensitive to its fluctuations and uncertainties.
standards and values by rural people. (3) Fast motor transport has brought urban centres within easy reach. Daily papers reflect urban views and urban standards of judgement. Radios in farm homes bring whatever may be the current urban conception of music, news value, drama or entertainment. Adult education to date, in the three provinces studied, seems to depend for its support upon those living in rural areas, who have an urban background. Although many teachers state, when questioned, that they find rural teaching intensely pleasant and satisfying, there are many of these urban-trained teachers who are out of sympathy with the rural pattern of living. The extent to which the urbanization of standards and values has adversely affected the development, and popularity, of post-primary agricultural education, would be an interesting topic for further investigation. In the meantime, while it is impossible to give any final answer as to its influence, it is a factor that should nevertheless be considered.

Contrary to the belief often widespread in urban areas, farm work is no rapidly acquired skill. It may require physical strength, but it also demands wisdom, judgement and devotion. After some years of study, the investigator has been led to believe that these qualities are innate. No amount of schooling will compensate for the dearth of those personal qualities, which make a good landsman, but training and education will develop the latent possibilities, which otherwise remain dormant, and the good trained man must always be better than the one with equal, but undeveloped, potentialities.

The satisfactions of the farmer are essentially different from those of the majority of city workers.

"The glory of the farmer is that in the division of labours, it is part to create. All trade rests on his primitive activity. He stands close to nature; he obtains from the earth the bread and the meat. The food which was not he causes to be. The first farmer was the first man, and all historic nobility rests upon possession and use of the land. Men do not like hard work, but every man has an exceptional respect for tillage, and the feeling that is the original calling of his race, that he himself is only excused from it by some circumstance which made him delegate it, for a time, to other hands." (4)

The New Zealand farmer is characterized, like farmers throughout the world, as a great grumbler - it must be admitted he is not given to advertising his own importance. He is cautious of the sometimes well meaning but sentimental catch-phrases used in reference to his calling by his city cousin. Nevertheless, there is every reason to believe that New Zealand farmers do welcome intelligent and well-informed interest in their welfare. If planning is to replace drifting, it is essential that New Zealand should be actively concerned with his welfare.

In view of the apathy that exists in regard to these important issues, can it be assumed that the life of the New Zealand farmer is near idyllic? Without adequate factual information, this assumption would be presumptuous.

The only two studies to date are one by Somerset (5) and another by Doig.(6) Both give some indication of trends, but are isolated investigations, and therefore preclude comparison with other aspects of national

life. Doig's survey deals only with a small group of dairy farmers, while Somerset's is a more subjective study of a rural town in North Canterbury.

It is often assumed that, in comparison with overseas countries, the average New Zealand farmer enjoys a high standard of material welfare. The disparity in the evidence offered by Somerset and Doig is sufficient to warrant further investigation. For example, with reference to farm houses, Somerset states that in Littledane "more than half are old and uncomfortable. Among the labouring people and small farmers, bath rooms are rare - only one house in five possessing one. Hot water services are rare, and wash-houses with water laid on, are equally rare. The rain water tank, and the old fashioned pump in the back-yard are still common." In a survey of 455 homes of dairy-farmers, Doig concludes that, so far as physical structure was concerned, housing was satisfactory. Only 6.30% of the houses were "very defective" or "dilapidated". If those dwellings classed as "defective" are included 23% of houses in this survey were in need of repair, painting or replacement. In a recent survey of farm homes in Otago (7), one investigator considered that, out of 105 homes studied, 70 were below the optimum standard set for the efficient running of a farm home. This survey also showed that there was a considerable diversity in the standards of housing in rural areas.

These conditions do compare very favourably with conditions of rural housing in overseas countries, but they nevertheless reveal a dis-

(7) Unpublished material held in Rural Development Division, Dept. of Agriculture, Dunedin: kindly made available to investigator: For Vincent County and plus Cromwell and Alexandra town Districts; Investigator: Miss McNab B.H.Sc.
quieting position for this country, so richly endowed with material resources. The generalization should be accepted with reserve, but if Doig's figures are representative, it would imply that in the Dominion as a whole there were 6,000 farm houses that might be classified as "defective" or "dilapidated", and a further 18,000 in need of repair. (+) (Assuming that there are 100,000 farm homes. 1945 Census) Standards of housing vary considerably, according to the age of the settlement of the district, its climate, the type of farming, and the efficiency with which the farm is operated. Much, too, depends on the outlook and the experience of the woman responsible for the maintenance of the home. These factors are of great interest, and of paramount importance to the sociologist. Enthusiastic workers are collecting facts in New Zealand, but much of the work is limited through lack of direction and cross-linking, faulty procedures, and inadequate training. Evidence submitted to the Rural Reconstruction Commission in Australia indicated the complexity and the seriousness of the situation in Australia. In view of the inadequate study of the social determinants of rural welfare, in New Zealand, there are no grounds for complacency.

Another aspect of the housing problem in rural areas is the provision of adequate housing accommodation for farm workers. Throughout the provinces studied there is an acute shortage of labour, both for the house and for the farm work. Everywhere, the farmers suggest that it is the general unattractiveness of the industry, associated with the paucity of

(+) Note: A recent report states that the replacement quota for rural housing in N.Z. is 2,500 houses a year (if each house has a life of 40 years). This figure does not include new developments but only replacement of existing houses.
adequate housing, that are the causative factors. When it comes to time to marry, the young men on the farms have often to seek some other avenue of employment. The seriousness of this position may be judged from a recent survey where 84% of those answering were under 25 years of age (91% of whom were single), and of the total answering 97% stated that they wished to remain on the land. Under existing conditions, the young man without capital, who aspires to become a farmer, must generally look forward to many years of farm labouring work at low wages, from which he will have to save enough to "get a start". He is unable to marry, and begin raising a family, without seriously prejudicing his chances of attaining his objective. Consequently, he is liable to drift into a blind-alley job, where at least he has the opportunity to marry, and all too often is lost to the farming industry. The very large measure of dependence upon unmarried men for farm labour is a bad feature of New Zealand's rural life. The farmer finds it cheaper to provide a whare for a single man than a cottage for a married worker, and this has contributed to the great difficulty in obtaining skilled and experienced farm workers at the present time. Later marriages and the consequent possibility of a small family, or no family at all, is also a social weakness, which is contributed to by the desire, or necessity, of many farmers to employ only single men. Surely, these young men should be permitted not only to fulfil their vocational ambitions, but also to take unto themselves a wife and family.

(8) Land Settlement Survey. Directed by L.W. McCaskill, Lincoln College, for Federation of Young Farmers' Clubs, 1949
Commenting on household facilities, Doig states:

"It can not be known whether possessions are the expression of ability to provide, or of custom, habit or prejudice, or personal preference, or a combination of these. This study of housing and equipment does show, however, the unbalanced nature of possessions. For example, 78% of dairy farmers possessed a motor car, but only 16% had a septic tank; 82% had a telephone, and 48% a sink, bath, wash-basin, and wash tubs, attached to the drainage system. (9) It is perhaps safe to suggest that dairy farmers' families are willing to tolerate a certain amount of domestic inconvenience, in order to be able to enjoy the possession of facilities which keep them in contact with other people - telephone, radio and car." (10)

It might be expected that, in Canterbury, Otago and Southland, this position would be accentuated, because of the large-scale agricultural and pastoral type of farming that exists. A survey shows that in the Vincent County (Otago) 67.3% of homes had a telephone, 95.3 had a radio, 7.5 had no bathroom, 93.3% had an articulated electricity supply and 87% had piped hot water. (11) The shortage of labour for farm houses has led to the increased use of labour saving devices in the home. In the survey quoted, eight housewives out of a total of 107 had full-time help: four of these were helped by relatives (daughters, sisters etc.) Domestic help is one of the most serious labour problems in rural areas at the present time.

