

10th National Convention on Statistics (NCS)
EDSA Shangri-La Hotel
October 1-2, 2007

Tracer Survey of Agriculture Graduates

by

Nelita M. Lalican

For additional information, please contact:

Author's name	:	Nelita M. Lalican
Designation	:	Assistant Professor
Affiliation	:	University of the Philippines Los Baños
Address	:	Agricultural Systems Cluster, College of Agriculture, UPLB
Tel. no.	:	(06349) 536-2548
E-mail	:	nsmlalican@yahoo.com

Tracer Survey of Agriculture Graduates

by

Nelita M. Lalican

ABSTRACT

To assess its curriculum and the relevance of its output with the present condition, the College of Agriculture of UPLB traced its graduates. Where they are employed and what are their perception about their job were accounted for.. Employers on the other hand also gave their assessment of the graduates. Variables studied are curriculum taken, years it took them to finish the course, major field, region where they came from, general weighted average (GWA), number of jobs taken before the present employment, employer, the curriculum taken and the year they graduated.

The study showed that employer is particular with the graduates' major field, region where they came from, GWA, the nature of the curriculum followed, the number of jobs taken by the graduate before the present employment, and the year they finish the course. More often, employers prefer specialists rather than generalists. The employers find the graduates effective, efficient and cooperative. Also, they find the graduates knowledgeable, dependable and resourceful. However, many employers describe UPLB graduates as academically inclined, having a know-it-all attitude although with assertive personality.

Both graduates and employers signify the need to include courses on economics/management, communication and more social science in the curriculum

I. Introduction

The share of agriculture to total employment declined by 11 percent from its 1990 figure of 45.2 percent to 34.1 percent in 2005. (LabStat Updates, 2006). The number of students willing to take agriculture as a profession also declined. The number of UPCAT qualifiers for the BSA curriculum is always short of what the UPLB College of Agriculture can accommodate. With this scenario, as well as in coping up with the changing times, the College of Agriculture has always maintained its objective of producing the best agriculturists of the land. To do this is to come up with a very workable and doable BSA curriculum.

II. Purpose and Objectives

This study was conducted to trace the agriculture graduates from 1990 to 2005 as to their employment; to determine the factors that contributed to securing employment; to assess the degree to which the curriculum prepared them in the performance of their job; and determine other concerns that should be addressed by the College of Agriculture so

that its graduates would be of greater service to the country. Some employers were also interviewed to determine their assessment of the graduates.

III. Methods

The list of graduates by major field with home addresses was secured from the office of the CA College Secretary to serve as the target population. Tracing the graduates was done in several ways: Lists of graduates were sent to the different academic units concerned for names of their employers. Advisers and mentors helped in tracing where the graduates are; List of employers was secured also from the different academic units. Letters were sent to employers. They were asked to list down UPLBCA graduates who have been hired from 1990 to 2006. Graduates who have been hired by the employers were asked to accomplish form B and the employers were asked to accomplish form A. Students of Agricultural Extension Communication I class, 1st semester 2006-2007 helped by interviewing alumni. Forms A and B were sent to alumni and their employers using contacts identified and through the e-mail addresses secured from the UPLBCA Alumni Association Office. A list of traced graduates was formed. The third list is the list of graduates who returned the accomplished questionnaires. Data gathering was conducted from May 2006 to October 2006.

The target population was compared with the traced graduates and the number of returned accomplished questionnaires (as the sample) to ensure that they statistically the same. Statistical comparison of the three group means was performed using a one-way analysis of variance. This was done to isolate and to compare the variations between groups from the variation within groups.

Graduates were asked the reasons for their employment; the needs that have to be incorporated in the present curriculum to be able to do their job well; and their misgivings if any, in their chosen major field. Some information like general weighted average (GWA) and number of semesters it took them to finish their course were likewise, obtained from the office of the CA Secretary.

Statistical tests were also done on the associations between several variables such as the regions where the graduates came from; major field; GWA; number of semesters taken to finish the course; the curriculum followed by the respondents; option taken in the conduct of their 200 course; number of job employment before the present employment;

and employer. Employers were asked about the criteria they used in hiring personnel and their experiences in hiring UPLB BSA graduates. Suggestions and recommendations were solicited for the curriculum enhancement, thus preparing graduates to meet employer needs.

IV. Findings/Results

There were 2405 graduates of the UPLB BSA curriculum from 1990 to 2006. About 745 graduates were traced as to their present employment. Personal contacts were identified from different regions of the country. Questionnaires were either sent through personal contacts in some regions, delivered personally to graduates in region IV and NCR and/or sent through e-mail addresses for others.

