Acceptance and cost factors in soup bases versus conventional stock

Janet Ilona Lemery

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ACCEPTANCE AND COST FACTORS IN SOUP BASES VERSUS CONVENTIONAL STOCK

by

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Master of Science

MONTANA STATE UNIVERSITY

1958

Approved by:

Chairman, Board of Examiners

Dean, Graduate School

Date
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INTRODUCTION

Today a lack of skilled labor and spiralling labor costs are wiping out profit in food service. One of the five classes of change recommended by Mundel (1) to reduce labor cost is a change in materials. A change in materials if made should not lower quality or service. Many investigations (2), (3), (4), in institutions are indicating that the purchase of a preprocessed item in food services reduces the labor cost and the cost per portion serving. Today there is an increasing trend to use frozen and canned meats and poultry, seafoods, soups, canned fruits, canned and frozen vegetables, prepeeled vegetables, preportioned items, sectioned fruits, frostings, puddings, pie fillings, instant mixes, salad dressings, sauces, concentrated frozen fruits, juices, beverages, baking mixes and other foods in forms which reduce labor costs in the institution kitchen.

While the acceptance of some of these foods has been fairly rapid, institutions have been slow in substituting soup bases for meat stocks in soups, gravies and entrees. One possible reason for this may be the lack of comparisons that have been made between standard or conventional institutional meat stocks and soup bases.

The purpose of the present study was to obtain data for an evaluation of the economy and acceptability of a soup base for use in making soups, stocks, entrees and gravies compared with these products made from conventional stocks.

The research was financed in part by a grant from General Foods, Inc. General Foods, Inc. Good Seasons Soup Bases were used to make the
stocks, soups, gravies and entrees compared with those made from conventionally prepared meat stocks.

PROCEDURE

A series of 16 tests compared soups, stocks, entrees and gravies made from soup and gravy bases now on the market with the same 16 products made from conventional stocks. These tests spanned a three week period and were conducted at the Montana State University food service in Missoula. Acceptance and cost factors were considered in the comparisons. Table I indicates the test number, the date on which the product was made, the quantity made, the products used for testing purpose, and the meal at which these products were served.

A panel of expert judges was used to test for flavor, texture and other differences. Preferences also were determined. A general consumer panel was used to indicate preference between the conventional and the base product.

The expert taste panel was composed of individuals selected from the students and food service staff at Montana State University. Twenty-one out of 105 tested were initially able to qualify as a judge. The test for selection as an expert judge called for the identification of 4 solutions at low taste thresholds, bitter, salty, sour or sweet. The items for this identification test were prepared as follows:

<table>
<thead>
<tr>
<th>TASTE TESTER THRESHOLD SOLUTIONS*</th>
</tr>
</thead>
<tbody>
<tr>
<td>*per gallon of water</td>
</tr>
<tr>
<td>1. Bitter 4 mg. quinine sulfate</td>
</tr>
<tr>
<td>2. Salt 300 mg. sodium chloride</td>
</tr>
<tr>
<td>3. Sour 500 mg. citric acid</td>
</tr>
<tr>
<td>4. Sweet 400 mg. sucrose</td>
</tr>
<tr>
<td>Test No.</td>
</tr>
<tr>
<td>---------</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
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<tr>
<td>23</td>
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<tr>
<td>24</td>
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<tr>
<td>25</td>
</tr>
<tr>
<td>26</td>
</tr>
</tbody>
</table>
Four 1-oz. paper cups coded "A", "B", "C", "D", each containing one of the four solutions, were set before the candidate. The candidate was then asked to identify the taste of each of the four solutions and to mark his selections on a sheet. (See appendix p. 28 for sample of the water flavor score sheet.) This method of selection of the expert panel is a modified version of the method used by Kotschevar. (5) In addition his method of conducting the tests and his method of handling the data were used.

The judges on the expert panel were given this water flavor test at the beginning of each test period to determine whether at the time of an actual test they still possessed taste acuity. Tests were made at 11:30 a.m. and 4:30 p.m. because at that time taste acuities are highest.

The testing of the food was done in the following manner: Each judge was asked to correctly identify 2 identical samples of 3 which were presented to him. If the products could be identified by visual means alone the judge was blindfolded. The identical pair of 3 samples used, conventional or base, varied at random. (The appendix p. 29 contains a sample of the expert panel score sheet.) In most instances this pairing of samples was repeated without the blindfold. Each judge was also asked to state his preference for a sample or samples and to indicate why he preferred this sample or samples. The expert judge's preference or preferences were used only when he was able to correctly identify the water flavor test when taken just previous to the test and when he was able to correctly pair identical samples in the triangle test. Because of this reason the data used on preferences of the expert panel varied in number from 1 to 7.

The consumer panel was used to obtain an estimate of what the
average palate might prefer. The consumer panel consisted of students, employees and faculty of Montana State University.

The first 50 or so individuals who came through the cafeteria line were used for the consumer panel. A pair of samples, one of which was on a red band dish or bowl and the other of which was on a grey band dish or bowl, were given to the consumer judge. Each judge was asked to check "red band", "grey band" or "no choice" as a preference listing (see appendix p. 30 for sample of the consumer panel sheet).

"The data obtained from the consumer panel was subjected to a statistical test to ascertain significance. This was the ordinary "t-test" but a slightly different formula was used. Tasters who are unable to detect a difference between samples, or to whom both samples are equally acceptable, sometimes indicate no preference. These no preference selections have to be taken into account in evaluating the results of comparisons or some means used to dispose of them.

In quality control work with an expert panel, the inability of a judge to discriminate between samples permits the exclusion of his response from the computations. However, this practice, when applied to a general tasting panel, might give a distorted value to a preference which may actually be slight. For this reason, the practice has been adopted in many laboratories of including "no choice" notations in the N (total number of preferences) of the formula:

\[
\frac{X - a-b}{\sqrt{N}}
\]

As an example, if 100 people tasted samples A and B and 29 prefer A, 11 prefer B, and 60 put "no choice" on their slips, the usual calculation of the t-test will indicate a probable chance of 1.8 which is not a sufficiently large statistic to indicate significance. The same result will be obtained if it is reasoned that those tasters who could not make an actual choice between A and B, would, in an arbitrary choice, have given equal preference to A and B. However, if "no choice" notations are disregarded, and their number omitted from the calculations, the result would be 2.55 which would make the preference for sample A significant. It is unlikely that a comparison in which 60 out of 100 tasters could make no choice would show that a real preference existed for one sample over the other. Therefore, no preferences by the panel are included in the total number of examinations, N, but not in "a" or "b". This procedure is consistent with practices in many food testing laboratories."
The results of all the consumer tests were pooled to determine if the panel had been able to distinguish between the conventional and base products. According to Wallis' method based on Fisher's test (6) the data from independent tests may be pooled. This test throws away any distinction between individual tests and lumps the results together, answering the question: "were the results as a whole significant?" This same procedure of pooling results was used to test the significance of all the allowed preferences of the expert panel.

Both the expert panel and the consumer panel tested all products with the exception of the first test for danish dumpling soup which was tested only by the consumer panel. A listing of the size portion and the method of serving for both the expert and consumer panel can be found in the appendix p. 27. The portion sizes used are those planned portions as used at Montana State University Food Service Department. Every effort was made to keep seasonings, color, flavor and temperature of the conventional and the base products the same.

Standardized recipes from Terrell (7) and from the files at Montana State University Food Service Department were used for the conventional stocks and their products. The directions on the jars were used for the stocks made from commercial bases. (See appendix pp. 55 to 70 for the recipes and ingredients used for both the conventional and base stocks and their products). Recipes as suggested by General Foods were used for the soups, gravies and entrees made from the base stocks as given on their pamphlets. Where General Foods did not suggest a recipe, as in the case of danish dumpling soup, beef barley soup, vegetable soup, chicken noodle soup, minestrone soup and mulligatawny soup, recipes from Terrell and from the files at Montana State University were used the only difference being that
a base stock was used in place of a standardized or conventional stock. This may lead to some variation because of differences in recipes however this method will be used to give a good comparative standard for the test.