The desire of farm people to acquire possessions, which keep them in contact with the outside world, rather than the possessions that

(9) Note: A cursory examination of unpublished data collected for farm homes in Levels County (S. Canterbury) on farm-house water supplies, indicates similar evidence. Material kindly made available to investigator by Miss Unwin, Dept. of Agriculture, Dunedin. Time has prevented a more careful examination of the data.

make for efficient house-keeping may be possibly explained by the inadequate development of leisure-time activities in rural areas. Leisure-time activities can be an important criterion of the standard of life, enjoyed by any section of the community. This aspect of rural life is often hard to assess. The definition of what constitutes time spent on work, and what may rightly be called leisure presents a difficult problem. There is an almost complete lack of systematically recorded data, to indicate what these activities might be for rural communities. Doig concludes that "musical activity does not take a very important place in the dairy farmer's homes," and Somerset states that "books are a rarity in almost all homes visited." There has been a decline in frequency of social evenings in homes of the farming community. The farming population today seek their leisure in attending such socially organized functions as dances, picture parties, and euchre evenings, of which there are usually two or three a month in most districts. It is not necessary to debate at this stage, whether these circumstances are good or bad, but they should be carefully considered by all who are interested in the "educational meal" of the rural adolescent.

Many people with justifiable reasons contend that our attitude to the soil is at fault. "We have come to regard agriculture and farming as an economic necessity; an exploitation of Mother Earth in the race for wealth! (12) But this attitude of "economic go-getting" is

(12) J. A. Murdoch. High Schools of New Zealand. p. 81
not solely the attitude of the farmer - it permeates our national life. In New Zealand, education is for status, but rarely for its intrinsic worth. If this outlook is to be changed, or even modified, teachers should have a great and noble part to play. If exploitation of the land is to yield to conservation, and care inspired by the love of the soil, then this spirit must be reflected in the attitude of the nation to agriculture and its place in the education of its citizens.

Many of the conditions existing in the farming industries are related, in large measure, to the system of land tenure in force in this country. In spite of the measures adopted by the present Government for the relief of mortgages, guaranteed prices etc., there is evidence that, in many districts, the system is far from satisfactory. The measures adopted by the Government have given some measure of stability, but have left untouched many of the serious problems affecting agricultural industries. There is no prevention of land speculation; there is no assurance of a better rural life: there is no guarantee that the land will be cared for as it should be. With all due respect to those farmers throughout the three provinces being reviewed, who are worthy husbands of the soil, there is evidence in many localities of deterioration of farm holdings, neglect of permanent improvements, and a lowering of the fertility of the soil. Whatever solution may be offered for the amelioration of these difficulties, whether it be land nationalization, or a more rational system of leasehold, it is imperative that a thorough investigation be made into
existing conditions. There is a growing recognition that the land is the property of the whole community. If this is true, then all have a moral right, and a responsibility, to see that the land is not abused, and that it is preserved for the use of future generations.

There is a popular belief that standards of health are generally higher in the country areas than in the city, and that farms are places where adequate supplies of fresh health-giving foods are always available. From the investigator's own experience and observations, and in view of the results of recent surveys of nutritional standards of rural people in many parts of the world, it is doubted if this belief is well-founded. As far as can be ascertained, there are no comprehensive surveys of the standard of health and development for country folk in New Zealand. One study by Somerset, (13) during the general economic depression (1932-1935), indicates that it is perhaps unwise to assume that the nutrition of country communities is good merely because they live in the country.

With all due respect to those country housewives, who "stagger" their city cousins with the bounty of the table (after all, it is one of their few modicums of self-expression), the investigator feels that there are nevertheless a great many country families who, in the words of Somerset, "live on a monotonous diet of mutton, potatoes, white bread, butter and jam - a diet which provides the requisite number of calories, but which is lamentably deficient in mineral salts and vitamins."

The difficulty and the cost of obtaining, in some country areas, certain types of food, which are highly desirable or essential, and which are readily available in city areas, needs to be emphasised. Milk, fruit and fresh vegetables are special foods of which all children need an adequate supply. There is some doubt as to whether all country children receive a diet which pays due attention to these foods. Meat is usually available in abundance, but the quality is not always good. Although Somerset's study was conducted during the depression period, he did not think that the "excessive amount of remediable malnutrition" among the children was "directly due to poverty." (+) He states "Ignorance of food requirements, of ways of providing nourishing meals from materials readily available, was general among a large section of the community. Few people understood the food value of milk or how to substitute carrots and turnips for more expensive fresh fruit." One authority quoted by Somerset stated that, judged by the standard wherein 10% or more below weight was adopted as a necessary condition for the diagnosis of malnutrition, then among the children of twentyfive rural schools in New Zealand 14% were found to be suffering from malnutrition. Somerset's figures are even less reassuring. Clearly, a comprehensive survey of nutritional standards of occupational groups in New Zealand would be welcomed. If there is a need for remedial measures, teachers are in an excellent strategic position to supplement the work of the school medical officers: in any case they should be fully conversant with the results of such an invest-

(+) Ibid. Somerset confirmed this view in a subsequent survey during the period of better times. 1936-37.
igation. The Government has adopted numerous measures in recent years, in an effort to supplement the health campaign in schools, but to date there appears to have been no investigation to indicate the effectiveness of these measures.

Furthermore, in many rural districts, there is no evidence available showing that there exists a well-coordinated scheme of health and medical services in all districts. The failure to provide services for rural people adds to a sense of insecurity, and these factors, along with many others, go to make up the unattractiveness of the farming industry.

Much has been written and many discussions have borne on the topic of "urban drift". This trend is not a new feature in New Zealand, nor is it confined to New Zealand. It is a movement experienced in almost all countries, and is indeed accepted by some points of view as not only a natural process, but also as inevitable and desirable. With the development of mechanized methods of agricultural production, and more efficient methods of transportation, the proportion of the population needed to maintain the efficient production of the necessary supplies of food and raw materials has decreased. Table XIII will give some indication of the extent that this process has gone on in New Zealand. The proportion of the population living in counties and boroughs respectively has long been used as a general indication of the development of urbanization. The following summary is given on this basis, and shows the relative proportions of urban and rural populations for fifty years in New Zealand.
The general trend is fairly clearly indicated. Over the period urban drift, at a fairly rapid rate, has been manifested, with however a marked check between 1926 and 1936. This check was probably caused by conditions resulting from the severe depression of this period. Urbanization has proceeded somewhat further in the North Island than the South Island, and there has also been a steady "northward" drift from the South Island. Associated with these factors, one should also consider the phenomena of an "ageing population", that is a feature of Otago and Canterbury. Further, the rapid decrease in the numbers engaged in agricultural and pastoral industries, also calls for some attention. In 1956, 53.35% of the total male population of New Zealand were engaged in primary production; in 1945 this figure had fallen to 26.27%. While this is not the appropriate place to discuss the many economic and demographic factors involved in these statistics, some of the general social aspects are worthy of attention from the point of
agriculture in post-primary schools.

