Growth and Development of the Present Division of Technology at Utah State Agricultural College

Lynn R. Willey

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Abstract
This thesis traces the growth and development of the Division of Technology at the Utah State Agricultural College from 1890, when the first mechanic arts classes were taught as part of the offering in Mechanical Engineering, to the present, covering as thoroughly as possible from the source material available, the chain of events out of which the present expansive and complex program has evolved. The intention here is not merely to itemize the steps in this development, but wherever possible to investigate the influences involved; also, to give some attention to the industrial, education, and war-time needs that have created a demand for competently trained industrial personnel—needs which have been met by a constantly expanding educational and training program. Since no comprehensive data are available on the development of what has now become a major division of the college, and since the need for such information will be felt by anyone making a future study of the growth of the division, it is hoped that this thesis will be useful. Thus, an intent of secondary importance is that the data made available here will prove useful to even more comprehensive studies. It is also hoped that the study may have some human interest as a sidelight on the history of the college. Because the development of the industrial work at the college has been such a concrete symbol of the growth of the institution as a whole, and because the work shows so well the constant effort made over the years to keep the offerings of the school on as pragmatic a basis as possible, the author has felt that rather complete and accurate record of this progress should be made. One of the principle reasons for writing this thesis has been to give a comprehensive survey of the illuminating growth of the industrial work and its contribution to the educational offering of the college. It is hoped that the planning of the future course of the Division of Technology will be aided by a closer understanding of what has been accomplished in the past. It appears obvious to the author that such an understanding will also make the importance of the work that has been done readily apparent to anyone. A branch of education that has expanded so rapidly, often ingeniously, to keep pace with the needs of our modern industrial period readily justifies the recording of its own history. Finally, such a record can hardly fail to be an inspiration to anyone connected with the work or to anyone with an appreciation for demonstrable values and accomplishments.

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Advances in conventional technology will remain the primary source of growth in crop and animal production over the next quarter century. Almost all future increases in agricultural production must come from further intensification of production on land that is now devoted to crop and livestock production. It will be useful, before presenting some of the findings of the second consultation, to characterize our state of knowledge about global climate change. There can no longer be any question that the accumulation of carbon dioxide (CO2) and other greenhouse gases—principally methane (CH4), nitrous oxide (N2O), and chlorofluorocarbons (CFCs)—has set in motion a process that will result in some rise in global average surface temperatures over the next 30-60 years. HISTORICAL DEVELOPMENT. At the start of the twenty-first century, higher education in the United States stands as a formidable enterprise. As an established "knowledge industry" it represents about 3 percent of the gross national product. Virtually every governor and legislature across the nation evokes colleges and universities as critical to a nation's economic and cultural development. This success story of growth and expansion began more than 300 years ago before the United States existed. Beginning in the seventeenth century, the idea of an American higher education grew to fruition throughout the ensuing centuries. At the same time, differences developed with each new era of collegiate growth, but the story has remained one of expanding access. The present day investment in agricultural machinery has risen to approximately rupees 2,50,000 million annually, which is about 10% of the total National GDP from the agricultural sector. After independence when Five Year Development Plans were prepared in 1950, agriculture was given priority as a result of which agricultural research was also given priority. Because of the peculiar local conditions, the lack of development of electricity on a large scale, and immediate utility of implements, agricultural engineering in India has come to mean more of agricultural implements and machinery. During the Second and the Third Five-Year Plans, agricultural engineering division were added to the departments of agriculture in the states and at the Centre.