The soup bases and the ingredients for both the base and the conventional products were obtained by a storeroom requisition. This requisition listed the exact amounts of all ingredients in the recipes and the necessary directions. The storeroom man weighed out the dry ingredients and the shortening and delivered them with the requisition to the steam section. The vegetables were prepared in the vegetable preparation unit and obtained from the refrigerators where they were stored. The cook obtained the dairy products from the walk-in refrigerators. Seasonings were stored in the cooks' unit.

The 30 gallon quantities of soup and the 25 gallon quantities of chili were made in an 80 gallon Groen steam-jacketed kettle Model G8OSP. The 20 gallon quantities of soup were made in a 30 gallon Wearever kettle. Two 20 gallon Groen tilt kettles Model 25430 and Model 2355 were used to make the 5 gallon and 2$2$ gallon quantities of soup. A 20 quart Legion tilt kettle Model TAT20Q and a 10 quart Legion tilt kettle Model TATLOQ were used for the remaining products. All steam kettles operated on an 8-pound steam pressure line. Soups simmered between 130-150°. Vegetables were delivered directly to the point of preparation where they were prepared at a vegetable table and sink with garbage disposal having the following over-all dimensions: 12' 4$1/2$" long X 2'-1/3" wide X 34$1/2$" high. The chicken risotto was prepared in a Fish 75 revolving oven Model 1925 3.

Time and cost studies were made in order to measure productivity. Time was recorded as production time and total time. The processing of
foods through equipment was recorded on man, machine, material flow charts. Steps also were recorded. (See appendix pp. 37 to 54 for the times and steps). In presenting flow charts here the symbols used are adapted from Mundel(1). The definitions and an example of the action indicated by these symbols are as follows:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Action Symbolized</th>
<th>Definition</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td>Operation</td>
<td>A change or modification of an item while productive work occurs. This may include planning or study.</td>
<td>A meat stock is strained.变换或修改一件物品，同时进行生产性工作。这可能包括计划或研究。</td>
</tr>
<tr>
<td>O</td>
<td>Movement</td>
<td>Changing location without causing a change or modification of an item.</td>
<td>Stock is moved from pans to storage; a waitress takes a bowl of soup to a table.</td>
</tr>
</tbody>
</table>

The production time indicates the time the worker actually spent working with the product and includes making-up, tending, tasting, stock room time, receiving time and clean-up.

The total time includes time from start of production to final completion of cooking of the product. Total time was recorded by a wall clock and production time was calculated with the aid of a stop-watch. Frequently times for vegetables were prorated in calculating times after being initially calculated as in Table II. These figures were obtained by taking

**TABLE II**

**VEGETABLE PREPARATION TIMES**

<table>
<thead>
<tr>
<th>Amount</th>
<th>Item</th>
<th>Mean Hand Calculations</th>
<th>Mean Machine Calculations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Steps</td>
<td>Time</td>
</tr>
<tr>
<td></td>
<td>Hand</td>
<td>Mn:Sec</td>
<td></td>
</tr>
<tr>
<td>1 lb.</td>
<td>Carrots</td>
<td>1.8</td>
<td>3:30</td>
</tr>
<tr>
<td>1 lb.</td>
<td>Turnips</td>
<td>1.6</td>
<td>2:07</td>
</tr>
<tr>
<td>1 lb.</td>
<td>Onions</td>
<td>.8</td>
<td>2:06 ½</td>
</tr>
<tr>
<td>1 lb.</td>
<td>Celery</td>
<td>2.8</td>
<td>1:24 ½</td>
</tr>
</tbody>
</table>
the mean figure for times on a series of 1 lb. batch preparations of the vegetables concerned. Hand peeling timings were used with the small quantity recipes while machine times were used with the 20, 25 and 30 gallon recipes. An effort was made to keep the procedures typical of what would be done in both a small and large food service institution.

Costs were calculated for the ingredients, the labor and the total cost of production. Ingredient costs were based on bid prices at Montana State University (see table pp. 71 to 72 in appendix) for Winter quarter, 1956. Where necessary to retranslate quantities of vegetables to as purchased (a.p.) and edible portion (e.p.) basis, the costs were figured according to the percentages in Food Yields Summarized by Different Stages of Preparation. (8) 1/10 the cost of the meat or chicken was used in calculating the cost of the meat used to make the stocks. The remaining 9/10 of the cost was considered to have remained with the meat or chicken since it could be used for creamed chicken, hash or some other product.

Labor costs were calculated at $1.50 per hour and are based on the production time figured to the nearest minute. Labor costs for products made from stocks also include the ratio of time spent in making the stock to the ratio of stock used in the particular recipe of the batch used.

The total cost was ingredient cost plus labor cost for the product. The cost per serving was also calculated and was based on total cost.

RESULTS AND DISCUSSION

Acceptability

Data obtained from the consumer panel as shown in Table III indicates individual preferences of conventional, base products and no preference listings. This table also gives the $x \sigma$'s calculated from the preferences, as well as the results of pooling the data. It indicates
<table>
<thead>
<tr>
<th>Test No.</th>
<th>Product</th>
<th>Consumer Panel Preferences</th>
<th>Expert Panel Preferences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Conventional Base Preference</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>x/Favors</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Danish Dumpling Soup</td>
<td>23</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Onion Gravy</td>
<td>19</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>Creamed Chicken</td>
<td>36</td>
<td>8</td>
</tr>
<tr>
<td>4</td>
<td>Minestrone Soup</td>
<td>25</td>
<td>31</td>
</tr>
<tr>
<td>5</td>
<td>Mulliganway Soup</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>Barley Beef Soup</td>
<td>13</td>
<td>32</td>
</tr>
<tr>
<td>7</td>
<td>Culi Con Carne</td>
<td>24</td>
<td>44</td>
</tr>
<tr>
<td>8</td>
<td>Swiss St. Gravy</td>
<td>12</td>
<td>19</td>
</tr>
<tr>
<td>9</td>
<td>Bechamel Sauce</td>
<td>21</td>
<td>11</td>
</tr>
<tr>
<td>10</td>
<td>Chicken Gravy</td>
<td>21</td>
<td>11</td>
</tr>
<tr>
<td>11</td>
<td>Vegetable Soup</td>
<td>24</td>
<td>20</td>
</tr>
<tr>
<td>12</td>
<td>Split Pea Soup</td>
<td>25</td>
<td>30</td>
</tr>
<tr>
<td>13</td>
<td>Navy Bean Soup</td>
<td>15</td>
<td>7</td>
</tr>
<tr>
<td>14</td>
<td>Consommé</td>
<td>14</td>
<td>35</td>
</tr>
<tr>
<td>15</td>
<td>Chicken Noodle S.</td>
<td>14</td>
<td>11</td>
</tr>
<tr>
<td>16</td>
<td>Onion Soup</td>
<td>42</td>
<td>16</td>
</tr>
<tr>
<td>Totals</td>
<td></td>
<td>328</td>
<td>392</td>
</tr>
</tbody>
</table>

* Indicates the results are significant at the 5% level.

** \( \frac{x}{6} \) of 2.24 (\( \frac{x}{6} \) - 1.36) indicates preference is significantly in favor of base product when subjected to Wallis' test (6).

*** 9 of 11 paired correctly with blindfold, 11 of 11 paired correctly visually.

**** Includes 1 "no preference".

***** \( \frac{x}{6} \) of 2.14 (\( \frac{x}{6} \) - 1.96) indicates preference is significantly in favor of conventional product (6).
that out of 16 tests 5 products were significantly preferred. Four of the products were made from bases. These were: mulligatawny soup, barley beef soup, chili con carne and consomme. Onion soup was the one conventional product significantly preferred by the consumer pane. The pooled $\bar{x}$ of 2.24 indicates preference was significantly in favor of the base product. (C)

Data obtained from the expert panel as shown in Table III indicates that the judges were able to correctly pair in both visual and blindfold tests 98% of the time. The only time they failed to pair correctly, as is indicated on Table III, was in chicken gravy. This ability of the judges to pair correctly shows there were significant differences between the control and the base product. This ability to pair correctly was based on a distinct difference in the taste of the 2 products. Differences in method of preparation or ingredients rather than basis differences between the base and control stocks account for this ability of the expert panel judges to readily pair 2 of 3 samples in both the blindfold and the visual test. A study of the test results for those recipes in which procedures and ingredients were identical (minestrone soup, mulligatawny soup, barley beef soup, vegetable soup, chicken noodle soup, and onion soup) indicate that the expert panel's preferences were as mixed in these tests as in the remaining tests where the procedures and ingredients were not identical. This leads to an assumption that recipe differences influenced a preference as much for the base product as for the control product. Substantiation for this assumption may be indicated by the expert panel's preferences and the reasons for these preferences. The expert panel score sheet contained a list of criteria which the judges
might check to indicate the basis on which they made their preference.