Schools are charged, and with some justice, with training children away from the soil and towards the city. So many enthusiasts clamour for agricultural courses in all rural high schools in order to encourage rural children to stay in rural areas. In New Zealand and elsewhere, the schools have been encouraged to adopt an agricultural bias. But, migration city-ward continues. Despite the efforts made in these directions, there are for the most part two groups who remain unaffected by the "so called" bias. There is a somewhat disproportionate share of the best, who migrate to the towns, thereby draining off the potential leaders of the farming community: and those who for lack of training or ability fill the ranks of unskilled labour in many cities. The migration of these young people, reared and schooled in rural areas, represents a sizeable social and economic contribution to the city, both direct and indirect. In New Zealand, as in many other countries, there is reason to doubt whether the city is fully aware of this "debt" it owes to the country. In modern times the rural areas have become the "seed-beds" for many of the city's best citizens. It is to the city's high interest to appreciate and safeguard this nucleus. There is no detailed evidence available in New Zealand to show to what degree, if any, these trends have led to a "devitalizing" of the rural population. We have not exact knowledge of the factors of "selective migration" between rural and urban areas. Herein lies an immense field for educational and sociological research.
In the meantime, it is suggested that the mere inclusion of agricultural courses in the already atomistic curriculum of many of the rural high schools will not provide an adequate solution. The problems are much bigger and more complex than just that. There is every reason to believe that there will always be an "urban drift," due to the differential birth-rate between urban and rural areas. Nevertheless, it is in the interests of many sections of this Dominion, that conditions be created which will ensure that the farmer industry is carried out by men who are educated, trained, enlightened, and receptive to the new ideas that ever-changing agricultural developments demand. It matters not whether the boy comes from town or country. If he has the ability, zeal and character to justify the responsibility of trusteeship of the soil, he should not be debarred by lack of opportunity, be it educational or social, lack of a large amount of capital should not debar him from this, or deprive New Zealand of his services in this sphere.

The Education Department, through its officers or its teachers, can not be blamed for all the defects of rural education in this country. Nor are these defects wholly responsible for the present disabilities in the welfare of the farming community. It is in the inability of the country as a whole, to diagnose the defects (and advantages) of rural welfare as a whole - in which opportunity for agricultural education is but one aspect - that has created many of the handicaps under which agricultural courses in the post-primary schools are labouring.
If the farming industries are to progress in the future, and this will depend a great deal on the rapidity with which improved techniques and the results of research can be incorporated into current practice, then it is of vital importance that these problems should be attacked. Agricultural education should be but one aspect of a national scheme for rural development. Country life must be made more attractive, and New Zealand's most important national objective should be an enlightened and contented rural population. If educationists are to overcome this feeling of frustration in regard to the unsatisfactory state of agricultural education in post-primary schools, it is essential that they carefully consider the findings of sociological research, which may indicate the root causes of the present unpopularity, and can suggest the correct point of attack for remedying the defects. We have made commendable efforts in overcoming many of the difficulties of rural life, both educational and social, without plan or programme. Future progress might well depend upon our ability, and our readiness, to seek an understanding of the weaknesses of our system, and plan accordingly. If New Zealand is to have an increasing number of people engaged in rural work, and enjoying the many benefits that life in the country can offer, then it is obvious that they must be attracted to it by better conditions than exist at the present time. In the rapid advance of technical competence, New Zealand has tended to overlook the problems of social adjustment. The future will judge which is the more important.
SECTION III.

CONCLUSIONS.

"The country life is to be preferred for there we see the works of God, but in the cities little else than the works of man."
CHAPTER VIII.

CONCLUSIONS AND SUGGESTIONS

From this study of the efforts to establish agricultural courses in the post-primary schools of Canterbury, Otago and Southland, it is now possible to venture some suggestions. It is not intended that these reflections should summarize, by some master-plan of simplification, all the many points raised in this survey. Rather than present a neat summary of the findings, the investigator chooses to offer some opinions that have resulted from his study of this aspect of secondary education. Suggestions thus made are necessarily tentative: education is not a subject that can be mastered in the short space of a University course, and where the investigator's knowledge of a good deal of this intractable data is faulty, then his judgements can not be final.

Statistics already quoted have shown that there is justification for the claim that those who enter the farming occupations are less well-prepared educationally for their calling than those who enter other occupations. And it is fully agreed that it is in the interests of New Zealand as a whole, that the farming industry should be manned by men and women who have received the training and enlightenment that may be derived from an adequate educational preparation. The boy who is intended for the land is entitled to, and indeed requires, just as good an education as the boy who is to enter a profession or a trade. The question that im-
mediately arises is, where and when can this educational preparation be most adequately provided?

With due respect to the very commendable efforts made by many teachers and schools, the investigator seriously doubts if an adequate pre-vocational course in agricultural can be provided in the first two years of a secondary school course. To insist that the schools should emphasize pre-vocational training in this period is seriously limit the true functions of the school. Education at this stage should not be a narrowly specialized preparation for one type of work. To mould the syllabus of the first two years at a post-primary school in a form designed to tie rural children to the land, is to render a sorry service to agriculture. Rather than ensuring a steady supply of skilled workers for the farming industry, evidence suggests that this emphasis has drawn the most promising pupils away, and lowered the standard of intelligence and capability amongst the remainder. The direct objective of the courses in secondary schools during this period should not be to turn out semi-skilled farmers, or farm workers, but rather to fit pupils to take their place as intelligent, useful and happy members of the community.

One of the most significant facts arising from this study is the sustained evidence that the majority of pupils who enter farming, do so with not more than two years' post-primary education. This has been a major problem for forty years.

Except for a few instances, agricultural courses are struggling -
often unsung and unappreciated - for a bare existence in post-primary schools. District High Schools have to cater for all types of pupils, with often a very wide range of interests and ambitions, and very small numbers. There is a limit to what two or three teachers can provide. Within the limits imposed by their organization, many of these small schools are doing outstanding work in the study of agriculture, under existing conditions. But it may be questioned if two or three hours a week in the study of agricultural subjects in a class-room, supplemented by occasional visits to farms, stock sales, or experimental plots in school gardens, is an adequate preparation for the future farmer. It is agreed, moreover, that excellent work is being done in the agricultural courses in certain urban secondary schools, even if it does seem somewhat illogical to bring rural boys to urban centres to give them an educational preparation for rural life. The efforts that these schools make to provide more realistic study by taking boys out to the country areas, certainly imposes severe strains on the organization and administration of these schools. Further, as has been pointed out, many of the courses in these urban schools necessarily depend upon rural boys, who board in order to attend these courses. It seems reasonable to assume that those boys from farms who are able to be sent to board, are the sons of substantial farmers, who are possibly farming on sound lines already. These boys may well be able to learn good methods at home. The sons of the less capable farmers are debarred from benefiting from the facilities provided. It is for the
latter group that provision should be made, in order that the general standard of farming may be raised.

"Agriculture" denotes an immense field of study, and in a short two or even three year course, during which most of the pupil's time is occupied with cultural subjects, it is not possible to give more than a very elementary knowledge of the subject. It is only possible to give an introduction to agriculture. The problem of providing an adequate vocational preparation for future farmers, is not met merely by teaching, in various classes, a few subjects with a rural flavour.

The point arises as to whether it might not be advisable to experiment with the establishment of Senior Agricultural High Schools, catering for boys who have completed two years of post-primary education. The primary function of such a school being to train youths, who wish to become farmers, in the scientific, mechanical and business skills essential for the farmer of today and tomorrow, such a school need not neglect the opportunities for cultural development, the encouragement of cooperative social life, or training in leisure-time activities. Because of the relative sparsity of our rural population, these schools would of necessity have to be residential. A primary requisite would be a farm. It is suggested that this farm should be a normal farm, with the same range of buildings as the ordinary farm, with the addition of class-room and dormitory facilities for at least 60-100 boys. Serious consideration might be given to the desirability of making these institutions co-educational. The school farms might well become experimental sub-stations for such research
institutions as the Grasslands Research, Animal Research, Fertilizer Research and Soil Research Stations, and for the Agricultural Colleges of University rank. However, it should be clear that such a school should not compete with the diploma and degree courses offered at Lincoln or Massey Colleges.

