

PLB 143 Term Paper

(version Spring 2009)

Note: This text was originally written by Andy Ross in 2007. Andy is a former student of PLB143 and he became a term paper tutor for this course in the 2006 and 2007 offerings.

General Information:

The writing component of this class is very important. It is 30% (more than either mid-term or final exam) of your overall grade. **Please, take it seriously and start early!**

- The due date is May 28th, 2009 when the clock strikes midnight!
- Submit paper as an e-mail attachment with “PLB 143 term paper” in subject line to Dr. Gepts plgepts@ucdavis.edu
- Name your file: PLB 143, Your Name, Topic (e.g., PLB143_AndrewRoss_*Olea_europea*)
- Paper length is a minimum of 5 pages single spaced (not including literature references).
- Number of references should be at least 20, approximately 7 from each type of source (~7 internet sources, ~7 book sources, and ~7 primary literature/scientific article sources). However, depending on the crop, you may not be able to find 7 sources from each type. If this happens then you should make up the difference with more from the other two but avoid using too many internet sources. Instead, try to find more book or primary literature sources. The papers from the primary scientific literature are very important because they provide recent original data.
- Photographs, illustrations, diagrams, etc. are neither required nor recommended to get an “A”. Grades are more dependent on the amount, context, and scope of references used but feel free to use images if you wish. They cannot be used to reach the 5-page minimum length of the paper.
- When writing scientific names (*Genus species*) in your paper use italicized letters with first letter of genus capitalized and all others lower case (e.g., *Zea mays*, or *Coffea arabica*). The second and following times you mention the scientific name, you can abbreviate the genus name (e.g., *Z. mays*).
- If you are interested in submitting your paper to the Prized Writing Contest here at UCD, you can obtain further information from <http://prizedwriting.ucdavis.edu/>

Format:

Scientific Review Paper (see example posted on class website).

- Abstract: < ½ page summary of entire paper.
- Introduction: ~ 20% of paper; very similar to the crop of the day lectures; general background information (what is it? where is it grown? why is it important?) like the description of crop and plant, where crop is produced, its economic value, its nutritional value, direct or indirect uses, etc.
- Results and Discussion: > 50% of paper. This part should constitute the majority of the paper and requires the most research. Here you identify the area of origin and domestication for

your crop using genetic, linguistic, archaeological, botanical, and historical evidence (this may not be as easy as it seems). For some crops, there is also evidence on the inheritance of the domestication syndrome, which you should add to your paper as well. Attempt to verify all results using multiple sources of the same evidence type, then get evidence to converge (if possible) on a common center of origin. Try to use all that you have learned in the class and apply it to your paper.

- Recommended Future Lines of Research: ~ ½ page conclusion. Identify any difficulties in obtaining data, contradictions in results, threats to crop, biases, etc. and how to resolve them.

Research Sources:

For the introduction and to help you get started you will need general background sources. The web is great for this stuff but be wary of specific claims made by dot com sites (they may just be trying to sell you something or have a political agenda). For specifics, I like to use legitimate dot org, dot gov, or dot edu sites but again be wary of claims and site the source with parenthetical references. **Be sure to record the date you viewed a particular site for your reference list.** There are many web sources for specific crops that are very useful but they are better dealt with on a one-on-one basis (just ask).

Here are some web sources that might be useful initially:

<http://www.wikipedia.org/>
<http://www.usda.gov/wps/portal/usdahome>
<http://www.fao.org/>
<http://faostat.fao.org/>
<http://www.nationalgeographic.com/index.html>
<http://www.google.com/>
<http://www.who.int/>
<http://vm.cfsan.fda.gov/label.html>
<http://www.nutrition.gov/>
<http://allrecipes.com/>
<http://www.nutritionresource.com/>
<http://plants.usda.gov/>

For the majority of your research you will want to use primary literature or book sources. For book sources I would suggest the Harvest database on the UCD Shields Library homepage. The library also has an extensive collection of online primary literature databases like ISI Web of Science, CAB Abstracts, and PubMed. Primary literature includes research papers, articles, etc. written by researchers or scientists and presented in peer-reviewed scientific journals. For the more difficult articles, try to glean as much information as you can from the abstract, introduction, and results sections. To narrow your search, use **scientific names** rather than common names (ex: common bean vs. *Phaseolus vulgaris*).

Some primary literature sources that might be helpful:

<http://scholar.google.com/>

<http://isiwebofknowledge.com>

<http://pubmedcentral.nih.gov>

<http://www.scirus.com/>

<http://www.lib.ucdavis.edu/ul/research/databases/>

(To navigate to “CAB Abstracts” click on the letter C and scroll down the page)

A few phrases you may want to use when searching Google Scholar are: “origin of domestication of **your crop**”, “original progenitor of **your crop**”, “center of origin for **your crop**”, “initial cultivars of **your crop**”, or any combination of these.

Good Luck:

This term paper can be a very rewarding experience but there is quite a bit of work involved with it. Research is something you can work on at your own pace but please don't wait until a week before the paper is due to start. I like to do my research and create an outline very early, then think about structure for a couple weeks before I start writing. This works well for me and keeps the stress level to a minimum but if you have a different style that works well for you stick with it. The whole point of this assignment is to help you understand and apply the concepts of this course. It helps acquaint you with the kind of writing that you will be required to do in your future career. Scientists don't study and take exams, they write grant proposals to get funding and author scientific research papers on the results of their experiments. This assignment and this class help you learn those valuable skills. Good luck with your research and writing.