(A copy of the expert panel score sheet can be found in the appendix on p. 29). These terms were not defined for the judge in any formal manner. They discussed the terms before beginning the first test. A study of Table IV shows small differences between products and gives an indication of why the judges preferred the base or conventional product. It appears that in general the conventional products were preferred on the basis of clarity, flavor, color and appearance, seasoning, body and texture. The term "other" was included in order to give the judge a chance to state "other reasons". In test 3 (creamed chicken) there were 5 comments stating that the base product was "too salty". In test 4 (minestrone soup) there was one comment indicating that the base product had a more natural flavor. In test 6 (beef barley soup) comments indicated that the base was too salty, too highly seasoned and "bitter". In test 7 the conventional product for chili con carne received the comments "sharper tasting", "milder seasoning", "smoother", "better texture". In test 10 (chicken gravy) 3 comments indicated that the base product was too salty. One comment indicated that the texture resembled lemon pie filling, and another commented that the color was too yellow. In test 11 (vegetable soup) one comment indicated that the control was smoother: another comment stated that as far as clarity and seasoning the soups were about the same and that the difference was hard to detect. In test 14 one person commented that the consomme had too much onion flavor. No onion was used.

On the evening of January 30 a test was made using identical products. This product, chicken risotto, was presented to both the expert and consumer panel to determine whether or not the panels were seriously stating a preference. This test was given after the consumer panel had
<table>
<thead>
<tr>
<th>Test No.</th>
<th>Product</th>
<th>No. Judges</th>
<th>Qualifying Clarity</th>
<th>Flavor</th>
<th>Appearance</th>
<th>Seasoning</th>
<th>Body</th>
<th>Texture</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>B* C**</td>
<td>B C</td>
<td>B C</td>
<td>B C</td>
<td>B C</td>
<td>B C</td>
</tr>
<tr>
<td>1</td>
<td>Danish Dumpling Soup</td>
<td>6</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>No Test by Expert Panel</td>
</tr>
<tr>
<td>2</td>
<td>Onion Gravy</td>
<td>6</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Creamed Chicken</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Minestrone Soup</td>
<td>5</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>Mulligatawny Soup</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>Barley Beef Soup</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Chili Con Carne</td>
<td>6</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>Swiss Steak Gravy</td>
<td>5</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>Bechamel Sauce</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>10</td>
<td>Chicken Gravy</td>
<td>6</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td>Vegetable Soup</td>
<td>6</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>12</td>
<td>Split Pea Soup</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>13</td>
<td>Navy Bean Soup</td>
<td>6***</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>14</td>
<td>Consomme</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>15</td>
<td>Chicken Noodle Soup</td>
<td>7</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>16</td>
<td>Onion Soup</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>

Totals | 3 | 7 | 21 | 34 | 9 | 15 | 15 | 2 | 6 | 8 | 5 | 9 |

* Base
** Conventional
*** Only 5 judges stated a preference.
taken 14 tests (with a chance for "no preference" listing) and the expert panel had taken 13 tests. On this test the consumer panel turned in the following results: 19 checks for "red band" and 16 checks for "grey band" with 7 "no choice" notations. A calculation of these results yielded .46 which indicated "no significant difference". There were only 3 other times that a higher number of "no choice" slips were noted. The expert panel's reaction to the chicken risotto shows that of 10 judges only 1 correctly identified the water flavor test that evening. Three judges instead of attempting to pair samples marked their slips "no difference", "very hard to detect", "both very good". A timing was not taken on this test but it did take appreciably longer for the judges to turn in their score sheets for the evening.

Data obtained from the expert panel as shown in Table III also indicates individual preferences for the expert judges for conventional and base products. This table indicates that when these preferences were evaluated a pooled of 2.14 indicated (6) that the expert panel significantly preferred the conventional products.

In view of the fact that an expert panel is used for quality control work and that the consumer panel represents the average palate, more weight should be attached to the consumer panel judgments, then to those of the expert panel in preferences as to what the ordinary person might prefer. Results on acceptability favor the base products somewhat but perhaps one could conclude from the data that there was no difference in acceptability of products made from base and conventional soup stocks.

Cost Factors

Table V compares the time and step data used to make the conventional and base products. These data are taken from the flow process
### TABLE V

**COMPARATIVE TIMES AND STEPS FOR CONVENTIONAL AND BASE PRODUCTS**

<table>
<thead>
<tr>
<th>Test No.</th>
<th>Product</th>
<th>Conventional</th>
<th>Bar.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Gals.</td>
<td>Total Production</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Time</td>
<td>Time</td>
</tr>
<tr>
<td>1.</td>
<td>Chicken Stock</td>
<td>30</td>
<td>4:47</td>
</tr>
<tr>
<td>2.</td>
<td>Chicken Stock</td>
<td>5</td>
<td>4:20</td>
</tr>
<tr>
<td>3.</td>
<td>Danish Dumpling S.</td>
<td>30</td>
<td>1:55</td>
</tr>
<tr>
<td>4.</td>
<td>Danish Dumpling S.</td>
<td>5</td>
<td>:59</td>
</tr>
<tr>
<td>5.</td>
<td>Beef Stock</td>
<td>30</td>
<td>10:09</td>
</tr>
<tr>
<td>8.</td>
<td>Chicken Stock</td>
<td>30</td>
<td>6:08</td>
</tr>
<tr>
<td>9.</td>
<td>Chicken Stock</td>
<td>5</td>
<td>4:53</td>
</tr>
<tr>
<td>10.</td>
<td>Creamed Chicken</td>
<td>5</td>
<td>:43</td>
</tr>
<tr>
<td>11.</td>
<td>Minestrone Soup</td>
<td>20</td>
<td>3:15</td>
</tr>
<tr>
<td>17.</td>
<td>Swiss Stk. Gravy</td>
<td>10</td>
<td>:35</td>
</tr>
<tr>
<td>18.</td>
<td>Bechamel Sauce</td>
<td>1\frac{1}{2}</td>
<td>:27</td>
</tr>
<tr>
<td>21.</td>
<td>Split Pea Soup</td>
<td>3\frac{1}{2}</td>
<td>3:15</td>
</tr>
<tr>
<td>22.</td>
<td>Navy Bean Soup</td>
<td>5</td>
<td>2:03</td>
</tr>
<tr>
<td>24.</td>
<td>Chicken Noodle S.</td>
<td>5</td>
<td>:30</td>
</tr>
</tbody>
</table>

**Totals**


*These tests are omitted from total calculations.*
charts made during the study. Tables VI, VII, VIII and IX are samples of these charts. Table V indicates that production time is about 46% less when products are made from a base over a conventional stock and savings in steps are about 43% less when the base is used. Total time savings are about 53% less.

Since labor costs are derived from production time (production time in hours × $1.50 per hour = labor cost) the percentage savings in dollars by using a base is about 46% less or the same as that saved in production time. Total dollar savings in labor cost for all products made in the tests is $8.30 (see Table X). Table X also indicates that ingredient cost was $35.58 less for products made from the base or 34% less than the cost of ingredients for the conventional product. Total dollars saved by using a base (labor cost plus ingredient cost) is $44.30 or 16% less.

In making these cost calculations, costs for tests 8 and 9 for the chicken stock are omitted from the cost calculations.

Table XI shows the total cost differences between the conventional and the base products per individual serving. The differences favored the base with the following 6 exceptions: creamed chicken, bechamel sauce, chicken gravy, navy bean soup, chicken noodle soup and swiss steak gravy.

Costs including ingredient, labor and time tend to favor the products made from bases.