The reasons for postponing entry until after two years' post-primary education are:-

1. That such a scheme should have a solid foundation of general and well-balanced education, in accordance with the spirit expressed by the recent committee on post-primary curricula changes. (1) The provision of this education might well be the primary function of the District High Schools. In view of the present state of affairs in these schools in regard to years of attendance, small numbers, small staffs etc., it is suggested that these schools might act as "feeder" schools to the Senior Agricultural High Schools. Candidly, this is their present relation to the "accrediting" High Schools. They are losing their senior boys, who wish to study for University Entrance.

2. That after two years in a post-primary school, a boy is presumably in a better position to decide his future vocation than a boy who has just left primary school.

3. The investigator feels that specific vocational training before the age of 15 seriously limits what a school can do with the promise offered

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(1) The Post Primary School Curriculum: Report of the Committee appointed by the Minister of Education, November 1942. Note: The essential recommendations of this Committee were adopted in the 1945 Post-Primary Syllabus Regulations. Wellington 1945
by the 1945 Curriculum Regulations. This should not be interpreted to mean that the investigator believes that rural high schools should not take full advantage of the educational opportunities offered by the environment of these schools. They should be free to use these educational resources to the fullest advantage for the development of all pupils, and for the full and meaningful study of all subjects of the secondary school syllabus. It is sheer educational ineconomy to do otherwise. There have been few attempts as yet to fully explore the potential educational value of ordinary school subjects taught in a "rural idiom". If there is the need to teach mathematics, social studies, music, art and literature, then surely they should be taught in the language that the rural child understands and experiences daily.

It seems that there is room in the first instance for the establishment of one of these Senior Agricultural High Schools in each of the provinces studied. A study of available facilities, pupils and environment would suggest that first sites might be chosen in (a) The Levels County (Canterbury), (b) The Taieri County (Otago) and (c) The Southland County. The scheme could be extended as the demand and popularity grew. The investigator has discussed these suggestions with members of farming organizations, ex-pupils of the present agricultural courses, and officers of the Department of Agriculture, who are all very enthusiastic in regard to the possibilities of such a scheme.
It is suggested that the curriculum of these schools should be organized under five groupings: (a) Practical, (b) Theoretical, (c) Cultural, (d) Physical, (e) Recreational. In any vocational course for farming, practical work and theoretical work are so closely interwoven that one is not really effective without the other, e.g. care of stock and veterinary surgery; improvement of herds and animal genetics; cropping and agricultural botany; manuring and agricultural chemistry; cultivation and soil physics; farm machinery and farm engineering; farm book-keeping and arithmetic. An understanding of some theory is also necessary for such practical work as building construction, concrete-making, wool-classing, blacksmithing, painting, gardening and afforestation. Moreover, there seems to be no reason why future farmers should not enjoy the cultural activities of music, literature and art, along with social and civic responsibilities associated with rural community centres and Young Farmers' Clubs. The physical welfare of the farming community is often overlooked: the encouragement of sport, physical education and personal hygiene should be an essential part of any programme of agricultural education. If education is to be an enriching experience, the encouragement of participation in recreational activities such as debates, music (including instrumental playing), club work, plays and arts and crafts is important. It is essential that the educational work of such an institution should not be confined to the geographical boundaries. Students should be encouraged to visit, and study farmers' gatherings,
stock sales, irrigation, and experimental areas. Regular visits by experts of the Agricultural Department and the Agricultural Colleges would do much to stimulate and encourage refresher studies.

It is an essential pre-requisite that the principal of such a school should have the ability to discuss farming with farmers, if he is to gain their support for the school, and their wholehearted cooperation in its activities. The type of school involves a much greater degree of cooperation between the school and the community than obtains in schools at present established in the provinces studied. It is suggested that provision should be made for the adequate representation of farming interests on the local controlling authority. The staffing of such a school should be liberal, and should include a body of specialists for each branch of the curriculum. The agricultural masters should be graduates of University Colleges of Agriculture. Their duties should include, not only instruction of agricultural subjects, but the placing of boys on farms for periods of practical farm work, and arranging of visits to local centres of interest. It should be the duty of these masters to establish contacts with farmers within a given radius of the school, depending upon the density of the farms. An agricultural master should have a sufficiently intimate knowledge of a large number of farms, to be able to take groups of boys on to those farms, and to give them the history of each farm, its soil types, and details of management. For these developments suitable transport would have to be available to facilitate such excursions.
Apart from their special functions, for those students enrolled, these schools might further act as:-

(a) Centres for visits from boys from district and urban high schools, whose studies in agriculture and social studies in their own schools would be foundational to the work they will undertake on proceeding to the Senior Agricultural High School.

(b) Headquarters for post-primary schools engaged on social study surveys.

(c) Winter farm schools for touring parties of Young Farmers' Clubs, country girls' clubs, and groups of young people from rural areas.

(d) Headquarters for touring parties of students from the University Agricultural Colleges at Lincoln and Massey.

(e) Refresher courses for teachers of rural post-primary schools.

(f) Field days for farmers, to view demonstration work organized by the Department of Agriculture.

The investigator discussed with farmers, who had sons at schools, the likelihood of support for this type of school for the training of farmers. There are grounds for believing that such a scheme would meet with the enthusiastic approval of farmers.

These suggestions for the future may represent a pleasant digression, but there are realities to be faced in the present situation. As yet, there has been little constructive thought in regard to what constitutes the true educational function of the District High Schools. Critics have been ready to condemn, without ever having established an explicit philosophy to meet the "needs", and the opportunities, offered by

(+) An investigation by A.H. Thom, shortly to be published by the New Zealand Council of Educational Research, is awaited with interest.
these schools. If the scheme, for Senior Agricultural High Schools, here-in outlined did materialize, there would probably still be, for some consider-able time, a residuum of boys in any district who would be unable, for various reasons, to attend such a school. This residuum also has a right to receive the fullest attention.

The freedom given under the new curriculum changes permits a good deal of extension work by teachers. District High Schools at pres-ent offering agricultural courses do avail themselves of these opportuni-ties, but there is room for considerable expansion in other District High Schools, without necessarily labelling the emphasis on vocational agricult-ure. There is much to be done in the interpretation of the social studies. Syllabus for rural schools. However, if the work is going to be of use educationally, then definite objectives, programmes of study, and care-fully organized surveys must be arranged by teachers in charge. This en-tails considerable organization and administrative enthusiasm on the part of teachers in these schools, and the impossible can rarely be expected. However, if boys are equipped with questionnaires, definite programmes of study and successful farmers are co-opted to assist, socio-agricultural surveys can be of distinct educational value. Whangarei Boys' High School has established a farm management survey on this basis.(2) A perusal of the study programme for this survey suggests that perhaps more is accomplish-ed in a week's survey of this type than many schools accomplish in a year, or years, of class-room study. To assist these activities, it might be

(2) Straight Furrow (official organ of Federated Farmers of New Zealand). Vol. VII No. 8 June (1928) p. 5
advisable to provide at focal points, in areas where there is no school, large huts similar to army recreational huts, which could be used as headquarters for boys engaged on such surveys. The various other uses to which such buildings, in rural areas, could be put are innumerable.