About 175 questionnaires were retrieved from the graduates and 31 from their employers.

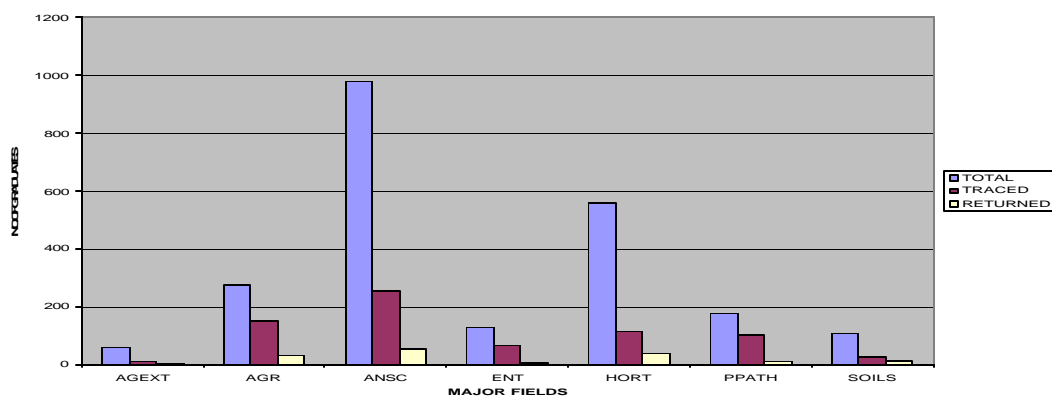


Fig. 1 Distribution of total graduates, traced graduates and graduates with returned questionnaires

Figure 1 shows the distribution of the BSA graduates from 1990-2006. It reflects the number of graduates who were traced through words of mouth, and the number of returned questionnaires. At one percent level of significance, The means of the total population, traced graduates and those who returned the questionnaires are equal. Also, means of the different major fields are equal. The returned questionnaire would be sufficient enough to make generalizations about the graduates from 1990 to 2006.

Distribution of graduates by region

Of the 2405 graduates from 1990 to 2006, about 90 percent came from Luzon, specifically 64 percent from Region IV. Visayas and Mindanao accounted for about 9.5 percent while less than .5 percent from other countries (Table 2). Compared to studies conducted by Sulabo et. al. 1993, 81 percent of the graduates from 1960-1989 came from Luzon. 51 percent from Region IV, 12 percent from the Visayas, 10 percent from Mindanao and 1 percent from other countries. It was observed that UPLB agriculture graduates are becoming concentrated in Luzon, specifically Region IV.

From the 2405 graduates, 41 percent were reported majors in animal science, 23. percent in horticulture, 12 percent were majors in agronomy, seven percent were majors in Plant Pathology, 5 percent in entomology; 5 and 4 percent in soil science and agricultural economics, respectively; and only 2 percent were majors in agricultural extension. Compared to the studies conducted by Sulabo et. al. only 22 percent and 48 percent were majors in animal science and plant sciences, respectively. Time has changed, since adding up the number of majors in horticulture and agronomy will only be around 35 percent, which means a decrease of 11 percent for majors in plant sciences and an increase of 19 percent for majors in animal science from 1960-1989 to 1990-2006 group of graduates.

Distribution of graduates by GWA and number of semesters taken..

On the average, there were about 140 graduates a year from about 300 new freshmen allotted to the College of Agriculture by the University. This study shows that it takes about 10 semesters for a student to finish the BSA program with a General Weighted Average of 2.33. Others however, take advantage of the privilege to apply for a leave of absence while others were able to finish the course in less than eight semesters.

Distribution of graduates by employer.

Results of the study showed that graduates can be employed in private companies both local and multinational, in government institutions, and NGOs. Others work in their own or family business. Based on the traced graduates, more than half were employed in private companies, 25 percent in government institutions, four percent in NGOs, and another four percent were into the management of their own/family business. Two percent were pursuing graduate work either locally or overseas. Eight percent work or resided abroad.

One percent has changed profession, that is from being an agriculturist to being a nurse, doctor, pastor, flight stewardess, etc. About one percent of the graduates have also passed away.

Majority of those employed in private companies are in sales/marketing which was about 45 percent of the total; 5 percent are teachers in private schools, mostly secondary level; 3 percent in private farms; two percent are employed in call centers; and one percent in banks.

Of those employed in government institutions, about 14 percent are in state universities and colleges; 9 percent in national government offices; and two percent are at local government units.