Soup bases may save in other ways than in ingredients and labor. They save money by requiring less storage space for raw material and by decreasing the need for refrigerated space. They also simplify ordering and purchasing procedures. In addition, soup bases give institutional
TABLE VI

ORIGINAL FLOW PROCESS CHART FOR MATERIALS INTO CHICKEN STOCK

<table>
<thead>
<tr>
<th>Type of chart</th>
<th>Flow Process Chart</th>
<th>Charted by</th>
<th>JL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original</td>
<td>Flow Process Chart</td>
<td>Charted by</td>
<td>JL</td>
</tr>
<tr>
<td>Original or Proposed</td>
<td>Original</td>
<td>Date charted</td>
<td>1/14/58</td>
</tr>
</tbody>
</table>

Subject: Materials into chicken stock Test No. 1 - Conventional - 30 gal.

<table>
<thead>
<tr>
<th>Details of Operation</th>
<th>Symbol</th>
<th>Steps</th>
<th>Feet</th>
<th>Time Hr:Mn:Sec</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receiving, weighing, to storage</td>
<td>0</td>
<td>51</td>
<td>48</td>
<td>4:47</td>
</tr>
<tr>
<td>Cart to kettles</td>
<td>0</td>
<td>30</td>
<td>85</td>
<td>3:39</td>
</tr>
<tr>
<td>Chicken to pot</td>
<td>0</td>
<td>54</td>
<td>96</td>
<td>11:02</td>
</tr>
<tr>
<td>Seasonings</td>
<td>0</td>
<td>24</td>
<td>42</td>
<td>1:02</td>
</tr>
<tr>
<td>Throw out boxes</td>
<td>0</td>
<td>36</td>
<td>60</td>
<td>1:16</td>
</tr>
<tr>
<td>Vegetable Preparation</td>
<td>0</td>
<td>207</td>
<td>398</td>
<td>15:23</td>
</tr>
<tr>
<td>Skimming and working time</td>
<td>0</td>
<td>465</td>
<td>855</td>
<td>9:37</td>
</tr>
<tr>
<td>Take out chicken and strain</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chickens and stock to storage</td>
<td>0</td>
<td>116</td>
<td>225</td>
<td>2:64</td>
</tr>
<tr>
<td>Wash kettles, pots and pans, and store</td>
<td>0</td>
<td>86</td>
<td>90</td>
<td>11:74</td>
</tr>
</tbody>
</table>

Totals 6-0,4-0 1,069 1,899 1:12:29
TABLE VII

PROPOSED FLOW PROCESS CHART FOR MATERIALS INTO CHICKEN STOCK

<table>
<thead>
<tr>
<th>Type of chart</th>
<th>Flow Process Chart</th>
<th>Charted by</th>
<th>JL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original or Proposed</td>
<td>Proposed</td>
<td>Date charted</td>
<td>1/14/58</td>
</tr>
</tbody>
</table>

Subject: Materials into chicken stock Test No. 1 - Base - 30 gal

<table>
<thead>
<tr>
<th>Details of Operation</th>
<th>Symbol</th>
<th>Steps</th>
<th>Feet</th>
<th>Time (Hr:Mn:Sec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>To storage</td>
<td>0</td>
<td>52</td>
<td>102</td>
<td>2:45</td>
</tr>
<tr>
<td>For seasonings</td>
<td>0</td>
<td>22</td>
<td>50</td>
<td>:43</td>
</tr>
<tr>
<td>Open jars and unload</td>
<td>0</td>
<td>6</td>
<td>4</td>
<td>1:43</td>
</tr>
<tr>
<td>Jars to garbage</td>
<td>0</td>
<td>16</td>
<td>45</td>
<td>:19</td>
</tr>
<tr>
<td>Get ladle to measure water, stir and taste</td>
<td>0</td>
<td>32</td>
<td>72</td>
<td>1:02</td>
</tr>
<tr>
<td>Wash pot and ladle and store</td>
<td>0</td>
<td>35</td>
<td>56</td>
<td>2:51</td>
</tr>
</tbody>
</table>

Totals 4-0, 2-0 163 329 9:23

SUMMARY OF FLOW PROCESS CHART

<table>
<thead>
<tr>
<th>Item</th>
<th>Control</th>
<th>Base</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operations</td>
<td>6</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Movement</td>
<td>4</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Steps</td>
<td>1,069</td>
<td>163</td>
<td>906</td>
</tr>
<tr>
<td>Distance (feet)</td>
<td>1,899</td>
<td>329</td>
<td>1,570</td>
</tr>
<tr>
<td>Time (Hr:Mn:Sec)</td>
<td>1:12:29</td>
<td>:09:23</td>
<td>1:03:06</td>
</tr>
</tbody>
</table>
### Table VIII

**Original Flow Process Chart for Materials into Beef Stock**

<table>
<thead>
<tr>
<th>Type of chart</th>
<th>Flow Process Chart</th>
<th>Charted by</th>
<th>JL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original or Proposed</td>
<td>Original</td>
<td>Date charted</td>
<td>1/18/58</td>
</tr>
<tr>
<td>Subject: Materials into Beef Stock</td>
<td></td>
<td>Test No. 5 - Conventional-30 gal.</td>
<td></td>
</tr>
</tbody>
</table>

#### Details of Operation

<table>
<thead>
<tr>
<th>Operation</th>
<th>Symbol</th>
<th>Steps</th>
<th>Feet</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receiving bones and meat</td>
<td>0</td>
<td>8</td>
<td>10</td>
<td>5:24</td>
</tr>
<tr>
<td>Bones and meat to storage</td>
<td>0</td>
<td>58</td>
<td>87</td>
<td>3:31</td>
</tr>
<tr>
<td>Meat from storage</td>
<td>o</td>
<td>34</td>
<td>49</td>
<td>1:20</td>
</tr>
<tr>
<td>Bones from storage</td>
<td>o</td>
<td>38</td>
<td>53</td>
<td>2:01</td>
</tr>
<tr>
<td>Meat to brown</td>
<td>0</td>
<td>49</td>
<td>51</td>
<td>3:10</td>
</tr>
<tr>
<td>Stir time and steam on</td>
<td>0</td>
<td>21</td>
<td>24</td>
<td>2:20</td>
</tr>
<tr>
<td>Wash bones</td>
<td>0</td>
<td>112</td>
<td>149</td>
<td>6:26</td>
</tr>
<tr>
<td>Dump bones into pot</td>
<td>0</td>
<td>10</td>
<td>16</td>
<td>1:10</td>
</tr>
<tr>
<td>Bones to garbage</td>
<td>0</td>
<td>52</td>
<td>135</td>
<td>1:46</td>
</tr>
<tr>
<td>Vegetable preparation</td>
<td>0</td>
<td>96</td>
<td>144</td>
<td>39:30</td>
</tr>
<tr>
<td>Seasonings</td>
<td>0</td>
<td>161</td>
<td>362</td>
<td>7:52</td>
</tr>
<tr>
<td>Water off</td>
<td>0</td>
<td>6</td>
<td>12</td>
<td>0:03</td>
</tr>
<tr>
<td>Skimming and tending time</td>
<td>0</td>
<td>40</td>
<td>21</td>
<td>8:23</td>
</tr>
<tr>
<td>Strain stock</td>
<td>0</td>
<td>35</td>
<td>72</td>
<td>23:10</td>
</tr>
<tr>
<td>Meat out</td>
<td>0</td>
<td>72</td>
<td>110</td>
<td>4:05</td>
</tr>
<tr>
<td>Bones out and into garbage can</td>
<td>0</td>
<td>87</td>
<td>182</td>
<td>2:10</td>
</tr>
<tr>
<td>Meat and stock to storage</td>
<td>0</td>
<td>167</td>
<td>138</td>
<td>4:15</td>
</tr>
<tr>
<td>Clean pot and equipment</td>
<td>0</td>
<td>71</td>
<td>144</td>
<td>15:02</td>
</tr>
</tbody>
</table>

Totals: 11-0-7-0 1,191 1,739 2:10:38
### TABLE IX

**PROPOSED FLOW PROCESS CHART FOR MATERIALS INTO BEEF STOCK**

<table>
<thead>
<tr>
<th>Type of chart</th>
<th>Flow Process Chart</th>
<th>Charted by</th>
<th>JL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original or Proposed</td>
<td>Proposed</td>
<td>Date charted</td>
<td>1/18/58</td>
</tr>
<tr>
<td>Subject</td>
<td>Materials into Beef Stock</td>
<td>Test No. 5 - Base - 30 gal.</td>
<td></td>
</tr>
</tbody>
</table>