It is outside the province of this investigation to make suggestions in regard to the administration of the Education Department, but in view of recent Departmental policy in regard to special aspects of the educational service, the investigator suggests that consideration should be given to the establishment of a sub-department of agricultural education, under a superintendent, to coordinate and plan the "agricultural emphasis." The superintendent, and sub-department, would be responsible to the Director of Education for the organization, administration and coordination of agricultural education throughout the country. To overcome the present haphazard approach to this aspect of education, it would be necessary to appoint agricultural inspectors, liaison officers and provincial organizers on similar lines - but not parallel organization - to the provision of specialists in other fields that is already made.

On leaving a Senior Agricultural High School or District High School, in the case of a boy who could not attend the former, boys should have some prospects of ultimately owning a farm of their own. The Government has recently agreed to the principles of a Land Settlement policy, submitted by the New Zealand Federation of Young Farmers' Clubs. The details have yet to be worked out.
When a boy leaves a Senior Agricultural High School at the age of seventeen, the investigator suggests that he should then undertake farm work on selected farms, for a further three years. At the end of this period, he should be permitted to return to the High School, or proceed to an Agricultural College for a short course. He could then seek employment with competent, and approved, farmers, for a further period of at least two years, during which he should be able to save some capital, and demonstrate his fitness to undertake farming on his own account. If his record is such as to warrant confidence being reposed in him, he should then be assisted by the State to establish himself as a farmer, along the lines of the present rehabilitation scheme for returned servicemen. He would then, also, be in a position to take a wife and become a responsible member of society.

**SUMMARY**

A summarized account of these conclusions is:-

(a) The development, coordination and organization of Post-Primary Agricultural Education, throughout the Dominion, should be directed by a Superintendent of Agricultural Education, assisted by a competent departmental staff of inspectors, liaison officers and provincial organizations.

(b) Consideration should be given to the establishment of residential co-educational Senior Agricultural High Schools, providing a specifically vocational education for eighteen months, for boys who
have completed two years post-primary education.

(c) A closer examination of the functions of District High Schools should be made, with a view to assisting them to become rural high schools, rather than semi-urban schools set down in a rural environment.

(d) Closer attention should be paid to the fact that the majority of pupils, who take up work in rural areas, have two years or less post-primary education. If the subjects of the "common core" are to be given the attention they deserve, during this period, there is little time left for an adequate course in agriculture.

(e) Teachers in District High Schools need assistance and advice in organizing social study activities. They need assistance in interpreting the "educational needs", and the educational opportunities offered by their environment.

(f) The success of agricultural education depends upon an enlightened policy of rural development.

It is a delightful, if futile, pastime to sit down and plan the ideal school or education system, oblivious of present circumstances and the narrow path of economic realism. Numerous objections may be raised against the suggestions offered in these pages, but the investigator hopes that they will be regarded in the light of their practicability and usefulness. No doubt many critics will regard these proposals as beyond the realms of financial possibility. To those, who are inclined to cavil at
the proposed expenditure on agricultural education, the investigator suggests a study of the values of primary industry exports in the economy of New Zealand.
CHAPTER IX.

LIMITATIONS OF THIS INVESTIGATION

As with any study of the type here attempted, many limitations detract from the completeness, without which the study must suffer greatly in value.

Firstly, there are the limitations imposed by the relative inexperience of the investigator in this type of research. It is unnecessary to elaborate these deficiencies: they are obvious. Many valuable lessons have been painfully learnt during this year of study.

Secondly, as education is an institution of society, it must necessarily be affected by the attitude and values abroad in society. This is strikingly evident in any discussion on post-primary agricultural education. This investigation is limited in that it can offer no systematic evidence of the social determinants, beliefs and attitudes of rural people as they affect the demand, and present popularity, of agricultural courses. These are subjective elements of rural welfare affecting post-primary education - they are extremely complex and difficult to evaluate. It has already been indicated, very briefly and somewhat inadequately, in Chapter VI that there is an urgent need for a study of the foundational and material conditions of welfare in the farming communities of this country. These elements, moreover, are measurable by more objective standards. Research on the socio-economic determinants of New Zealand's education system is limited, but the studies al-
ready conducted suggest a need for extension and continuance of this work. The investigator has ventured to suggest that agricultural education at the post-primary level can only hope for limited success, if the agricultural industries are not made sufficiently attractive to induce young people to enter them.

Moreover, in considering post-primary agricultural courses, the investigator has from time to time drawn attention to the "educational needs" of rural adolescents as a whole, but in all instances this discussion has been concerned with boys. One must not overlook the fact that the education of the rural girl is of equal importance. The principles, aims and ideals guiding the education of girls in rural areas should receive just as much attention as the education of boys. Farmers' wives are very important people in the farming industry. Through the years much has been written and said about agricultural education for boys - very little has been heard of education for rural girls.

Thirdly, there are the limits imposed by the nature of the research materials. Even though the questionnaire answers, and the data collected by visits to schools, were systematically recorded on standard schedules, subjective influences in the interpretation of these replies, opinions and remarks are liable to occur. The investigator is fully aware that many of his interpretations are influenced by a strong, and perhaps exaggerated, belief in the importance of the rural welfare of this country. In view of this emphasis, it is hoped that criticisms offered herein will not be regarded as too carping or too ungracious.
Finally, there are those restrictions enforced by the limited time available for the survey. There is consequently a tendency to investigate at high pressure, with insufficient time for assimilation and reflection. The collection and collation of a considerable amount of intractable material required to make a study of this kind comprehensive, necessitates unlimited time. It is probably best pursued as a leisure-time activity.

With a growing conviction that one of the great needs of education in this country is the revelation of fundamental facts, in order that deduced principles may be applied wisely, the investigator submits this humble contribution to the knowledge of agricultural education.
CHAPTER X.

SUGGESTIONS FOR FURTHER STUDY.

Accepting the results of this study as giving some indications of the inadequacies of agricultural education in post-primary schools, and also some of the difficulties experienced in rural high schools, it is urged that there is an obligation for further enquiry into related aspects of these problems. This survey may not offer tailor-made solutions for the organization of agricultural education. It has at least revealed the complexity of the problem.

A very able critic states that the attempts to establish agricultural courses in post-primary schools has been a failure. There is a note of defeatism in this judgement. Rather, it has been the inability of the country to tackle the rural problem as a whole - of which educational preparation for rural life is but one aspect - which has created the handicap under which the schools must work to establish these courses. A careful review of the conditions and standards of life in rural areas is required. We need a survey of housing conditions, information on rural amenities, systems of land tenure, availability of farm labour, conditions of work, standards of behaviour and many other elements of rural welfare.

If New Zealand is to have an effective basis for material and cultural progress, then country life must be made more attractive and our most important national objective should be an enlightened and contented rural population.

Many of our leading agriculturalists deplore the "urban drift"
and "rural depopulation." If an enlightened policy of land settlement is to be adopted, it is essential that we have a knowledge of the causes, effects and extent of selective migration from rural areas. Many people already suspect a decline in the intelligence and fertility of rural people, and some predict a "devitalizing" of the rural population of this country. Our tools of research for these problems are not yet adequate; our techniques for the study of rural sociology are as yet in their infancy. There is indeed much work to be done.

