

Work-integrated Learning in Science

Case Study: Curtin Agribusiness Industry Experience (CAIE) program

Curtin University

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1. Initiative description

Career opportunities in agriculture/agribusiness are found across many industries involved with production of food and fibre, equipment design, development and implementation of new technologies, finance and marketing, advisory services, research and further processing of agricultural products. Through the Curtin Agribusiness Industry Experience (CAIE) program students have the opportunity to explore many of these areas and to use placements to identify potential areas of career interest.

The proportion of students from farm backgrounds in the B. Agribusiness course has been decreasing but is complemented by increasing enrolments of students with limited or no agricultural experience and/or of mature-age students. The CAIE program provides the opportunity for Agribusiness students to see agriculture in action, gain practical skills and to develop industry networks. For all students, including those off-farm, placements provide opportunities to compare production practices between producers, participate in research programs, undertake training programs relevant to their interests and work with consultants and advisors in field trials, field days and producer business planning activities.

Students enrolled in B. Agribusiness must undertake 60 days of Industry Experience across a broad range of areas in agriculture. Although students are free to select suitable placements, each student must undertake placements across the broad areas of cropping, livestock production and servicing agriculture - with a minimum of 15 days in each of these focus areas. Participation in training programs is also encouraged to allow students to focus on further skill development and potential accreditations. Placement duration times can vary from a few days to weeks and can be undertaken within Western Australia, other Australian states and internationally. International placements have involved working with agencies and volunteer groups to improve food security in a number of communities in developing countries. Students are encouraged to use placements to broaden both practical and business skills, understanding of agricultural practices, to develop peer networks and to use the experiences to identify potential career paths and employment/research opportunities.

Students can find placements through direct contact with producers, companies, research program leaders, through peer contacts and local networks or through the database developed by the program coordinator from completed placements.

For each placement, students must complete an approval form providing details of the placement, supervisor name/contact, enterprise type and placement dates. Once approved the nominated supervisor is contacted to confirm the placement (including the dates) and provided with a Supervisor Report Form which must be completed at the end of the placement and returned to the Agribusiness Industry Experience Coordinator. The supervisor is asked to provide a range of feedback related to the student experience: days worked, tasks undertaken, performance and attitude of the student and suggestions for improvement. The supervisor also has the opportunity to register interest in taking other students. Approximately 90% of supervisors have indicated interest in having students again. In addition to the Supervisor Report, students are required to submit a work summary, signed by the Supervisor. Days are credited only when all documents have been received. Completed days are recorded using the LMS system 'Blackboard', with students having access to their records through 'My Grades'.

2. Context

The CAIE program sits within the Faculty of Science and Engineering, School of Molecular and Life Sciences at Curtin University, Perth Western Australia. Completion of the program is a requirement for graduation for B. Agribusiness rather than a unit within the degree (it does not accrue credit) and is administered by the

Agribusiness Industry Experience Coordinator who is a Teaching Focus academic in the School and a member of the Agribusiness/Agriculture discipline. Students are required to complete 60 days of work, with a minimum of 15 days in areas of cropping (including horticulture), livestock and businesses supporting agriculture (eg research, advisory and extension services, banking/rural finance, grower groups). Students can also allocate days to training courses (eg Chem Cert). For students from a farming background, a maximum of 10 days on the home or relatives' farm is allowed.

The current program was implemented in 2013 following the transition of the B. Agribusiness degree from delivery at a regional location (Muresk Campus, Northam, Western Australia) to the Perth campus. Relocation of the degree threatened maintenance of the linkages between theory and practice and opportunities for students to visit local producers. In the Muresk based program students were physically located in the WA Central wheatbelt and undertook a professional placement unit within the degree. The move to the Perth campus was accompanied by a course review. The review identified the need to provide students with authentic experiences that link theory and current practice, and the opportunity to experience a broad range of agricultural practices. Block (ie single location for a number of weeks or months) placements, as in the previous program, could be beneficial but had the risk of the 'wrong' choice. The current Agribusiness Industry Experience program provides students with a 'tasting plate' of agricultural opportunities that allow them to both find, confirm and/or discount areas of interest. Discussions with current students suggest that based on experiences from the CAIE program many students have changed target careers as they have recognised that there are so many more career options within the Agribusiness space. Reasons for the change of direction include valued experiences outside of their comfort zone, and recognition of new opportunities that they were unaware of.