**Details of Operation**

<table>
<thead>
<tr>
<th>Operation</th>
<th>Symbol</th>
<th>Steps</th>
<th>Feet</th>
<th>Time (Hr:Mn:Sec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>To storage</td>
<td>0</td>
<td>52</td>
<td>120</td>
<td>1:25</td>
</tr>
<tr>
<td>For seasonings</td>
<td>0</td>
<td>22</td>
<td>60</td>
<td>:22</td>
</tr>
<tr>
<td>Open jars and unload</td>
<td>0</td>
<td>6</td>
<td>4</td>
<td>:43</td>
</tr>
<tr>
<td>Jars to garbage</td>
<td>0</td>
<td>26</td>
<td>45</td>
<td>:28</td>
</tr>
<tr>
<td>Get ladle to measure water, stir, taste</td>
<td>0</td>
<td>32</td>
<td>72</td>
<td>1:02</td>
</tr>
<tr>
<td>Wash pot and ladle and store</td>
<td>0</td>
<td>34</td>
<td>54</td>
<td>1:42</td>
</tr>
</tbody>
</table>

**Totals**

4-0, 2-0 193 355 5:42

**SUMMARY OF FLOW PROCESS CHART**

**Test No. 5**

<table>
<thead>
<tr>
<th>Item</th>
<th>Control</th>
<th>Base</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operations</td>
<td>11</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Movement</td>
<td>7</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Steps</td>
<td>1,191</td>
<td>193</td>
<td>998</td>
</tr>
<tr>
<td>Distance (feet)</td>
<td>1,739</td>
<td>355</td>
<td>1,384</td>
</tr>
<tr>
<td>Time (Hr:Mn:Sec)</td>
<td>2:10:38</td>
<td>:05:42</td>
<td>2:04:56</td>
</tr>
</tbody>
</table>
TABLE X

COMPARATIVE COST COMPARISONS FOR CONVENTIONAL AND BASE PRODUCTS

<table>
<thead>
<tr>
<th>Test No.</th>
<th>Product</th>
<th>Gals.</th>
<th>Conventional</th>
<th>Base</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Chicken Stock</td>
<td>30</td>
<td>$10.84</td>
<td>$1.80</td>
</tr>
<tr>
<td>2.</td>
<td>Chicken Stock</td>
<td>5</td>
<td>1.82</td>
<td>.75</td>
</tr>
<tr>
<td>3.</td>
<td>Danish Dumpling S.</td>
<td>30</td>
<td>35.99</td>
<td>95</td>
</tr>
<tr>
<td>4.</td>
<td>Danish Dumpling S.</td>
<td>5</td>
<td>5.99</td>
<td>.28</td>
</tr>
<tr>
<td>5.</td>
<td>Beef Stock</td>
<td>30</td>
<td>14.47</td>
<td>3.28</td>
</tr>
<tr>
<td>6.</td>
<td>Beef Stock</td>
<td>5</td>
<td>2.35</td>
<td>1.38</td>
</tr>
<tr>
<td>7.</td>
<td>Onion Gravy</td>
<td>1</td>
<td>.79</td>
<td>.55</td>
</tr>
<tr>
<td>*8.</td>
<td>Chicken Stock</td>
<td>30</td>
<td>7.55</td>
<td>2.40</td>
</tr>
<tr>
<td>*9.</td>
<td>Chicken Stock</td>
<td>5</td>
<td>12.11</td>
<td>.98</td>
</tr>
<tr>
<td>10.</td>
<td>Creamed Chicken</td>
<td>5</td>
<td>12.10</td>
<td>.98</td>
</tr>
<tr>
<td>11.</td>
<td>Minestrone Soup</td>
<td>20</td>
<td>18.80</td>
<td>1.23</td>
</tr>
<tr>
<td>12.</td>
<td>Minestrone Soup</td>
<td>5</td>
<td>4.70</td>
<td>.53</td>
</tr>
<tr>
<td>13.</td>
<td>Mulligatavny S.</td>
<td>30</td>
<td>33.19</td>
<td>.68</td>
</tr>
<tr>
<td>14.</td>
<td>Mulligatavny S.</td>
<td>5</td>
<td>5.53</td>
<td>.43</td>
</tr>
<tr>
<td>15.</td>
<td>Beef Barley</td>
<td>5</td>
<td>5.72</td>
<td>.68</td>
</tr>
<tr>
<td>16.</td>
<td>Chili Con Carne</td>
<td>25</td>
<td>44.50</td>
<td>1.45</td>
</tr>
<tr>
<td>17.</td>
<td>Swiss Stc. Gravy</td>
<td>10</td>
<td>6.45</td>
<td>.73</td>
</tr>
<tr>
<td>18.</td>
<td>Bechamel Sauce</td>
<td>1½</td>
<td>1.07</td>
<td>.30</td>
</tr>
<tr>
<td>19.</td>
<td>Chicken Gravy</td>
<td>1</td>
<td>.14</td>
<td>.28</td>
</tr>
<tr>
<td>20.</td>
<td>Vegetable Soup</td>
<td>5</td>
<td>5.46</td>
<td>.56</td>
</tr>
<tr>
<td>21.</td>
<td>Split Pea Soup</td>
<td>2½</td>
<td>2.21</td>
<td>.43</td>
</tr>
<tr>
<td>22.</td>
<td>Navy Bean Soup</td>
<td>5</td>
<td>2.25</td>
<td>.35</td>
</tr>
<tr>
<td>23.</td>
<td>Consomme</td>
<td>5</td>
<td>6.74</td>
<td>.55</td>
</tr>
<tr>
<td>24.</td>
<td>Chicken Noodle S.</td>
<td>5</td>
<td>3.52</td>
<td>.25</td>
</tr>
<tr>
<td>25.</td>
<td>Chicken Noodle S.</td>
<td>30</td>
<td>21.12</td>
<td>.43</td>
</tr>
<tr>
<td>26.</td>
<td>Onion Soup</td>
<td>5</td>
<td>4.15</td>
<td>.25</td>
</tr>
</tbody>
</table>