The present study also indicates that an enlightened and comprehensive review of the functions of the District High Schools is long overdue. Somerset said in 1933 that the development of a philosophy of rural education was still very much in the future as far as New Zealand was concerned. (1) We have made little progress in the last decade. The history of these rural high schools illustrates the confusion and apathy that has often existed towards them. A thorough examination of their difficulties could do much to foster a more explicit appreciation of the functions they can most adequately fulfil. The recent administrative changes have not solved the difficulties. Some teachers suggest they have been accentuated. New Zealanders have made a worthy contribution to rural primary education through the efforts of the sole-charge and two-teacher schools. Rural secondary education is no less important.

(1) H.C.D. Somerset. Littlecote. p. 72
"The nation preserves its vigour as long as it harbours a real contrast between what has been and what may be: and so long as it is nerved by the vigour to adventure beyond the safeties of the past. Without adventure, civilization is full of decay."

Professor A. E. Whitehead. Adventure of Ideas. p. 360
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(b) Records and Notes collected on visits to a number of schools.
(c) Personal correspondence with numerous headmasters, teachers, officers of the Department of Agriculture, lecturers and instructors in agriculture.
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APPENDIX A.

STATISTICS RELATING TO AGRICULTURAL COURSES.
# APPENDIX A - 1

SHOWING NUMBER OF BOYS ON AGRICULTURAL COURSES IN RELATION TO ROLL NUMBERS FOR HIGH SCHOOLS AND TECHNICAL HIGH SCHOOLS (1937 - 1947).

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<td>Otago B.H.S.</td>
<td>437</td>
<td>406</td>
<td>446</td>
<td>504</td>
<td>504</td>
<td></td>
<td>496</td>
<td>429</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>King's H.S.</td>
<td>244</td>
<td>311</td>
<td>252</td>
<td>284</td>
<td>320</td>
<td>346</td>
<td>335</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>South Otago H.S.</td>
<td>140</td>
<td>10</td>
<td>66</td>
<td>4</td>
<td>52</td>
<td>4</td>
<td>78</td>
<td>4</td>
<td>84</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gore H.S.</td>
<td>117</td>
<td>121</td>
<td>142</td>
<td>47</td>
<td>165</td>
<td>52</td>
<td>197</td>
<td>14</td>
<td>207</td>
</tr>
<tr>
<td>Southland B.H.S.</td>
<td>294</td>
<td>255</td>
<td>312</td>
<td>351</td>
<td>366</td>
<td>372</td>
<td>360</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Greymouth T.H.S.   | 125  | 159  | 174  | 196  | 222  | 219  | 196  |      |      |      |      |      |
|                    |      |      |      |      |      |      |      |      |      |      |      |      |
| Papamoa T.H.S.     |      |      |      |      |      |      |      |      |      |      |      |      |
|                    |      |      |      |      |      |      |      |      |      |      |      |      |
| Christchurch T.H.S.| 346  | 50   | 346  | 39   | 923  | 78   | 997  | 23   | 708  | 65   | 674  | 60   |
|                    |      |      |      |      |      |      |      |      |      |      |      |      | 664  |
| Ashburton T.H.S.   | 131  | 24   | 152  | 19   | 167  | 23   | 184  | 26   | 181  | 33   | 122  | 23   |
|                    |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Timaru T.H.S.      | 120  | 134  | 141  | 163  | 170  | 184  | 167  | 184  | 26   | 181  | 33   | 122  | 23   |
|                    |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Dunedin T.H.S.     | 339  | 352  | 345  | 396  | 410  | 400  | 364  |      |      |      |      |      |      |
|                    |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Invercargill T.H.S.| 356  | 32   | 344  | 36   | 295  | 75   | 378  | 75   | 424  | 89   | 430  | 88   |
|                    |      |      |      |      |      |      |      |      |      |      |      |      | 411  |

**TOTALS**

|                  | 4818 | 299 | 5162 | 261 | 5140 | 368 | 5665 | 415 | 6098 | 451 | 6057 | 451 | 5879 | 491 |

**Note:** Column A - Roll numbers.
Column B - Number on Agricultural courses.
## APPENDIX A: II

**STANDARD OF EDUCATION OF ENTRANTS TO FARMING OCCUPATIONS FOR 1947**

<table>
<thead>
<tr>
<th>STANDARD OF SCHOOLING</th>
<th>BOYS LEAVING SCHOOL TO ENTER FARMING</th>
<th>OTHER OCCUPATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Without Primary School Certificate</td>
<td>317</td>
<td>12.5</td>
</tr>
<tr>
<td>With Primary School Certificate</td>
<td>237</td>
<td>9.7</td>
</tr>
<tr>
<td>With one or more years Post-Primary</td>
<td>1,883</td>
<td>77.2</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td>2,457</td>
<td>100.0</td>
</tr>
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</table>

## APPENDIX A: III

**SHOWING PERCENTAGE OF PUPILS LEAVING DIFFERENT TYPES OF SCHOOLS TO ENTER FARMING 1940-47**

<table>
<thead>
<tr>
<th>From 1940 entering farming</th>
<th>Second-</th>
<th>Tech-</th>
<th>Com-</th>
<th>D.H.S.</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ary</td>
<td>nical</td>
<td>bined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1940</td>
<td>15</td>
<td>14</td>
<td>21</td>
<td>37</td>
<td>19</td>
</tr>
<tr>
<td>1941</td>
<td>18</td>
<td>17</td>
<td>23</td>
<td>38</td>
<td>21</td>
</tr>
<tr>
<td>1942</td>
<td>17</td>
<td>17</td>
<td>23</td>
<td>38</td>
<td>21</td>
</tr>
<tr>
<td>1943</td>
<td>18</td>
<td>19</td>
<td>29</td>
<td>43</td>
<td>25</td>
</tr>
<tr>
<td>1944</td>
<td>17</td>
<td>18</td>
<td>25</td>
<td>39</td>
<td>22</td>
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<tr>
<td>1945</td>
<td>19</td>
<td>17</td>
<td>25</td>
<td>43</td>
<td>23</td>
</tr>
<tr>
<td>1946</td>
<td>18</td>
<td>16</td>
<td>25</td>
<td>39</td>
<td>21</td>
</tr>
<tr>
<td>1947</td>
<td>15</td>
<td>17</td>
<td>23</td>
<td>38</td>
<td>20</td>
</tr>
</tbody>
</table>
### APPENDIX A - IV

**SHOWING YEARS OF SCHOOLLING OF PUPILS LEAVING VARIOUS TYPES OF POST - PRIMARY SCHOOLS**

(Shown in percentages)

#### Secondary

<table>
<thead>
<tr>
<th>Leaving in first year</th>
<th>1942</th>
<th>1943</th>
<th>1944</th>
<th>1945</th>
<th>1946</th>
<th>1947</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>12.7</td>
<td>10.0</td>
<td>9.6</td>
<td>9.0</td>
<td>29.5</td>
<td>22.1</td>
</tr>
<tr>
<td>Leaving in second year</td>
<td>23.5</td>
<td>27.4</td>
<td>25.8</td>
<td>26.0</td>
<td>36.3</td>
<td>41.4</td>
</tr>
<tr>
<td>Leaving in third year</td>
<td>25.2</td>
<td>25.9</td>
<td>27.7</td>
<td>40.2</td>
<td>22.5</td>
<td>24.5</td>
</tr>
<tr>
<td>Leaving in fourth year or later</td>
<td>38.6</td>
<td>36.7</td>
<td>36.9</td>
<td>24.8</td>
<td>11.9</td>
<td>12.0</td>
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</table>

