

Poleman, Thomas T.

Working Paper

Guide for Manuscript Preparation and Data Compilation

Staff Paper, No. SP 66-16

Provided in Cooperation with:

Charles H. Dyson School of Applied Economics and Management, Cornell University

Suggested Citation: Poleman, Thomas T. (1966) : Guide for Manuscript Preparation and Data Compilation, Staff Paper, No. SP 66-16, Cornell University, Charles H. Dyson School of Applied Economics and Management, Ithaca, NY, <https://doi.org/10.22004/ag.econ.189145>

This Version is available at:

<https://hdl.handle.net/10419/276297>

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CORNELL
AGRICULTURAL ECONOMICS
STAFF PAPER

GUIDE FOR MANUSCRIPT PREPARATION AND
DATA COMPILATION

By

Thomas T. Poleman

21 January 1966

No. 16

Department of Agricultural Economics
Cornell University Agricultural Experiment Station
New York State College of Agriculture and Life Sciences
A Statutory College of the State University
Cornell University, Ithaca, New York, 14853

GUIDE FOR
MANUSCRIPT PREPARATION AND DATA COMPILATION

NOTE: There are almost as many forms of style and data presentation as there are journals and publishing houses. Those summarized below are, however, being followed increasingly by leading economic journals; the citation technique in particular appeals to author and typist as well as publisher. Their use is required in all Ag. Ec. 560 term papers and in other courses as required by the instructor.

I - GENERAL INSTRUCTIONS

All papers will be typewritten, double spaced.

Proper Names in Text: At the first mention of a person in the text, identify him by given name and initial, or initials. Thereafter the last name is used unless there is confusion between similar names, in which case the complete identification is repeated. Academic titles may be employed occasionally, but the usage should be kept at a minimum.

Geographical Names: Be consistent. Let Webster be your guide. In cases of recent name changes, use the current designation; the more familiar name should, however, be indicated parenthetically following the first reference. Examples: Sabah (North Borneo); Malawi (Nyasaland).

Foreign Words: Consult Webster. If the term is listed as foreign, underline it to indicate italics. If any term is to appear frequently in the text, put the translation in parenthesis following the first use, and thereafter use the term without underlining. Avoid too frequent use of foreign terms; it conveys an impression of spurious scholarship.

Abbreviations: Avoid the use of abbreviations or contractions in the text. In special cases, such as the better known alphabet agencies, spell out the name of the organization in full at first mention, followed by the alphabetical designation in parentheses if the name is to appear

more than once; thereafter use the short form.

Examples:

Food and Agricultural Organization of the United Nations (FAO)

United Nations (UN)

Economic Commission for Latin America (ECLA)

In works of more than one chapter, repeat full title of lesser known agencies at first mention in each chapter. If many such agencies are referred to in works of thesis length, a glossary should be provided, which should also incorporate unfamiliar terms.

Abbreviations and contractions may be used in citations and, in the case of government agencies, should be used whenever possible.

Numbers: Write out numbers "one" through "nine" unless used in a sequence of three or more, or of two where comparisons are involved (even in this circumstance, "one" should be written out.)

Explanatory Footnotes: Use sparingly. They are recommended only for needed detail which would clutter the text (if there is much detail bearing on a single topic, put the information into an appendix); also for relevant material which is not germane to the organization of the text. Footnotes should appear (single spaced) at the foot of the pages to which they appertain and be indicated by a number in the text. To distinguish them from citations such numbers should be set in a " / " and be ordered consecutively within each chapter. Thus:

A mere 10 per cent of the area was reported as crop land.^{4/}

^{4/} The term "crop land" as defined in the census of agriculture refers to land which was cultivated in the year of the census or in any of the previous five years.

Citations: Citations will be listed by number at the end of the paper or chapter. Text references will contain the citation number, underlined, followed by the page number, and the whole enclosed in parentheses. Example:

Prices broke sharply when the new regulations were put into effect (1, p. 43).

In general treatments, citations may be listed at the end of a paragraph rather than scattered throughout: (1, p. 15; 15, pp. 12-18; 7, p. 9).

Citations may be numbered either in the order they first appear in the text or in alphabetical order according to author.

Quotations: When quoted passages are of less than five lines, they are run into the text. If the last quoted word ends the sentence, the following form is used:

The United States "continued to be confronted with difficult problems ... in the Near East, Asia, and Africa" (1, p. 2).

When the last quoted word is not the end of a sentence, the form is "Near East, Asia, and Africa ..." (1, p. 2).