$249.90 $19.12 $269.02
$214.32 $10.32 $224.64

*These tests are omitted from total calculations
<table>
<thead>
<tr>
<th>No.</th>
<th>Product</th>
<th>Portion Serving</th>
<th>Portion Cost Conventional</th>
<th>Portion Cost Base</th>
<th>Difference Favors Conventional Base</th>
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</thead>
<tbody>
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<td>8 oz</td>
<td>.0263</td>
<td>.0191</td>
<td>.0072</td>
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<td>.0321</td>
<td>.0200</td>
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<tr>
<td>3.</td>
<td>Danish Dumpling S.</td>
<td>8 oz</td>
<td>.0770</td>
<td>.0687</td>
<td>.0083</td>
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<tr>
<td>4.</td>
<td>Danish Dumpling S.</td>
<td>8 oz</td>
<td>.0784</td>
<td>.0683</td>
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<td>5.</td>
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<td>8 oz</td>
<td>.0370</td>
<td>.0169</td>
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<td>6.</td>
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<td>.0466</td>
<td>.0183</td>
<td>.0283</td>
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<tr>
<td>7.</td>
<td>Onion Gravy</td>
<td>2 oz</td>
<td>.0209</td>
<td>.0179</td>
<td>.0030</td>
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<tr>
<td>8.</td>
<td>Chicken Stock</td>
<td>8 oz</td>
<td>.1244</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>9.</td>
<td>Chicken Stock</td>
<td>8 oz</td>
<td>.0344</td>
<td>--</td>
<td>--</td>
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<td>10.</td>
<td>Creamed Chicken</td>
<td>6 oz</td>
<td>.1222</td>
<td>.1427</td>
<td>.0205</td>
</tr>
<tr>
<td>11.</td>
<td>Minestrone Soup</td>
<td>8 oz</td>
<td>.0626</td>
<td>.0474</td>
<td>.0152</td>
</tr>
<tr>
<td>12.</td>
<td>Minestrone Soup</td>
<td>8 oz</td>
<td>.0654</td>
<td>.0501</td>
<td>.0153</td>
</tr>
<tr>
<td>13.</td>
<td>Mulligatawny S.</td>
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<td>.0706</td>
<td>.0628</td>
<td>.0078</td>
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<tr>
<td>14.</td>
<td>Mulligatawny S.</td>
<td>8 oz</td>
<td>.0745</td>
<td>.0650</td>
<td>.0095</td>
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<td>15.</td>
<td>Beef Barley Soup</td>
<td>8 oz</td>
<td>.0800</td>
<td>.0605</td>
<td>.0195</td>
</tr>
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<td>16.</td>
<td>Chili Con Carne</td>
<td>8 oz</td>
<td>.1149</td>
<td>.0988</td>
<td>.0161</td>
</tr>
<tr>
<td>17.</td>
<td>Swiss Stk. Gravy</td>
<td>2-1/3 oz</td>
<td>.0142</td>
<td>.0243</td>
<td>.0101</td>
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<tr>
<td>18.</td>
<td>Bechamel Sauce</td>
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<td>.0171</td>
<td>.0194</td>
<td>.0023</td>
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<tr>
<td>19.</td>
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<td>.0177</td>
<td>.0111</td>
</tr>
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<td>20.</td>
<td>Vegetable Soup</td>
<td>8 oz</td>
<td>.0755</td>
<td>.0539</td>
<td>.0216</td>
</tr>
<tr>
<td>21.</td>
<td>Split Pea Soup</td>
<td>8 oz</td>
<td>.0733</td>
<td>.0711</td>
<td>.0022</td>
</tr>
<tr>
<td>22.</td>
<td>Navy Bean Soup</td>
<td>8 oz</td>
<td>.0325</td>
<td>.0433</td>
<td>.0108</td>
</tr>
<tr>
<td>23.</td>
<td>Consomme</td>
<td>8 oz</td>
<td>.0911</td>
<td>.0183</td>
<td>.0728</td>
</tr>
<tr>
<td>24.</td>
<td>Chicken Noodle S.</td>
<td>8 oz</td>
<td>.0471</td>
<td>.0389</td>
<td>.0082</td>
</tr>
<tr>
<td>25.</td>
<td>Chicken Noodle S.</td>
<td>8 oz</td>
<td>.0449</td>
<td>.0480</td>
<td>.0031</td>
</tr>
<tr>
<td>26.</td>
<td>Onion Soup</td>
<td>8 oz</td>
<td>.0550</td>
<td>.0400</td>
<td>.0150</td>
</tr>
</tbody>
</table>
managers greater management control. Food costs are more easily determined for they are easier to portion control and to calculate costs. The cost of ingredients for a conventional soup stock is also apt to vary more than the soup base and thus more frequent cost calculations for costed recipes of the conventional soup stock will have to be made. There is less apt to be contamination of products when a base is used since there is less holding of meat stocks. Errors in weighing or measuring ingredients for the soup bases are minimized since the human element involved has been considerably reduced. The retention of color, flavor and texture is more apt to be standard in a preprocessed product. Standardization of quality is important. These dishes do not vary with the cook of the moment. The food service operator can make his day's menu with confidence that the items it contains will be exactly the same each time, whether or not kitchen personnel has changed. He can be assured that foods come to him, prepared competently, uniformly and packaged conveniently. These items are extremely important if management must work with employees of limited skill.

In addition to savings in preparation time, inventory problems are also reduced. Receiving and checking, low maintenance, upkeep, good sanitation, safety, low operating costs, quality in food production and service, adequate storage, cleaning facilities, waste and garbage disposal, security, supervision, maintenance are all important factors. Preprocessed foods cut down on handling time. If storeroom requisitions are used, it takes less time to write out a requisition for a soup base than for a conventional stock. The use of soup bases would decrease the time spent in keeping up a recipe file.

Amortization of equipment and construction costs are factors which
also affect profits in a food service. These studies show less equipment will be used and less space will be required to make a product from a base. Therefore in future planning of food services soup bases can reduce operating costs.

Preference tests indicated that it doesn't make any difference whether a product made from a base stock or a product made from a conventional stock is used. Cost studies favor using products made from soup bases. Indirect costs other than labor and ingredient costs save the manager valuable time and money. If an evaluation could be placed on these factors it would more heavily swing the balance of costs in favor of the use of soup bases in institutions.

SUMMARY

A comparative study was made to compare acceptance and cost factors in making a number of food products from base and conventional soup stocks. Indirect costs and management control were also considered. Results on acceptability favor the base products somewhat but perhaps one could conclude from the data that there was no difference in acceptability. Costs including ingredient, labor and total costs favored the bases.
REFERENCES


APPENDIX
<table>
<thead>
<tr>
<th>Item</th>
<th>Portion Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Danish Dumpling Soup</td>
<td>8 oz. (not served to expert panel)</td>
</tr>
<tr>
<td>Onion Gravy</td>
<td>2 oz. (on hamburger steaks)</td>
</tr>
<tr>
<td>Creamed Chicken</td>
<td>6 oz. (plain to expert panel and on mashed potatoes to the consumer panel)</td>
</tr>
<tr>
<td>Minestrone Soup</td>
<td>8 oz.</td>
</tr>
<tr>
<td>Mulligatawny Soup</td>
<td>8 oz.</td>
</tr>
<tr>
<td>Beef Barley Soup</td>
<td>8 oz.</td>
</tr>
<tr>
<td>Chili Con Carne</td>
<td>8 oz.</td>
</tr>
<tr>
<td>Swiss Steak Gravy</td>
<td>2-1/3 oz. (on swiss steaks to both consumer and expert panels)</td>
</tr>
<tr>
<td>Bechamel Sauce</td>
<td>2 oz. (plain for expert panel and with tunafish for consumer panel)</td>
</tr>
<tr>
<td>Chicken Gravy</td>
<td>2 oz. (plain to expert panel and on mashed potato to consumer panel)</td>
</tr>
<tr>
<td>Vegetable Soup</td>
<td>8 oz.</td>
</tr>
<tr>
<td>Split Pea Soup</td>
<td>8 oz.</td>
</tr>
<tr>
<td>Navy Bean Soup</td>
<td>8 oz.</td>
</tr>
<tr>
<td>Consomme</td>
<td>8 oz.</td>
</tr>
<tr>
<td>Chicken Noodle Soup</td>
<td>8 oz.</td>
</tr>
<tr>
<td>Onion Soup</td>
<td>8 oz.</td>
</tr>
<tr>
<td>Chicken Rissotto</td>
<td>6 oz.</td>
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</table>
**WATER FLAVOR SCORE SHEET FOR SELECTION OF EXPERT PANEL**

Please mark A, B, C or D under the following:

<table>
<thead>
<tr>
<th>Salt</th>
<th>Bitter</th>
<th>Sweet</th>
<th>Sour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Name________________________

Address________________________

Telephone No.________________________
Taste Test

Please mark A, B, C or D under the following: Salt  Bitter  Sweet  Sour

____  ____  ____  ____

Product________________________  Name________________________

Of the 3 samples which 2 are alike while blindfolded?______________

Of the 3 samples which 2 are alike without blindfold?______________

Which sample or samples do you prefer?____________________________

Why do you prefer this

1. Clarity  ______________
2. Flavor   __________________
3. Color & Appearance __________________
4. Seasoning __________________
5. Body __________________
6. Texture __________________
7. Other __________________
Which do you prefer

<table>
<thead>
<tr>
<th>Red Band</th>
<th>Grey Band</th>
<th>No Choice</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tbody>
</table>
**EXPERT PANEL TEST RESULTS**

**Test No. 1**  
No Test Made

---

**Test No. 2 (1/17/58) Onion Gravy**

<table>
<thead>
<tr>
<th>Judge</th>
<th>Water-flavor test</th>
<th>Correct/Incorrect</th>
<th>Correct Pairings</th>
<th>Blindfold/No Blindfold</th>
<th>Preference</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
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</tr>
<tr>
<td>2.</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
<td>Conventional</td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td>X</td>
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<td>6.</td>
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<td>X</td>
<td></td>
<td>X</td>
<td>Base</td>
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<tr>
<td>7.</td>
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<td>X</td>
<td></td>
<td>X</td>
<td>Conventional</td>
</tr>
<tr>
<td>8.</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
<td>Base</td>
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<tr>
<td>9.</td>
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<td>X</td>
<td></td>
<td>X</td>
<td>Base</td>
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<td>X</td>
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**Test No. 3 (1/19/58) Creamed Chicken**