#### Technical

<table>
<thead>
<tr>
<th>Leaving in first year</th>
<th>1942</th>
<th>1943</th>
<th>1944</th>
<th>1945</th>
<th>1946</th>
<th>1947</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>22.8</td>
<td>16.8</td>
<td>16.2</td>
<td>16.4</td>
<td>16.5</td>
<td>16.4</td>
</tr>
<tr>
<td>Leaving in second year</td>
<td>27.9</td>
<td>26.8</td>
<td>26.2</td>
<td>26.4</td>
<td>26.5</td>
<td>26.4</td>
</tr>
<tr>
<td>Leaving in third year</td>
<td>28.5</td>
<td>28.9</td>
<td>28.3</td>
<td>28.7</td>
<td>29.0</td>
<td>29.4</td>
</tr>
<tr>
<td>Leaving in fourth year or later</td>
<td>24.0</td>
<td>23.8</td>
<td>23.2</td>
<td>23.6</td>
<td>23.9</td>
<td>23.3</td>
</tr>
</tbody>
</table>

#### District High School

<table>
<thead>
<tr>
<th>Leaving in first year</th>
<th>1945</th>
<th>1946</th>
<th>1947</th>
<th>1948</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>23.4</td>
<td>25.9</td>
<td>26.5</td>
<td>26.8</td>
</tr>
<tr>
<td>Leaving in second year</td>
<td>29.3</td>
<td>34.7</td>
<td>40.8</td>
<td>39.3</td>
</tr>
<tr>
<td>Leaving in third year</td>
<td>19.4</td>
<td>20.4</td>
<td>21.2</td>
<td>23.9</td>
</tr>
<tr>
<td>Leaving in fourth year of later</td>
<td>23.3</td>
<td>19.5</td>
<td>12.5</td>
<td>25.8</td>
</tr>
</tbody>
</table>

#### All Schools

<table>
<thead>
<tr>
<th>Leaving in first year</th>
<th>1945</th>
<th>1946</th>
<th>1947</th>
<th>1948</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>21.3</td>
<td>17.4</td>
<td>17.1</td>
<td>17.1</td>
</tr>
<tr>
<td>Leaving in second year</td>
<td>29.0</td>
<td>33.7</td>
<td>35.0</td>
<td>34.7</td>
</tr>
<tr>
<td>Leaving in third year</td>
<td>23.9</td>
<td>24.7</td>
<td>25.6</td>
<td>33.4</td>
</tr>
<tr>
<td>Leaving in fourth year of later</td>
<td>25.8</td>
<td>24.5</td>
<td>22.3</td>
<td>14.6</td>
</tr>
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</table>
### APPENDIX A: V

SHOWING COURSES OFFERED IN 45 POST-PRIMARY SCHOOLS OF CANTERBURY, OTAGO AND SOUTHLAND, STUDIED IN THIS INVESTIGATION.

<table>
<thead>
<tr>
<th>TYPE OF SCHOOL</th>
<th>SECONDARY</th>
<th>TECHNICAL</th>
<th>DISTRICT HIGH</th>
<th>PRIVATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic (one or two foreign languages)</td>
<td>11</td>
<td></td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>Commercial</td>
<td>8</td>
<td>4</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>Agricultural</td>
<td>7</td>
<td>3</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Industrial</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Home Life</td>
<td>5</td>
<td>4</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>General</td>
<td>8</td>
<td>1</td>
<td>17</td>
<td>2</td>
</tr>
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</table>
### APPENDIX A: VI

**SUMMARY OF INFORMATION RELATING TO AGRICULTURAL COURSES IN PROVINCES STUDIED (1949)**

<table>
<thead>
<tr>
<th>Roll No. on Roll No.</th>
<th>No. Agric. No. from</th>
<th>Farm of</th>
<th>Length of</th>
<th>Average Length of</th>
<th>Boys</th>
<th>Boys</th>
<th>Hostel</th>
<th>Accommodation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Course</td>
<td>Home</td>
<td>Agric. Schooling</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Course</td>
<td>Course</td>
<td>(Years)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rangiora</td>
<td>H.S.</td>
<td>145</td>
<td>39</td>
<td>40</td>
<td>3</td>
<td></td>
<td>2</td>
<td>40</td>
</tr>
<tr>
<td>Ashburton</td>
<td>H.S.</td>
<td>110</td>
<td>3</td>
<td>24</td>
<td>5</td>
<td></td>
<td>2-3</td>
<td>Nil</td>
</tr>
<tr>
<td>Timaru</td>
<td>B.H.S.</td>
<td>381</td>
<td>72</td>
<td>N.A.</td>
<td>3</td>
<td></td>
<td>2-3</td>
<td>161</td>
</tr>
<tr>
<td>Waimate</td>
<td>H.S.</td>
<td>108</td>
<td>18</td>
<td>40</td>
<td>4</td>
<td></td>
<td>2</td>
<td>161</td>
</tr>
<tr>
<td>Waitaki</td>
<td>B.H.S.</td>
<td>491</td>
<td>113</td>
<td>200</td>
<td>5</td>
<td></td>
<td>2</td>
<td>270</td>
</tr>
<tr>
<td>Gore</td>
<td>H.S.</td>
<td>134</td>
<td>30</td>
<td>41</td>
<td>5</td>
<td></td>
<td>2-2</td>
<td>34</td>
</tr>
<tr>
<td>Southland</td>
<td>B.H.S.</td>
<td>390</td>
<td>55</td>
<td>60</td>
<td>5</td>
<td></td>
<td>3-5</td>
<td>Nil</td>
</tr>
<tr>
<td>Ashburton</td>
<td>T.H.S.</td>
<td>155</td>
<td>27</td>
<td>57</td>
<td>3</td>
<td></td>
<td>3-5</td>
<td>Nil</td>
</tr>
<tr>
<td>Timaru</td>
<td>T.H.S.</td>
<td>207</td>
<td>21</td>
<td>29</td>
<td>3</td>
<td></td>
<td>2</td>
<td>Nil</td>
</tr>
<tr>
<td>Invercargill</td>
<td>T.H.S.</td>
<td>375</td>
<td>83</td>
<td>N.A.</td>
<td>3</td>
<td></td>
<td>3-5</td>
<td>Nil</td>
</tr>
<tr>
<td>Geraldine</td>
<td>D.H.S.</td>
<td>26</td>
<td>9</td>
<td>11</td>
<td>3</td>
<td></td>
<td>2</td>
<td>34</td>
</tr>
<tr>
<td>Methven</td>
<td>D.H.S.</td>
<td>25</td>
<td>13</td>
<td>10</td>
<td>5-4</td>
<td>3-5</td>
<td>3-5</td>
<td>Nil</td>
</tr>
<tr>
<td>Pleasant Point</td>
<td>D.H.S.</td>
<td>21</td>
<td>15</td>
<td>13</td>
<td>3</td>
<td></td>
<td>3-3</td>
<td>Nil</td>
</tr>
<tr>
<td>Kurow</td>
<td>D.H.S.</td>
<td>12</td>
<td>6</td>
<td>3</td>
<td>3</td>
<td></td>
<td>2</td>
<td>Nil</td>
</tr>
<tr>
<td>Mosgiel</td>
<td>D.H.S.</td>
<td>100</td>
<td>65</td>
<td>19</td>
<td>5-4</td>
<td>3</td>
<td>3-5</td>
<td>Nil</td>
</tr>
<tr>
<td>Wynesham</td>
<td>D.H.S.</td>
<td>26</td>
<td>23</td>
<td>12</td>
<td>2</td>
<td></td>
<td>2-2</td>
<td>Nil</td>
</tr>
<tr>
<td>John McGlashan(Private)</td>
<td>D.H.S.</td>
<td>60</td>
<td>17</td>
<td>N.A.</td>
<td>3</td>
<td></td>
<td>3-5</td>
<td>60</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Roll No.</th>
<th>Length of</th>
<th>Boys</th>
<th>Hostel</th>
<th>Accommodation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2326</td>
<td>624</td>
<td>599</td>
<td>Av.3</td>
<td>Av.-2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>565</td>
</tr>
</tbody>
</table>
# APPENDIX A - VII

**ANALYSIS OF THE TIMETABLES OF AGRICULTURAL COURSES OF CERTAIN SCHOOLS IN CANTERBURY, OTAGO AND SOUTHLAND, GIVING TIME ALLOCATIONS FOR SUBJECTS OVER TWO YEARS OF THESE COURSES.**

(1949)

N.B. 'x' Denotes that no specific times were given in replies.