3. Implementation process

Students are encouraged to find placements in areas of interest by contacting producers and/or businesses directly. Students from farms can use the home or a relative's farm for a maximum of 10 days and are encouraged to provide experiential opportunities to other Curtin Agribusiness students. A database is being developed from information provided by the supervisor for each placement including contact details, enterprise type and location, interest in additional students and preferred timing for placements. The database will be used to help students find placements in preferred industries/businesses and locations.

On the back of engagement with Curtin Agribusiness students, WA grower groups are actively looking for Curtin students as part of their capacity building focus and to participate in funded research programs. Grower Groups are regionally based farmer and community groups that have been established to increase production and profitability through education, research and extension. Curtin Agribusiness staff are now also being approached by research organisations, including CSIRO, DPIRD (Department of Primary Industry and Resource Development WA), CCDM (Centre for Crop and Disease Management), for students to actively participate in current research programs.

Apart from certified training programs such as ChemCert® (<http://www.chemcert.com.au/>), students have been provided with training programs developed to introduce them to a range of industries and associated skills. The have included Sheep Camp (sponsored by SIBI – Sheep Industry Business Innovation), Hort Camp and Crop Camp (run by AgVivo Events), Sheep Meat Industry Value Chain Forum (DPIRD/University of Queensland) and internships under Horticulture Innovation Australia GradLink program. Opportunities are uploaded to the Blackboard site and students are encouraged to lodge applications with the contacts from the organisations. Writing applications for these positions can be viewed as developing skills for job applications following graduation.

4. Enablers and challenges

Work experience or practical experience has, historically, been a core component of agricultural science/agribusiness courses. Changes in degree structures, time frames and focus has threatened this element of such programs. Reduced direct exposure of students to agricultural industries may increase the gap between theory and practice. Curtin is cognisant that industry wants graduates with knowledge and understanding of agricultural production and business practices, as well as practical understanding and application to production, but meeting this need is a major challenge.

An essential element of this program is that it is coordinated by staff with a good understanding of Australia's agriculture industries. The CAIE program draws on the networks that have been established with industry over a number of years, particularly in the areas of field work and research. Relationships have been established with producers and private enterprise to provide students with placement opportunities over a broad range of Agribusiness industries and to enhance the academic program through guest lectures, visits and workshops.

The major challenge has been to provide students with meaningful and valid experiences that allow them to identify, and eliminate, potential career paths and directions. Student feedback has provided evidence that experience in areas previously outside initial areas of interest has at times fired both interest and opportunity in the new areas, or clarified interest in a particular area. For example, a number of students from cropping areas were focused on crop agronomy as the career of choice. Whilst this interest was reinforced in some cases by placements with agronomists, in others experiencing placements with livestock or the banking sector lead to a change in career direction. . Students have selected up to 8 placements across the required broad areas, often using connections met through one placement to set up additional opportunities, thus providing greater breadth and depth around the placement and the focus area.

5. Achievements and impact

The CAIE program has provided Agribusiness' more than 250 students with industry links that have helped them clarify career options and pathways, and often led to job offers both during their time as an undergraduate and to positions after graduation. These offers have come as early as year 2 of their undergraduate study program. The program has allowed potential employers to evaluate students as potential employees. Feedback from supervisors has confirmed that students work with a professional work ethic, promoting themselves as professionals and ambassadors for Curtin University, as well as endorsing the B. Agribusiness program.

The CAIE program has developed from sourcing student placements to organisations actively seeking students. The professional approach of students to this program has resulted in higher profile for the B. Agribusiness course particularly in regional areas. Student enrolments into B. Agribusiness are increasing with siblings of recent students now enrolling. The CIAE program has also resulted in graduates that are more job-ready and suited to industry as they have had exposure the agriculture in practice at many levels.

Now in the 5th year of operation, past graduates are keen to continue their involvement with the program by providing current students with Industry Experience opportunities. Through these opportunities past graduates act as mentors to current students, providing guidance and advice as well as experience.

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