Quotations of five or more lines are set down, i.e., segregated from the text, indented, and single-spaced; quotation marks are not used to indicate the beginning and end of quoted passages. When set-down quotations are used, citation references and quotations appear as follows:

To quote Poleman (7, p. 9):

The economics of agriculture in low-income countries is a fascinating field, but it is also a frustrating one, since underdeveloped statistics go hand in hand with economic underdevelopment. I cannot think of a single country in tropical Latin America, Asia or Africa which has an adequate set of economic indicators. The problem extends to data of the most fundamental type: population, cultivated area, production, yields, prices, and the like. Evidence about all of them is often obviously erroneous, seriously conflicting, or, more frequently, totally absent.

II - CITATION FORMS

Journal Articles.

1 B. F. Johnston and J. W. Mellor, "The Role of Agriculture in Economic Development," The American Economic Review, September 1961.

2 P. P. Jones and T. T. Poleman, "Communes and the Agricultural Crisis in Communist China," Food Research Institute Studies, February 1962.

If the journal is foreign and relatively obscure, include place of publication. Thus:

3 F. C. Pedrão, "Las desigualdades regionales en el desarrollo económico," El trimestre económico (Mexico City), April-June 1964.

4 R. M. Lawson, "Engel's Law and its Application in Ghana," The Economic Bulletin (Legon, Ghana), vol. VI, no. 4, 1962.

Newspapers, Magazines, and Journals.

1 New York Times, Jan. 3, 1961.

2 San Francisco Chronicle, Jan. 20-Mar. 1, 1958, passim.

3 American Economic Review, March 1957.

4 Inter-American Economic Affairs, Autumn 1956.

5 L'Humanité (Paris), July 1, 1964.

Note that if only month and year are used, name of month is spelled out; if day is given, abbreviate name of month if of more than four letters.

Books and Monographs.

1 P. T. Bauer, West African Trade (London, 1954).

2 Pierre Gourou, The Tropical World (3rd ed., London, 1961).

3 W. O. Jones, Manioc in Africa (Stanford, Calif., 1959).

4 U. J. Lele and J. W. Mellor, Estimates of Change and Causes of Change in Foodgrains Production, India, 1949/50 to 1960/61 (Cornell Univ. Int'l. Agr. Dev. Bull. 2, August 1964).

5 R. L. Beals, Ethnology of the Western Mixe (Univ. of Calif. Publications in Amer. Archaeology and Ethnology, vol. 42, no. 1, 1945).

References to Part of a Work.

1 V. R. Dorjahn, "African Traders in Central Sierra Leone," in Paul Bohannan and George Dalton, eds., Markets in Africa (Evanston, Ill., 1962).

2 Ford, Bacon & Davis, Inc., La Industria azucarera de México, Tomo I (Banco de México, S.A., Mexico City, 1952).

Official Publications - General Note:

The publications of foreign governments and international organizations are treated the same as those of U.S. governmental agencies, except that the country or organization is clearly identified and set off by a comma, and the place of publication is usually identified for international documents.

If an annual report of a government agency is published within the year following the period covered by the report, publication date is not required. But for a report covering, say, the year 1947 but not published until 1949 or later, the publication date is given. The place of publication of an official document is assumed to be the seat of government; if that is not the case, give place of publication.

For regularly published weekly or monthly reports by government agencies relating to specific subject the issuing agency follows the title of the series, in parentheses.

U.S. Governmental Publications.

1 U.S. Dept. Agr., Food: The Yearbook of Agriculture, 1959.

2 R. W. Swift, "Food Energy," in U.S. Dept. Agr., Food: The Yearbook of Agriculture, 1959.

3 U.S. Dept. Agr., Econ. Res. Ser., The World Food Budget, 1970 (For. Agr. Econ. Report no. 19, October 1964).

4 U.S. Dept. Agr., Econ. Res. Ser., Changes in Agriculture in 26 Developing Nations, 1948 to 1963 (For. Agr. Econ. Report no 27, November 1965).

5 Foreign Agriculture (U.S. Dept. Agr., For. Agr. Ser.), Nov. 22, 1965.

6 Rice Market Review (U.S. Dept. Agr., Agr. Mktg. Ser., San Francisco), July 1954.

7 U.S. Dept. Comm., Bur. Fisheries, Alaska Fishery and Fur Seal Industries, 1939.

But note the difference when the author is given:

8 L. R. Brown, Land, Man, and Food (U.S. Dept. Agr., Econ. Res. Ser., For. Agr. Econ. Report no. 11, November 1963).

9 G. H. Stevenson, Whalebone: Its Production and Utilization (U.S. Dept. Comm. and Labor, Bur. Fisheries Document 626, 1907).

Publications of Foreign Governments and International Organizations.