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<td>X</td>
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<td>2.</td>
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<td>3.</td>
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### Test No. 4 (1/19/58) Minestrone Soup

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<tr>
<td>1.</td>
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### Test No. 5 (1/20/58) Mulligatawny Soup

<table>
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<th>Correct Pairings</th>
<th>Blindfold/No Blindfold</th>
<th>Preference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Correct/Incorrect</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>X</td>
<td>X</td>
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</tr>
<tr>
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</tr>
<tr>
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<td></td>
<td>X</td>
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</tr>
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<td>X</td>
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### Test No. 6 (1/22/58) Beef Barley Soup

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<th>Correct Pairings</th>
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<th>Preference</th>
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<tr>
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<tr>
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<td>X</td>
<td>Conventional</td>
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<tr>
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<td>X</td>
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<tr>
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<td>X</td>
<td>Conventional</td>
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<td>X</td>
<td>Conventional</td>
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<td>11.</td>
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</table>
### Test No. 7 (1/23/58) CHILI CON CARNE

**Judge** | Water-flavor test | Correct Fairings | Blindfold/No Blindfold | Preference |
--- | --- | --- | --- | --- |
1. | X | X | X | Base |
2. | X | X | X | Base |
3. | X | X | X | Base |
4. | X | X | X | Base |
5. | X | X | X | Conventional |
6. | X | X | X | Base |
7. | X | X | X | Conventional |
8. | X | X | X | Conventional |
9. | X | X | X | Base |
10. | X | X | X | Base |
11. | X | X | X | Base |

---

### Test No. 8 (1/23/58) SWISS STEAK GRAVY

**Judge** | Water-flavor test | Correct Fairings | Blindfold/No Blindfold | Preference |
--- | --- | --- | --- | --- |
1. | X | X | X | Conventional |
2. | X | X | X | Base |
3. | X | X | X | Conventional |
4. | X | X | X | Base |
5. | X | X | X | Conventional |
6. | X | X | X | Conventional |
7. | X | X | X | Conventional |

---

### Test No. 9 (1/24/58) BECHAMEL SAUCE

**Judge** | Water-flavor test | Correct Fairings | Blindfold/No Blindfold | Preference |
--- | --- | --- | --- | --- |
1. | X | X | X | Base |
2. | X | X | X | Base |
3. | X | X | X | Base |
4. | X | X | X | Base |
5. | X | X | X | Base |
6. | X | X | X | Base |
7. | X | X | X | Base |
8. | X | X | X | Base |
9. | X | X | X | Base |
10. | X | X | X | Base |
**Test No. 10 (1/26/58) CHICKEN GRAVY**

<table>
<thead>
<tr>
<th>Judge</th>
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<th>Correct Pairings</th>
<th>Preference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Correct/Incorrect</td>
<td>Blindfold/No Blindfold</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>X</td>
<td>X</td>
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</tr>
<tr>
<td>2.</td>
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<td>- *</td>
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</tr>
<tr>
<td>3.</td>
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<td>- *</td>
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</tr>
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</tr>
<tr>
<td>5.</td>
<td>X</td>
<td>X</td>
<td>Base</td>
</tr>
<tr>
<td>6.</td>
<td>X</td>
<td>X</td>
<td>Base</td>
</tr>
<tr>
<td>7.</td>
<td>X</td>
<td>X</td>
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<tr>
<td>8.</td>
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</tr>
<tr>
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</tr>
<tr>
<td>10.</td>
<td>X</td>
<td>X</td>
<td>Conventional</td>
</tr>
<tr>
<td>11.</td>
<td>X</td>
<td>X</td>
<td>Conventional</td>
</tr>
</tbody>
</table>

* The judges couldn't pair correctly while blindfolded

---

**Test No. 11 (1/27/58) VEGETABLE SOUP**

<table>
<thead>
<tr>
<th>Judge</th>
<th>Water-flavor test</th>
<th>Correct Pairings</th>
<th>Preference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Correct/Incorrect</td>
<td>Blindfold/No Blindfold</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>X</td>
<td>X</td>
<td>Base</td>
</tr>
<tr>
<td>2.</td>
<td>X</td>
<td>X</td>
<td>Base</td>
</tr>
<tr>
<td>3.</td>
<td>X</td>
<td>X</td>
<td>Conventional</td>
</tr>
<tr>
<td>4.</td>
<td>X</td>
<td>X</td>
<td>Base</td>
</tr>
<tr>
<td>5.</td>
<td>X</td>
<td>X</td>
<td>Base</td>
</tr>
<tr>
<td>6.</td>
<td>X</td>
<td>X</td>
<td>Conventional</td>
</tr>
<tr>
<td>7.</td>
<td>X</td>
<td>X</td>
<td>Conventional</td>
</tr>
<tr>
<td>8.</td>
<td>X</td>
<td>X</td>
<td>Conventional</td>
</tr>
<tr>
<td>9.</td>
<td>X</td>
<td>X</td>
<td>Conventional</td>
</tr>
<tr>
<td>10.</td>
<td>X</td>
<td>X</td>
<td>Conventional</td>
</tr>
<tr>
<td>11.</td>
<td>X</td>
<td>X</td>
<td>Conventional</td>
</tr>
</tbody>
</table>

-34-
### Test No. 12 (1/28/58)  SPLIT PEA SOUP

**Judge** | **Water-flavor test** | **Correct Pairings** | **Preference**  
---|---|---|---  
1. | X | X | Base  
2. | X | X | Conventional  
3. | X | X | Conventional  
4. | X | X | Base  
5. | X | X | Base  
6. | X | X | Conventional  
7. | X | X | Conventional  
8. | X | X | Conventional  
9. | X | X | Conventional  
10. | X | X | Conventional  
11. | X | X | Conventional  

### Test No. 13 (1/29/58)  NAVY BEAN SOUP

**Judge** | **Water-flavor test** | **Correct Pairings** | **Preference**  
---|---|---|---  
1. | X | X | Conventional  
2. | X | X | Conventional  
3. | X | X | Conventional  
4. | X | X | No preference  
5. | X | X | Base  
6. | X | X | Base  
7. | X | X | Base  
8. | X | X | Conventional  
9. | X | X | Base  
10. | X | X | Base  

### Test No. 14 (2/1/58)  CONSOMME

**Judge** | **Water-flavor test** | **Correct Pairings** | **Preference**  
---|---|---|---  
1. | X | X | Base  
2. | X | X | Base  
3. | X | X | Conventional  
4. | X | X | Base  
5. | X | X | Base  
6. | X | X | Base  

-35-
### Test No. 15 (2/4/58)  CHICKEN NOODLE SOUP

<table>
<thead>
<tr>
<th>Judge</th>
<th>Water-flavor test</th>
<th>Correct Pairings</th>
<th>Preference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Correct/Incorrect</td>
<td>Blindfold/No Blindfold</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>X</td>
<td>X</td>
<td>Base</td>
</tr>
<tr>
<td>2.</td>
<td>X</td>
<td>X</td>
<td>Base</td>
</tr>
<tr>
<td>3.</td>
<td>X</td>
<td>- *</td>
<td>Conventional</td>
</tr>
<tr>
<td>4.</td>
<td>X</td>
<td>X</td>
<td>Conventional</td>
</tr>
<tr>
<td>5.</td>
<td>X</td>
<td>X</td>
<td>Conventional</td>
</tr>
<tr>
<td>6.</td>
<td>X</td>
<td>X</td>
<td>Conventional</td>
</tr>
<tr>
<td>7.</td>
<td>X</td>
<td>X</td>
<td>Conventional</td>
</tr>
<tr>
<td>8.</td>
<td>X</td>
<td>X</td>
<td>Conventional</td>
</tr>
</tbody>
</table>