This trend is very much different from the findings of Sulabo et. al., where two-thirds of the graduates from 1960 to 1989 were employed in government institutions, one-fourth in private institutions and 7 percent in international institutions. However, this study confirmed their observation that employment in government institutions will decrease while employment in private institutions will increase.

Distribution of graduates by number of jobs taken.

From their first job, about 59 percent have moved to other jobs obviously in search for greener pastures. Others looked for jobs related to their major field; while some shifted from research to instruction or to extension-related jobs. Thirty three percent moved out from their second job while only about 15 percent moved out of their third job.

Distribution of graduates by curriculum taken.

The BSA curriculum that incorporates courses on sustainable agriculture, ecological agriculture or agro-ecology as fundamental course/s required for all BSA students had its first graduates in 1998 up to the present. Graduates from 1990 to 1997 were still covered by the 1988 curriculum. There were 1103 out of the 2405 graduates or 46 percent graduates from the 1988 curriculum and 1302 or 54 percent were graduates of the 1996 curriculum

Measures of Association

Contingency Coefficient C and Kendall's tau-b are a measure of the extent of association or relation between two or more sets of attributes for nominal and ordinal measurements respectively. Significant level at .05 and lower suggests that there are sufficient evidence to support that coefficient is statistically significant. Given variables follow a symmetrical distribution or are not independent. It showed that an association or relationship exists between the variables.

Table 1 Measures of Association of employer with other variables. 172 respondents

Variable	Coefficient	Significant Level
Nominal (contingency)		
Major field	.670	.000
Region	.791	.000
200 option taken	.331	.634
Curriculum	.306	.081
Ordinal (Kendall's tau-b)		
GWA	-.164	.003
SEMS	-.032	.627
No. of jobs worked on	-.106	.082
Year graduated	-.146	.018

Generally, the employer was found to be particular with the major field of the graduates, more often they have preference for specialist over generalist. Graduates were likely hired based on their region of origin. Employers do not prefer graduates coming from one region/province only. They are interested in graduates coming from different regions.

Similarly, employers were particular with the scholastic performance of the graduate, experience acquired by the graduate, and the year they graduated.

Employers were not asked to differentiate graduates from the 1988 and 1996 curriculum. However, data showed their appreciation for the graduates who were able to apply their acquired knowledge and skills in promoting productivity, efficiency, sustainability and stability of agricultural production systems for the enhancement of the quality of life of the stakeholders.

It can be noted that employers are not particular with the length of time the student finished his degree and the option taken by the graduate at his 200 level course. . The number of semesters and the 200 course level taken to finish the course do not show significant relationships with employers as variables.

Perceptions of the graduates about their job

Reasons for applying for their present job

When asked why they applied for their present job, 44 percent of the graduates said “to gain experience” since some of the respondents were newly graduates while another 44 percent said the job is related to their major field. Twenty three percent reasoned because of attractive salaries. The remaining 18 percent applied for the present job to earn a living. Some even took jobs not related to their major field. Others include farm establishment, operation and managing own/family business.

Nature of present work of the graduates

About 46 percent of the respondents are doing research, while 23 percent are into extension work and 14 percent are in instruction. Some of them, about five percent each are doing both research and extension, extension and sales, research, extension and instruction. Three percent of the graduates are employed in call centers. Others (13%) are employed as farm manager or production manager either in privately owned or their own farms.

Reasons why graduates are hired in their present employment

Fifty two percent of the respondents claim that they were hired because of their major field, while 32 percent said they were hired because they were UP graduates and therefore, are said to have an edge over other applicants. About 18 percent were hired after passing a competitive examination. About five percent were hired because of connections, brotherhood, and family friends. Others include managing own farm or helping in family business.

Contribution of the major field in the efficiency on job performance

Respondents were asked if their major field contributed to their efficiency in the performance of their job. Responses can be categorized into three groups. These are those who answered NO because their jobs are not agriculture related like data encoding, call center agent, technical writing and sales agent (13%). The other group are those whose job are not related to their major field but still in agriculture. They said YES (34%) because their training at UPLB CA developed in them the attitudes and skills to be critical thinkers and the virtue of patience. The other group who said YES (41%) are those who are hired because of their major field.

