

Instructions on Writing an Essay for 065.150 Natural Resources and Primary Agricultural Production

Introduction

Agriculture is an applied science, and so it is expected that an essay written for an agriculture course will conform to several basic principles that govern all scientific writing. These are:

- **Identified sources of credible information.** The source of all information that is not common knowledge (e.g. the world's population of 6 billion is common knowledge, the population growth rate of 1.4% p.a. is not) must be given using citations referring to a reference list. The sources used should give the reader confidence that the information is true. Failure to identify sources of information, may constitute *plagiarism*, which is a serious academic crime. Read the attached items about plagiarism, consult the University Calendar section on plagiarism, and consult with an instructor if you are in doubt about what constitutes plagiarism. During marking, routine checks will be made to detect plagiarism.
- **Objectivity.** Relevant information should be presented, whether or not it supports the conclusions the writer wishes to reach.
- **Logically developed arguments.** The information presented should be joined together by arguments that persuade by logic, and show the reader how and why the writer reached the conclusions they present.
- **Clarity and accuracy.** The reader should be in no doubt about what the writer means, and the writer should be careful that everything written accurately portrays their information sources and arguments. This requires precision in word choice and care in sentence construction, as well as attention to scientific detail.
- **Organization.** The information and arguments should be marshalled so that related topics are dealt with together, so that there is minimal repetition, and so that the reader can appreciate the relationship of what they are reading to what has gone before and what will follow.
- **Effective use of language.** The writing should be free of grammatical and spelling errors. The writing should be in a formal style that is free of colloquialisms and other idioms that damage the writer's credibility as a source of information and informed opinion. The writing should be stylish and stimulating to read.

General format

The essay must conform to the following rules:

- Not less than (nor much more than) 1000 words. Focus on content, not bulk.
- Relevant tables and figures are encouraged, but are not included in calculation of length. Tables and figures should be numbered and have succinct titles.
- Printed or typed in clear dark 12-point (or 10 c.p.i.) characters, double spaced.
- Each page should have a page number and the student number in the header or footer.
- Pages should be fixed together firmly, preferably with a staple.
- The student should retain a copy of what is submitted.
- There should be a title page showing essay title, course number, student number and date.

Elements of the essay and how they are marked

The sections and their content

Introduction (10% of marks). The introduction should be a single paragraph providing a brief overview of the topic area, preferably with some justification of why the topic of the essay is important. At or near the end of the introduction, there should be a clear statement of the thesis of the essay. This statement should be a brief, one-sentence summary of the point(s) of the essay and should be consistent with the conclusions presented at the end of the essay.

The body (35%). This section should consist of three or more paragraphs, in which the information used as evidence in the essay is presented and evaluated and the arguments leading towards the conclusions are presented. The marks allocated for this section are for content, the information used, the effectiveness of the way in which arguments or positions are developed from it, and the quality of the resulting positions adopted.

Conclusion (10%). This section should be a single paragraph that summarizes the foregoing arguments and clearly states the conclusions that the writer believes the reader should draw.

Mechanics and presentation

Citations and References (20%). Marks are allocated for correct citations and references, and appropriate information sources). The reference section should be a list of the sources of information used in the essay.

- **A minimum of five different sources of information is required, all of which should be credible sources (see below). At least two of the sources should be from refereed journals.** Information from references should be delivered in the essay writer's own words. Direct quotations should not be used except when the exact words of the original source are key to the point being made.
- Information in a source should be generally available to readers, so that they can follow up: lecture notes, defunct web sites and personal communications do not meet this criterion.

For every item in the reference list, there should be a corresponding citation in the body of the essay. **Only two citation formats and referencing formats are acceptable.** They are the two formats approved by the Council of Biological Editors (now the Council of Science Editors). The formats are the **citation sequence system**, which is favoured by many applied and physical sciences, and the **name-year system**, which is used by most agricultural and biological sciences. You must choose **one** of these systems and conform to its conventions. Brief descriptions and examples of these systems are found by going to the William R. Newman library website: <http://www.umanitoba.ca/libraries/units/agriculture/> follow the links...