1 Mexico, Sec. Econ., Dir. Gen. Estad., Tercer censo agrícola ganadero y ejidal, 1950. Resumen general (1956).

2 Ghana, Cent. Bur. Stat., Economic Survey, 1954.

3 Ghana, Cent. Bur. Stat., Field Survey Work in the Ghana Statistics Office (Stat. and Econ. Paper no. 8, January 1961).

4 Mexico, Sec. Rec. Hid., Comisión del Papaloapan, Compendio estadístico de la cuenca del Papaloapan (Cd. Gral. Alemán, Veracruz, 1960).

5 Kenya, Min. Fin. and Econ. Planning, The Pattern of Income, Expenditure and Consumption of African Middle Income Workers in Nairobi, July 1963 (July 1964).

6 FAO, Stat. Div., Production Yearbook, 1964 (vol. 18, Rome).

7 FAO, Development Through Food (Freedom from Hunger Campaign Basic Study no. 2, Rome, 1962).

8 U.N., Econ. Comm. for Asia and the Far East, Use of Fertilizers on Food Crops in Malaya (Memo. by Malaya and North Borneo Delegation...E/CNLL/I and T/L8, New York, Feb. 22, 1951).

9 Revista de estadística (Mexico, Sec. Econ., Dir. Gen. Estad.), May 1945.

Again note the difference when the author is given:

10 F. J. Andrade and D. K. Freebairn, Economía agrícola en el valle del Yaqui: Los ejidatarios individuales (Mexico, Sec. Agr. Gan., Inst. Nac. Investigaciones Agrícolas, Folleto Técnico no. 49, January 1965).

11 L. M. Goreux, Income Elasticity of the Demand for Food - Household Survey Analysis (U.N., Econ. Comm. Europe, Com. on Agr. Prob., AGRI/WP.7/2, June 22, 1959).

12 J. D. Freeman, Iban Agriculture (U.K., Col. Off., Col. Res. Studies no. 18, 1955).

Unpublished Materials.

1 M. J. Purvis, "Marketing of Foodgrains in India: An Economic Appraisal of Government Intervention" (thesis, Cornell Univ., 1964).

2 U. J. Lele, "Efficiency of Jowar Marketing: A Study of Regulated Markets in Western India" (diss., Cornell Univ., 1965).

3 P. G. Minneman, "Mexico's Agriculture" (American Embassy, Mexico City, Mar. 1, 1955, mimeographed).

4 T. T. Poleman, "Survey on Nutritional Concomitants of Urbanization in Sub-Saharan Africa" (Draft report submitted to the Nutr. Div., FAO, Rome, Nov. 2, 1965, mimeographed).

5 M. S. Bugh, "Process for Removing Salt from Sea Water" (draft manuscript in preparation).

6 Curtis Haylaud, "Economic Criteria" (draft manuscript).

7 W. L. Booker, Government Statistician, Accra, Ghana, letter to M. P. Miracle, dated Aug. 5, 1960.

8 T. T. Poleman, Field notes, Addis Ababa, Ethiopia, Oct. 8, 1965.

Translations.

1 All Russian Crop Institute of the People's Commissariat of Agriculture of the USSR, Rasteniewodstwo USSR, [The Crops of USSR], (Leningrad and Moscow, 1933).

2 D. N. Prianishnikow, Azot v zhizni rastenii i v zemledolii SSR, [Nitrogen in the Life of Plants and in the Agriculture of the USSR], (Moscow-Leningrad, 1945).

III - TABULAR PRESENTATION

The rules that follow are illustrated by a few examples given as appendix tables at the end of this guide. Table 1, below, identifies the different parts of a table.

Tables should be complete in themselves. One should be able to understand a table without reading the surrounding text. In cases where this can not be managed by footnotes of reasonable length, a footnote should direct the reader to specific text pages for explanation.

Design the table to bring out most clearly the comparisons that are being discussed. It is easier to compare figures up and down than it is to compare across. For this reason, in studies over time, years should

TABLE 1. - TABLE TITLE*
(Indication of units)

Stubhead	Column head ^{a/}	Column head ^{b/}	Spanner head	
			Column head	Column head
	o		Center head ^{c/}	
Stubline ^{d/}	o	e/		f/
Stubline	o			
etc.	o			
o Stubline	o		Center head ^{g/}	
Stubline ^{h/}	o			
Stubline	o			
etc.	o			

* General note - gives source, and explanations pertinent to all or most of the table.

- a/
- b/
- c/
- etc.

Body x

usually be in the stub as in Appendix Tables I, II, and IV. However, when the major interest is the composition in a given year, the composition (distribution or whatever) should be in the stub and the years in the column heads, as in Appendix Table III.

The top line and the left column tend to catch the eye first. Hence, put totals on the left or at the top unless there is some reason for doing otherwise.

Keep title short, column heads low, and stubs as short as possible. This makes the table look cleaner and easier to read. It should never be necessary to spend brain power reading anybody's tables.

Parts of a Table:

1. Title. The title should be a reasonably complete statement of what the table contains, but should be kept as short as possible.