Courses to be included in the curriculum

Respondents were asked about other courses that should be included in the BSA curriculum to help prospective graduates in the performance of their job. Table 12 shows that the respondents need additional courses on management/economics, practical applications, additional courses in agriculture, and courses in communication, among others. A comparison of the 1988 and the 1996 curricula showed that both needed management/economics courses, reality-based activities and practical applications and communication courses. Higher percentage of the students who undertook the 1996 curriculum requested for more agriculture courses. Courses mentioned were advanced courses in plant pathology, tissue culture subjects, agricultural research and extension courses and more technical hands-on experience. Students said that these courses could have been their chosen elective courses. The demand now for these courses are dictated by the work graduates are in at present.

Data showed that the 1996 curriculum was not able to answer fully the request of employers as mentioned in Sulabo et al study that is providing opportunities for field work and practical training.

If given the chance to take their agriculture degree all over again, about 62 percent of the respondents said they would remain with their major field. Sixteen percent however, said they will remain in agriculture but will choose different major field; Seven percent said they will get out of the BSA curriculum.

The Employer

Thirty one employers completed and returned the questionnaires. Of these, 42 percent were engaged in research; 26 percent in extension work, 13 percent in instruction and 10 percent in sales/ marketing and 10 percent in consultancy/training. About two-thirds of the staff who are in research, extension and sales/marketing employers are in agriculture. Only about one-fourth of the staff in instruction and consultancy/training are in agriculture. The employers were given a different set of questions to assess the criteria they use in hiring their employees. The criteria were given in a Likert-type item along a 5-point continuum as follows; with:

Always	Often	Sometimes	Seldom	Never
(5)	(4)	(3)	(2)	(1)

Often the employers prefer UP graduates with specialized discipline but not “always”. Sometimes a generalist is needed, according to some employer-respondents. Also, employers look at experience, passing an examination and an interview and proficiency in English language, as criteria for hiring and sometimes an honor student. They seldom look at the prospective salary of the applicant, and passing a licensure examination. Although, they said that passing a licensure examination will be a consideration for the future.

Experiences in hiring UP graduate

According to the employers, UPLB agriculture graduates are always dependable. They are often times academically inclined, efficient and effective, cooperative, knowledgeable, shows self confident, team oriented, resourceful and a hands-on-person. But sometimes, they show assertive personality, know-it-all tendency but can be a good leader.

V. Conclusion, Recommendation , and Implications

Graduates of the UPLB BSA curriculum do not contribute only to agriculture- related employment but also to services as well. Data showed that some BSA graduates are into teaching not only in agriculture schools, in sales and marketing and call centers. Those who are in agriculture -related employment are working on research, extension, instruction, sales and marketing of agriculture related products, and managers of their own farms.

Based on data from the graduates, employers tend to look at major field, region of origin, GWA, curriculum followed, number of jobs taken in before the current employment, and year they graduated. Not all employers however, are particular in terms of number of semesters taken to earn the degree and the option taken in the 200 level course.

Employers have indicated that they need BSA graduates who will pass a given examination as well as the personal interview, and that he/she should be proficient in the English language. Oftentimes, they will look for UPLB graduates with specialized discipline. Some are looking for a graduates who are generalist, an honor graduate, and/or with experience. During the time of the study, passing the licensure examination was not yet a major criteria in hiring, but this will be a consideration in the future.

Employers also suggest that UPLB BSA graduates should be enhanced further to be able to work on a multidisciplinary team in addition to enhancing their fieldwork, analytical and writing skills.

General Education (GE) courses must be reduced to accommodate other courses in management, economics, communication and other technical agriculture courses.

If UPLB cannot provide actual situations to the students, partnership with private farms in training and exposure can be done. More field trips and practical experiences must be emphasized.

Entrepreneurial skills and attitudes must be developed in the graduates.

References

European Union Training Centres. 2002. Graduates Tracer Survey.

LABSTAT Updates 1990-2006. Publication of the Bureau of Land and Employment Statistics.
Department of Labor and Employment.

Maldives College of Higher Education. Republic of Maldives.2003. Interim Report on
Alumni Tracer Study Programme.

Sulabo, EC, LP Domingo, FO Tan. 1993. Occupational Placements of the UPLB BSA Graduates
(1960-1989). DAERS-CA.

Sulabo, EC, LP Domingo, FO Tan. 1993. Graduates and Employers' Assessment of the UPLB BSA
Curriculum and Reactions to certain Issues. DAERS-CA.

Sulabo, EC, LP Domingo, FO Tan. 1993. Profile of the UPLB BSAGraduates (1960 -1989). DAERS-
CA.

Zamora, OB and BR Sumayao. 1999. Integrating Sustainable Agriculture in the BSA Curriculum.
SEARCAUPLB.