“Resources”...

“Style Guides for Writing (MLA, ALA, CBE, etc.)” ...

“Using CBE (Council of Biological Editors) Style to Cite & Document Sources”

Style, grammar and spelling (15%). In addition to the marks allocated to individual sections, 5% of marks are awarded for correct spelling, 5% for correct grammar, and 5% for an appropriate style of writing.

Development and organization (10%). The essay should be organized in a way that takes the reader along an easily-appreciated and logical route through the material presented. Each of the paragraphs should address a distinctly different theme, which is often identified in the first sentence of the paragraph. The order of sentences within each paragraph, and the order of the paragraphs should be chosen to present and develop ideas in a logical sequence without undue repetition.

For information on writing style and general resources to help you to write, go to the William R. Newman library website and follow the link “Resources”. Style guides and other materials to assist you in writing are on Library Reserve in the William Newman Library. If you need help, ask the library staff.

How to Assess Credibility of Sources

Refereed journals. Articles in refereed journals are the building blocks of science. After research has been done, the results are written up and submitted to a refereed journal. What makes this type of journal unique is that all submitted items are sent to two or more experts in the field of the submission to get opinions on the value of the work. Only if the referees advise the journal editor that the submission is a new and important finding and is good science is the submission published. Thus refereed journals have a higher level of quality control built into their system than other forms of publication. Examples of refereed journals are *Nature*; *Science*; *Canadian Journal of Plant Science*; *Agriculture, Ecosystems and Environment*; *Journal of Agricultural Economics* and *Soil Science*. Many of these journals can be found on the fourth floor of the Sciences and Technology Library. Recent issues can be found in the William R. Newman Library and on the main floor of the Sciences and Technology Library. Recent issues of many are now also available as E-journals and can be accessed through the library website and BISON, the libraries' catalogue. **Refereed journals are the most credible literature available.**

Review sources: review journals, monographs, government reports, government extension information and text books. These items usually take information from refereed journal sources, and summarize it or link it together for a particular user group. The result is often easier to read, and may also have a broader viewpoint than individual refereed journal articles. However, because reviewers can only review what has already been published, review sources tend to be at least a year or two out of date by the time they are published, so reliance on review sources, tends to miss recent events in a field. Review sources are normally subject to quality control, through independent reviews, or editing by experts. **Therefore, review sources are generally credible sources of information.**

News media: popular and trade journals, magazines, specialist and general newspapers, advertising, TV and radio. Refereed journals and review sources depend for their survival on a reputation of accuracy. For many news media, accuracy is secondary to immediacy and a marketable product. As a result, news media cannot be relied on to check accuracy with independent experts. They are frequently not accurate, and some may, through editorial policy or individual writer's attitudes, present a one-sided view of an issue. As a result, news media, even agricultural newspapers that are highly regarded within the community, cannot be relied upon to be accurate. Broadcast media suffer from all the above disadvantages and the additional one that they are transient, and things may be said in live broadcasts that were not intended. **News media are not regarded as credible information in scientific writing including the essay you are writing.**

Websites and internet media. Available on the web are sources that range from entirely credible through to incredible.

Online Refereed journals and Review sources may be available to you through the E-journals subscribed to by the libraries, or through government or publisher's web sites. For these, the fact that they are accessed via the web makes no difference to their credibility, although it may affect their long-term availability. References for on-line sources that have identifiable volume and page numbers of a print equivalent should be cited as though they are the print equivalent. References to other credible online sources should include the URL and the date on which the site was accessed (see the CBE link from the library to see how to do this). **Refereed journals and review sources on line are credible sources.**

Other websites may include web versions of news media, personal home pages, and sites of organizations that promulgate balanced or unbalanced views of issues. The problem with all of these is that there is no guarantee that there is a mechanism to ensure accuracy or long-term accessibility. **These are not credible sources of information.**