The title should indicate:

- a. The area covered (world, Europe, Tompkins County, or whatever).
- b. The subject (grain production, farm prices, etc.).
- c. The dates included.

The title should end with an asterisk (*) to refer to the general note.

2. Indication of units. Immediately under the title indicate the units as completely as possible. Sometimes the description of units may be brief -- for instance if the whole table is in thousand metric tons. But see Appendix Tables I-III for some other situations. Some agencies give units as part of each column head even if they are all the same; this is messy and should be avoided whenever possible. If obscure units such as maunds are used, they should be described in a footnote. If tons are used, the kind of ton should be indicated.

3. Stubhead. Always fill this space. See Appendix Tables I-IV for the sorts of things that go in it. On Appendix Table II, if the crop year for all the commodities had been the same -- July-June, for instance -- the words "July-June" could have been written there and no footnote would have been required. Always describe the year unless it is a calendar year.

If there are several different sorts of things in the stub, the word "Item" can be written in the stubhead. This doesn't mean anything, but prevents the odd look of a vacant space.

4. Column heads, stubs, and center heads. Comparison of Table 1 with Appendix Tables I-IV gives some indication of what to do about column heads, stubs, and center heads. Try to limit the stublines to one line for each line of figures, and the column heads as few lines as possible. There is some question as to whether it is better to have cleaner column heads and more lettered footnotes, or taller column heads and fewer footnotes. This must be answered for each table individually on the basis of ease of reading and understanding.

Center heads can be used to put different sorts of information in one table if the column heads are appropriate for each subject, as in Appendix Table IV.

5. General note (* note). This note should give the source of data. Sources are cited in full in appendix tables, and are usually cited in full in text tables. The only exception is when a text table is based on a more complete appendix table which is cited as the source. Citation numbers are not used; the table must stand by itself.

The general note should also give descriptive or qualifying information that applies to the table as a whole -- description of averages, conversions, exchange rates used, and the like -- as in Appendix Tables I-IV.

6. Lettered footnotes. Subsequent footnotes are designated by letters rather than numbers to avoid confusion with the figures in the body of the table. The footnote designations in the body of the table should appear in alphabetical order, and in the normal order of reading, as shown in Table 1.

Always put footnote designations on the right side of the column and attach them to something (column head, stub, figure, etc.); don't leave them hanging in the air.

7. Conventions and symbols. In making tables underline words or figures to indicate italics (this is a printers convention). The following symbols used by the UN and FAO should be followed:

1934-38	Total or average for a period covering all the years 1934 through 1938.
1934/35	Year beginning in 1934 and ending in 1935.
...	Data not available.
-	None, negligible, or entry not applicable.

In tables giving both plus and minus items, such as net imports shifting to net exports, enclose the changed figures in parentheses and add a footnote to indicate the shift, or include an indication in the heading, as in Appendix Table IV.

See Appendix Tables I-IV for the rulings to be used. Vertical rules may make tables easier to read, but should be avoided because of the difficulty in setting the type face for printing.

Text Tables, Appendix Tables, and Tabulations: The forms described above are used for tables whether they appear in the text or in an appendix. In general, tables necessary to the discussion are kept in the text, detailed reference tables are placed in an appendix. Tables referred to in several places in the manuscript may also be placed in an appendix, but it is

preferable to introduce them when first discussed. Tables in an appendix may give figures for charts that appear in the text. Text tables may summarize data shown in more detail in an appendix, or may show derived figures from computations that are fully shown in an appendix. For convenience of reference, use Arabic numbers for text tables, Roman for appendix tables.

If only a few figures are required for text discussion they may be shown informally in what are called "tabulations." Tabulations have no title, and the units and sources are indicated in the introductory sentence; there are no ruled lines.

For example:

1) Wheat production in France and Italy was as follows, in thousand metric tons (3, p. 33):

Country	1955	1956
France	10,365	5,683
Italy	9,504	9,681

2) Wheat and flour net imports were as follows, in thousand metric tons (Appendix Table IV):

Country	1948-50	1952
France	227	379
Italy	1,855	1,333

Special Considerations for Appearance and Printing: Printing costs are especially high for tables; hence tables should be made as compact as possible to get the maximum amount of information in the minimum of space. In a statistical appendix there should be a minimum of wasted space at the bottom or sides of pages.

Printing houses give a great deal of consideration to the appearance of their work. They object to empty spaces where they believe figures should be and may insert dots (...) or blanks (-). Therefore these should be put in by the author in order to keep the meaning clear.

Presses also object to printing figures that have different numbers of digits after the decimal in the same column, though they do not object to different numbers of digits after the decimal in the different columns of the same table.