<table>
<thead>
<tr>
<th>Subject</th>
<th>First Year</th>
<th></th>
<th></th>
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<tbody>
<tr>
<td>English</td>
<td>4.0</td>
<td>x</td>
<td>x</td>
<td>3.75</td>
<td>x</td>
<td></td>
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</tr>
<tr>
<td>Social Studies</td>
<td>2.7</td>
<td>x</td>
<td>x</td>
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<td>x</td>
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</tr>
<tr>
<td>Mathematics</td>
<td>2.7</td>
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<td>x</td>
<td>2.25</td>
<td>x</td>
<td></td>
<td></td>
<td>2.2</td>
</tr>
<tr>
<td>General Science</td>
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<td>x</td>
<td>x</td>
<td>3.0</td>
<td>x</td>
<td>2.5</td>
<td>2.0</td>
<td>3.33</td>
</tr>
<tr>
<td>Art</td>
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<td>x</td>
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<td>x</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Music</td>
<td></td>
<td>x</td>
<td>x</td>
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</tr>
<tr>
<td>Physical Edu.</td>
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<td>x</td>
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</table>

<table>
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<th>Subject</th>
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<td>3.33</td>
<td>1.35</td>
<td>7.5</td>
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<td>1.75</td>
</tr>
<tr>
<td>Animal Husband</td>
<td>1.33</td>
<td>3.33</td>
<td>1.35</td>
<td>7.5</td>
<td></td>
<td></td>
<td>2.0</td>
<td>1.75</td>
</tr>
<tr>
<td>Dairy Science</td>
<td>1.33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.75</td>
<td></td>
</tr>
<tr>
<td>Biology</td>
<td></td>
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## APPENDIX A: VIII

### SUMMARY OF TYPES OF SCHOOLS STUDIED IN THIS INVESTIGATION

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APPENDIX B.

INFORMATION ON RANGIORA SCHOOL FARM.
RANGIORA HIGH SCHOOL FARM

The Rangiora school farm consists of 143 acres of land of varying soil types, extending from sandy-loam through to clay soil. These varieties in soil-types present distinct advantages educationally, for they permit the development of the varying types of farming such as arable farming, sheep-farming, dairy farming and pig-farming. Nevertheless, they do present difficulties if the farm is regarded as purely an economic unit.

The dairy herd consists of 30 cows, mainly Jersey-Friesian cross, two bulls and replacement heifers. Until recently it was the custom to sell milk to the public of Rangiora, and from any surpluses the butterfat was sold, leaving the skim milk for feeding the pigs. This practice was encouraged in order to foster community spirit, and to cross-link the school with the community. A recent change has been made to total butterfat production, so that interpretation of test sheets may be simplified for instruction. There is no winter machine milking, but a few cows are milked by hand during this period to give boys practice in hand milking, and to provide milk for the hostel.

The ewe flock varies in size according to the area in pasture, and the extent to which returns from sheep exceed those from cash crops. Each year ewes are purchased at the local ewe fair, and after producing wool, and Southdown cross lambs, they are fattened and sold to the freezing works. In 1948, 190 ewes were carried on twentyfive acres, and this year (1949) the farm is carrying 162 ewes and 6 rams. Short-rotation pastures, which fit in with cropping rotations, are grazed by sheep and lambs.

As the fertility is built up in the paddocks under pasture and stock-grazing, a "cash in" is made, with such crops as potatoes, peas and cereals. Good stands of lucerne are maintained to provide hay for sheep and cattle in winter. Mangles and green feed are also grown for the same reason.

A well-equipped piggery, linked to the dairy by a skim-milk pipe line, gives good accommodation for six sows and one boar, whose litters are used to convert milk into pork.
The farm also has two dogs and two horses. Previously a six-horse team was maintained, but for many reasons this was uneconomic. The team has now been replaced by a tractor. The equipment possessed by the farm is as follows:

**Dairy:** A six cow machine milking plant, a milk cooler, a separator and other general dairy equipment. The unit is powered by electricity with an auxiliary petrol motor for use when power fails. Washings from the cow yard are collected in a concrete sump, pumped into a mobile tank unit and sprayed over dairy pasture.

**Piggery:** Six sties, with creep feeding facilities, a litter weighing shed, a loading ramp and three fattening houses. All buildings are made of concrete.

**Sheep:** A shearing shed with accommodation for 60 sheep, an australian wool table and a box for baling, yards with a capacity of 300 sheep, a foot-rot and lamb-loading race.

**Implements:**

- **Cultivation:** Tractor, double and single furrow plough, grubber, discs, harrows (three types) and a Cambridge roller.
- **Sowing:** Drill, turnip ridger and potato planter.
- **Harvesting:** Six foot reaper and binder, five foot horse mower converted for tractor use. A contractor is employed when it is necessary to head or bale crops.
- **Haymaking:** Hay-rake, sweep, elevator-stacker.
- **General:** Spring-cart, dray, small tractor trailer.

**Other Buildings:**

- Calf house, stable, grain, implement and tool sheds, and a modern house for the farm overseer.

There are 40 boys on the course - 18 in 3rd form, 8 in 4th form, 6 lower 5th form, 5 farm cadets and 3 upper 5th form (School Certificate candidates).

On each of the four days of the school week, two periods are devoted to agriculture and animal husbandry, and on the fifth day these periods are spent in the workshops at woodwork, or farm-engineering. Each day three boys go to the farm for the day, their turns recurring
every ten days. Every day the farm cadets spend the afternoon from 2 p.m. until 5.30 p.m. on the farm. School Certificate candidates do not go to the farm in their final year.

Regular class inspections of the farm are conducted by the agriculture master, and these are more frequent when operations such as hay-making, lambing of ewes, marking of lambs and castration of pigs are in progress. Such visits are arranged to maintain continuity of interest in the farm unit throughout the year. At other times, the instruction and general supervision of the boys is maintained by the farm overseer.

The aim is to give all boys an appreciation of all operations, and considerations concerned with (a) Dairy farming, (b) Fat lamb farming, (c) Pig-farming, (d) Growing and harvesting of potatoes, wheat, barley, peas and oats. Included in these activities are the important problems of establishment and management of pastures, establishment of lucerne stands, and the making of hay and growing of supplementary fodder crops such as turnips, mangels, chou moellier, rape, lupins and greenfeed. Class work is planned so that it may be related very closely to daily farm operations. All problems of management are discussed freely in class, and the aim is to stimulate thought and develop initiative rather than "spoon feed" pupils. The suggestion has been that this school should provide for instruction in horticulture, bee-keeping and poultry-keeping, but these have not been attempted because, as the agricultural master points out, although materially the school is well equipped for agriculture, there is still improvement possible in the use of the facilities. The school does not favour extension of its activities until it is satisfied that what is already being done is being done well.