For example, the following form is objectionable:

Rice production was as follows, in million metric tons of cleaned rice (4, p. 293):

Country	1938	1939	1940
China	26.2	26.6	21.5
Australia	.034	.023	.028
Egypt	.47	.58	.43

This form is acceptable:

Rice production was as follows, in million metric tons of cleaned rice (4, p. 293):

Year	China	Australia	Egypt
1938	26.2	.034	.47
1939	26.6	.023	.58
1940	21.5	.028	.43

IV - GRAPHIC PRESENTATION

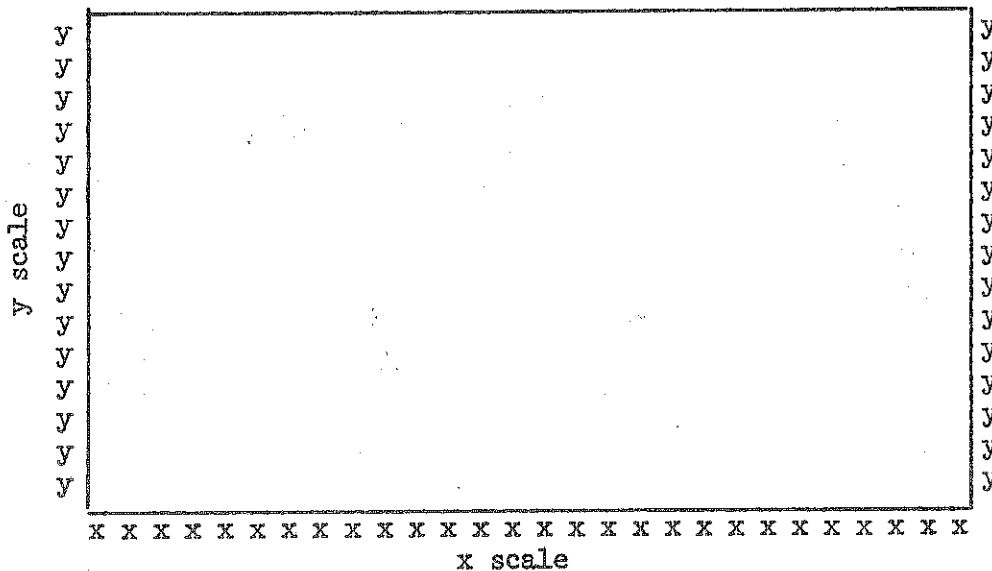
The same general rules apply to graphic presentation as to tabular forms. Charts (and maps) should be complete in themselves and should be designed to bring out most clearly the relationships that are to be emphasized.

The parts of a chart, shown in Chart 1 below, differ little from those of a table. A chart will always have a title (with same components as that of a table), an indication of units (either below the title, or, if more than one unit is involved, along the scales), a general (*) footnote, and, if needed, lettered footnotes.

Charting can serve two functions in a research paper: 1) to drive home a simple point, or 2) to illustrate a fairly complex situation which would

CHART 1 - CHART TITLE*

(Indication of units)



* General note - gives source, and explanations pertinent to all or most of chart.

a/
b/
etc.

become overly involved if explained in the text -- the one-picture-is-worth-a-thousand-words notion.

Charts always contain a comparison, either static or over time. For static comparisons, one usually uses either 1) circle and/or pie charts, or 2) bar charts. Time comparisons are commonly shown through 1) bar charts, or 2) line (curve) charts, including the surface, strata, and semi-log varieties.

Some general observations concerning these different types of charts follow.

Circle and Pie Charts:

Show comparisons on an area basis. Such comparisons are generally difficult to interpret correctly.

The key element is the radius; data must be converted to square roots before determining relative radii to be plotted.

Use of undivided circles is largely confined to maps. In charts per se circles are usually employed as the basis for pie charts. For showing components of a single total, pie charts are commonly better than "100%" or "multiple" bar charts.

Bar Charts:

If it is easier to visualize components in a pie chart, bar charts better illustrate absolute amounts.

Bar charts must always have a zero line and never more than one scale.

For static comparisons horizontal bars are frequently the most convenient. Labeling is easier and time change is not suggested.

Vertical bars are invariably used for time comparison. Bars get cumbersome in a time series if very many years are shown, so they are usually used for a long series only if components are to be shown.

Missing years should be indicated by an appropriate gap unless they are too numerous; then a suggestive space can be employed.

Line (Curve) Charts:

Even if a number of observations are missing, all years must be shown on time scale.

Data should be plotted either as "point" or "period" observations, depending on time scale employed.

Simple line charts need not have a zero line. To indicate omission of zero, a saw-tooth is frequently useful. But recognize that without a zero line, a chart can be misleading.

Surface line charts show physical magnitudes shaded in. They must always show a zero line.

Strata chart is a surface line chart with components. It must always have a zero line. (Strata charts are often messy; best used only when fluctuations are moderate.)

Log (semi-logarithmic) charts show percentage change. Since one cannot show zero line on a log scale the technique cannot be used for surface of strata charts. Nor can negative quantities be plotted.

Although prime use of log charts is to indicate percentage change, they also come in handy when there is a great difference in the magnitude of several series being plotted together. (The larger the range, the greater the difference between charts scaled arithmetically and logarithmically.)

ALWAYS BEAR IN MIND THAT SELECTION OF THE CHARTING TECHNIQUE SHOULD BE BASED AS MUCH ON THE RELATIONSHIP YOU WISH TO ILLUSTRATE AS ON THE NATURE OF THE DATA.

V - DATA COLLECTION

Since statistical evidence is the raw material of economic analysis, it is axiomatic that considerable pain should be invested in its collection and interpretation.

Let caution be your watchword, particularly when dealing with agricultural data. Since crops and livestock are raised by a multitude of small growers and much of the output may be consumed where grown and never enter commercial channels, agricultural data start with several strikes against them. In questioning the accuracy of statistics it is sometimes fruitful to imagine how the figures could possibly have been gathered. If the imagination suggests the problem was difficult, it is all the more important to probe them thoroughly. For a small, statistically well developed country one can imagine the collection of reasonably accurate figures. One could imagine more problems for the United States, even though we fancy ourselves as statistically advanced. But imagine what the difficulties are in the numerous statistically underdeveloped countries of tropical Africa, Asia, and Latin America!

The use of statistics always involves comparison -- over time, between countries, among commodities, or what have you. Before such comparisons are made one needs to know whether the figures one has found measure the same thing, or even roughly the same thing, for the years, countries, or commodities being studied. Unfortunately, this takes time, for statistical series (particularly in less developed countries) frequently appear without accompanying description. But the time so spent is far more productive than the generation of nonsense conclusions.

If complex analytical techniques are contemplated, it is particularly important to test the underlying set of figures. The gulf between mathematical concepts and those crude values we know as statistics is still wide. Few data are yet the product of controlled experiments undertaken for the specific purposes at hand, and one must also remember that from time to time figures are deliberately distorted for reasons of national or individual advantage.

In addition to learning caution in personal use of statistics, one should also acquire a critical attitude toward data employed by others. The most common misuses of statistics result more from naivete than an intent to deceive. But the product is equally misleading. A favorite propaganda technique is to cite respectable data in support of an argument that the author knows to be of little relevance. A similar deception occurs when a researcher in a hurry finds a number and uses it without troubling to discover its full validity.

Sources of Statistical Data: Sources are frequently described as either "official" or "unofficial," or as "primary" or "secondary". These terms defy precise definition; they are loosely used by many, while others attach varying specific meanings to them. Suffice it to say that when we speak of official sources we generally mean governmental sources, and by primary sources we usually mean sources that are published by the specific organization, governmental or otherwise, that has prepared the figures.

When ever possible use the primary source. This tradition holds because description of the series, revisions, and the necessary qualifying notes are more apt to be in the primary source, and because there have been fewer opportunities for typographical errors to creep in. Secondary sources may

be very useful, however, to obtain a first view of the subject, to discover the kind of data available, and to secure specific references for further details and description. In fact, when hunting for data on an unfamiliar subject, the fastest way to proceed may often be from the general to the particular, unorthodox as it may sound.

Suggestions for Data Assembly: Always use full size paper. This makes filing much easier, and losing less likely. Avoid recopying. It is expensive (in either your time or money for an assistant), and provides another chance for making mistakes.

Determine the final form of presentation before starting to compile. This will make it possible to bring out the comparisons appropriate to your study, rather than those that seemed desirable to the issuing agency. It will also save recopying. If computations are required it may be necessary to compile on a worksheet in order to have columns (or lines) next to each other that must be added or multiplied. This last is desirable both to speed up the computation and to make for accuracy. If both the copied and the computed figures are to be presented, it is often possible to design an appropriate form before compiling is started.

Leave space at the end of the table (lines or columns depending on whether the years go down or across) to bring the figures up to date.

Put totals on the left, or at the top. Sometimes as the work progresses it becomes necessary to add columns or lines for new items not covered in the original plans.

Be careful not to abbreviate too much. In general it is best not to abbreviate more than would be permissible for final presentation. But if this is not practical be sure not to abbreviate so much that the meaning

will disappear in a year or so.

Get the source of the data on every sheet. This may seem ridiculous on a long job that requires several pages, but as time passes the individual sheets may be filed in different places.

Cite the source at least fully enough so that the book can be easily found for checking, or so that more recent issues of a serial can be found giving later data. It is preferable to cite the source completely so that it will not be necessary to hunt up the book again when preparing the paper for final presentation.

Look for and take down descriptions of the data -- kinds and weightings of averages and indexes, inclusiveness of totals, currency, kinds of years, geographical coverage, dates of estimates, units and conversions, and so forth. Look for and take down qualifying footnotes applying to all or part of the data, changes in definition, coverage, and the like. These notes will appear either in the general (*) note or in lettered footnotes. In the process of compiling, the lettered footnotes will probably not appear in the final order. It is best to take them as they come. At a later stage the order can be changed, and it may be possible to combine some and omit others. But take all to start; they are easy to eliminate later if study indicates that they are of no importance.

Figures may be rounded as they are compiled since it is seldom necessary or desirable to carry figures to the last unit. Be sure not to round too far, however, as it is easier to round farther at a later stage than to have to hunt up the source again. If it may be necessary to convert the data to other units later, be sure to carry enough figures.

To round off a figure that is exactly 5 the arbitrary rule is to raise the preceding number if it is odd and to leave even numbers unchanged (i.e., 3.5 and 4.5 would both be rounded to 4).

When preparing tables for final presentation never mix degrees of rounding in the same table (millions and thousands for instance). If you need more refinement in some columns than in others, carry more figures after the decimal, but keep all in the larger unit.

For example, it would have been confusing if the rice figures in million tons on p. 13 had been shown as follows:

Year	China	Australia ^{a/}	Egypt
1938	26.2	34	.47
1939	26.6	23	.58
1940	21.5	28	.43

a/ Thousands.

A quick glance at this tabulation suggests that Australia was the largest producer. The confusion would be even greater in large tables where the footnote is farther away from the figures.

When figures are rounded the items may not add exactly to the rounded total. If desired, the figures can be adjusted to make them add exactly (by rounding incorrectly on the figure that requires the least adjustment). This process is time consuming, and neatness the only value received. The recent tendency is against it. Instead such tables carry a note reading "Detail will not necessarily add to totals because of rounding."

In compiling a long series of data, work backwards from the most recent source to the oldest. This will automatically give the most recent revisions, and may give all the years wanted in a single source. Watch for, and note,

changes in definition or other kinds of incomparability that appear in this backward search.

As an exception to the above, in compiling successive estimates of a given item, rather than the latest revisions, it is more satisfactory to work forwards from the earliest forecast to the most recent revision.

When compiling, fill every space on the table with a figure, dots (...), blank (-), or nl. If spaces are left empty it will not be clear to you next month whether there was no information in the source, or whether the figures were inadvertently not copied. The use of the letters "nl," meaning not listed, is convenient in compiling since it shows that there is no way of knowing whether the magnitude was large or small. If the table being compiled from has an "all others" line (or column) the "not listed" item is probably included in "all others" and in the total. Even if there is no "all others" the items may be included in the total -- hence the necessity for finding a description of the total. This is especially important if an "all others" item for a series of years is to be computed.

When using sources in an unfamiliar language and the meaning is not perfectly clear, copy the words or notes in the original language as well as making an attempt at translation. At a later stage increased knowledge may yield a better translation, or it may be necessary to find a translator.

Watch for apparent inconsistencies when compiling series. If there are copied figures that look out of line, check with the source while it is still at hand. If the inconsistencies are in the source, it is sometimes possible to locate and correct typographical errors by computing totals or per cents for comparison with the corresponding printed figures. If this

doesn't work, it is helpful to mark the queer figure sic (literally "thus," and more specifically, "I know this looks crazy but that is what the book said").

It is a good custom to put the initials of the compiler and the date of compiling in the upper right hand corner of each sheet. The initials will indicate to whom questions should be addressed concerning the compiling, and the date will give a rough indication of the point beyond which latter information must be sought.

While it is suggested that recopying be avoided, it is sometimes necessary. In such cases the original work sheets should be preserved even after the derived tables have been prepared. These work sheets will give full details of any calculations that have been made, show the copied figures and the steps in computation, and thus provide the material with which to check or correct challenged figures in final tables. The work sheets are also required when manuscripts are prepared for printing since all the underlying calculations, as well as copied figures should be rechecked at this stage. Because this checking and rechecking sometimes necessitates another look at the source, it saves time to have library call numbers directly on the work sheets. Also consider photocopying the most important source pages.

APPENDIX TABLES

TABLE I - UNITED STATES, GRAIN PRODUCTION, ANNUALLY 1940-56*
(Million bushels)^{a/}

Year ^{b/}	Wheat	Rye	Corn	Oats	Barley
1940	815	39.7	2,457	1,246	311
1941	942	43.9	2,652	1,183	363
1942	etc.	etc.	etc.	etc.	etc.
1943					
1944					
1945					
1946					
1947					
1948					
1949					
1950					
1951					
1952					
1953					
1954					
1955					
1956 ^{c/}					

* Data from U.S. Dept. Agr., Agricultural Statistics, 1957, pp. IV, 2, 19, 35, 46, 52. Includes revisions (1949-54) based on the results of the 1954 Census of Agriculture.

a/ Bushels of weight, as follows: wheat 60 lbs., rye and corn 56 lbs., barley 48 lbs., oats 32 lbs.

b/ Year of harvest.

c/ Preliminary.

[Note that a line is skipped every 5 years to make reading easier.]

TABLE II - UNITED STATES FARM AND MARKET PRICES FOR FEED GRAINS,
1950/51 - 1956/57 *

(U.S. dollars per bushel of indicated weight)

Crop year ^{a/}	Corn (56 lbs)		Oats (32 lbs)		Barley (48 lbs)	
	No. 3 Yellow		No. 2 White		No. 3	
	Farm	Chicago	Farm	Minneapolis	Farm	Minneapolis
1950/51	1.53	1.73	.79	.74	1.18	1.49
1951/52	1.66	1.83	.82	.72	1.24	1.35
1952/53	1.53	1.59	.79	.84	1.35	1.53
1953/54	1.49	1.53	.74	.77	1.15	1.39
1954/55	1.43	1.48	.71	.74	1.08	1.33
1955/56	1.34	1.24	.60	.62	.92	1.15
1956/57	1.29	1.31	.69	.74	.98	1.20

* Data from U.S. Dept. Agr., Agr. Mkt. Serv., Grain and Feed Statistics Through 1956 (Stat. Bull. 159, May 1957), pp. 37-40; and ibid., Through 1957 (Supp. to Stat. Bull. 159, March 1958), pp. 18-19. Average prices received by farmers include an allowance for unredeemed loans and deliveries to the CCC under purchase agreements; and are crop year averages by States weighted by production to obtain weighted averages for the United States. Market prices are weighted by carlot sales.

a/ Oct.-Sept. for corn, July-June for oats and barley.

[Note that this table is designed primarily for comparison over time between the farm and market price for each grain. If the object had been to compare the grains with each other, some other form would have been preferable.]

In contrast with Table I, higher column heads are used here rather than additional footnotes.]

TABLE III - CANADA, EXPORTS OF WHEAT AND FLOUR BY DESTINATIONS,
1945/46 - 1949/50 *

Destination	1945/46	1946/47	1947/48	1948/49	1949/50
	(Million bushels)				
Total	340.1				
United Kingdom etc.	151.5				
	(Percent of total)				
United Kingdom etc.	44.5				

* Data for August-July years from Canada, Dominion Bureau of Statistics, and Board of Grain Commissioners, Grain Trade of Canada, 1949-50, pp. 116-18. Export clearances of Canadian wheat by countries of final destination plus grain equivalent (4.5 bushels per barrel) of customs exports of wheat flour. The latter have been officially adjusted to remove time lag in the returns for 1947/48 and later years. Percent of total our computation.

[The number of destinations and the order in which they should be listed would depend on what one wished to learn from the table. The source includes every destination, there are no "others" items. One might want to show those countries that represented 5 percent or more of the total, or perhaps only continental totals, etc. There are also various possibilities to be considered in the order of listing -- for instance, order of magnitude in one of the years, or geographical or alphabetical order, and so on.]

TABLE IV - TRADE IN WHEAT AND FLOUR FOR SELECTED EUROPEAN COUNTRIES,
1952-54, WITH COMPARISONS *

(Thousand metric tons)

Period	United Kingdom	France	Italy	Sweden
<u>Imports</u>				
Average				
1934-38	5,681	646	709	48.5
1948-50	5,018	680	1,866	71.2
1952	4,681	775	1,355	334.9
1953	4,765	256	1,171	59.0
1954	4,028	257	266	5.0
<u>Exports</u>				
Average				
1934-38	161	498	217	62.0
1948-50	14	453	11	61.8
1952	15	396	22	62.1
1953	14	512	3	263.3
1954	16	1,700	9	380.4
<u>Net imports</u>				
Average				
1934-38	5,520	148	492	(13.5) ^{a/}
1948-50	5,004	227	1,855	9.4
1952	4,666	379	1,333	272.8
1953	4,751	(256) ^{a/}	1,168	(204.3) ^{a/}
1954	4,012	(1,443) ^{a/}	257	(375.4) ^{a/}

* Data from Food and Agriculture Organization (FAO), Yearbook of Food and Agricultural Statistics, 1955, Part 2, Trade, pp. 54, 261. The extraction rate used by the FAO for converting flour to grain equivalent is 72 per cent of these countries, except 75 per cent 1934-38.

a/ Net exports.

[Instead of using footnote a/ the last center head might have been as follows:
Net imports (In parentheses, net exports)].