* The judge couldn't pair correctly while blindfolded

### Test No. 16 (2/6/58)  OATN SOUP

<table>
<thead>
<tr>
<th>Judge</th>
<th>Water-flavor test</th>
<th>Correct Pairings</th>
<th>Preference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Correct/Incorrect</td>
<td>Blindfold/No Blindfold</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>X</td>
<td>-</td>
<td>No Preference</td>
</tr>
<tr>
<td>2.</td>
<td>X</td>
<td>X</td>
<td>Base</td>
</tr>
<tr>
<td>3.</td>
<td>X</td>
<td>X</td>
<td>Base</td>
</tr>
<tr>
<td>4.</td>
<td>X</td>
<td>X</td>
<td>Base</td>
</tr>
<tr>
<td>5.</td>
<td>X</td>
<td>X</td>
<td>Base</td>
</tr>
<tr>
<td>6.</td>
<td>X</td>
<td>X</td>
<td>Base</td>
</tr>
<tr>
<td>7.</td>
<td>X</td>
<td>X</td>
<td>Base</td>
</tr>
<tr>
<td>8.</td>
<td>X</td>
<td>X</td>
<td>Base</td>
</tr>
<tr>
<td>9.</td>
<td>X</td>
<td>X</td>
<td>Base</td>
</tr>
</tbody>
</table>

-36-
### Test No. 1 (1/14/58) CHICKEN STOCK

#### Conventional

<table>
<thead>
<tr>
<th>Step</th>
<th>Time</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receiving, weighing and to storage</td>
<td>4:47</td>
<td>51</td>
</tr>
<tr>
<td>Cart to kettles</td>
<td>1:39</td>
<td>30</td>
</tr>
<tr>
<td>Chicken to pot</td>
<td>11:02</td>
<td>54</td>
</tr>
<tr>
<td>Seasonings</td>
<td>1:02</td>
<td>24</td>
</tr>
<tr>
<td>Throw out boxes</td>
<td>1:16</td>
<td>36</td>
</tr>
<tr>
<td>Vegetable preparation</td>
<td>15:23</td>
<td>207</td>
</tr>
<tr>
<td>Skimming and working time</td>
<td>13:25</td>
<td>465</td>
</tr>
<tr>
<td>Take out chicken and strain</td>
<td>9:37</td>
<td></td>
</tr>
<tr>
<td>Chickens and stock to storage</td>
<td>2:64</td>
<td>116</td>
</tr>
<tr>
<td>Production time and steps</td>
<td>11:74</td>
<td>86</td>
</tr>
<tr>
<td><strong>Total time</strong></td>
<td>4 hrs 47 min</td>
<td></td>
</tr>
</tbody>
</table>

#### Base

<table>
<thead>
<tr>
<th>Step</th>
<th>Time</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>To storage</td>
<td>2:45</td>
<td>52</td>
</tr>
<tr>
<td>For seasonings</td>
<td>1:43</td>
<td>22</td>
</tr>
<tr>
<td>Open jars and unload</td>
<td>1:43</td>
<td>6</td>
</tr>
<tr>
<td>Jars to garbage</td>
<td>1:19</td>
<td>16</td>
</tr>
<tr>
<td>Get ladle to measure water, stir and taste</td>
<td>1:02</td>
<td>32</td>
</tr>
<tr>
<td>Wash pot and ladle and store</td>
<td>2:51</td>
<td>35</td>
</tr>
<tr>
<td><strong>Production time and steps</strong></td>
<td>9:23</td>
<td>163</td>
</tr>
<tr>
<td><strong>Total time</strong></td>
<td>34 min</td>
<td></td>
</tr>
</tbody>
</table>

### Test No. 2 (1/14/58) CHICKEN STOCK

#### Conventional

<table>
<thead>
<tr>
<th>Step</th>
<th>Time</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receive and store chicken</td>
<td>1:07</td>
<td>51</td>
</tr>
<tr>
<td>Chicken to pot</td>
<td>2:16</td>
<td>58</td>
</tr>
<tr>
<td>Get ladle to measure water</td>
<td>1:39</td>
<td>45</td>
</tr>
<tr>
<td>Measure water, add seasonings</td>
<td>8:05</td>
<td>(137)</td>
</tr>
<tr>
<td>Vegetables from storeroom and prepare</td>
<td></td>
<td>(134)</td>
</tr>
<tr>
<td>Drain chicken and strain stock</td>
<td>7:00</td>
<td>34</td>
</tr>
<tr>
<td>Chicken to storage</td>
<td>1:42</td>
<td>58</td>
</tr>
<tr>
<td>Wash kettle and pots and pans and store</td>
<td>7:04</td>
<td>27</td>
</tr>
<tr>
<td>Chicken to storage</td>
<td>1:15</td>
<td>119</td>
</tr>
<tr>
<td><strong>Production time and steps</strong></td>
<td>29:45</td>
<td>605</td>
</tr>
<tr>
<td><strong>Total time</strong></td>
<td>4 hrs 20 min</td>
<td></td>
</tr>
</tbody>
</table>

#### Base

<table>
<thead>
<tr>
<th>Step</th>
<th>Time</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>To storage for chicken and return</td>
<td>1:05</td>
<td>52</td>
</tr>
<tr>
<td>Open jar and pour in</td>
<td>1:16</td>
<td>12</td>
</tr>
<tr>
<td>Jar to can</td>
<td>1:19</td>
<td>18</td>
</tr>
<tr>
<td>Get ladle and measure water and mix</td>
<td>1:26</td>
<td>16</td>
</tr>
<tr>
<td>Wash pot and ladle and store</td>
<td>1:35</td>
<td>36</td>
</tr>
<tr>
<td><strong>Production time and steps</strong></td>
<td>3:41</td>
<td>136</td>
</tr>
<tr>
<td><strong>Total time</strong></td>
<td>5 min 51 sec</td>
<td></td>
</tr>
</tbody>
</table>
### Test No. 3 (1/15/58)  DANISH DUMPLING SOUP  30 gallons

**Conventional**

<table>
<thead>
<tr>
<th>Step</th>
<th>Time (Hr:Min:Sec)</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>To storage for stock</td>
<td>:36</td>
<td>58</td>
</tr>
<tr>
<td>Get pans and ladle to skim stock</td>
<td>:72</td>
<td>43</td>
</tr>
<tr>
<td>Skim fat</td>
<td>4:12</td>
<td>6</td>
</tr>
<tr>
<td>Dump broth</td>
<td>:40</td>
<td>15</td>
</tr>
<tr>
<td>Fat to refrigerator</td>
<td>:23</td>
<td>34</td>
</tr>
<tr>
<td>Vegetable preparation</td>
<td>24:00</td>
<td>72</td>
</tr>
<tr>
<td>Pans to pot &amp; pan sink, wash and store</td>
<td>1:16</td>
<td>29</td>
</tr>
<tr>
<td>Tending and seasoning time</td>
<td>4:28</td>
<td>72</td>
</tr>
<tr>
<td>Dumpling time - not added in</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wash pot</td>
<td>1:42</td>
<td>32</td>
</tr>
<tr>
<td>Production time and steps</td>
<td>38:29</td>
<td>361</td>
</tr>
</tbody>
</table>

**Total time**  1 hr 55 min

**Base**

**Production time and steps**  31:00  507

**Total time**  2 hr 11 min

Dumpling time not added in

---

### Test No. 4 (1/15/58)  DANISH DUMPLING SOUP  5 gallons

**Conventional**

<table>
<thead>
<tr>
<th>Step</th>
<th>Time (Hr:Min:Sec)</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>To storage for broth</td>
<td>2:03</td>
<td>96</td>
</tr>
<tr>
<td>Get pan for fat</td>
<td>2:31</td>
<td></td>
</tr>
<tr>
<td>Skim fat and dump broth</td>
<td>1:10</td>
<td>24</td>
</tr>
<tr>
<td>Fat to refrigerator</td>
<td>:23</td>
<td>34</td>
</tr>
<tr>
<td>Pans to pot and pan sink and cart to store</td>
<td>1:26</td>
<td>77</td>
</tr>
<tr>
<td>Vegetable preparation and dumpling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>addition not counted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wash pot and pans and ladle and store</td>
<td>2:57</td>
<td>46</td>
</tr>
<tr>
<td>Production time and steps</td>
<td>10:30</td>
<td>277</td>
</tr>
</tbody>
</table>

**Total time**  59 min

**Base**

<table>
<thead>
<tr>
<th>Step</th>
<th>Time (Hr:Min:Sec)</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>To storeroom</td>
<td>1:05</td>
<td>52</td>
</tr>
<tr>
<td>Open Good Seasons and pour in</td>
<td>:16</td>
<td>12</td>
</tr>
<tr>
<td>Jar to garbage can</td>
<td>:19</td>
<td>18</td>
</tr>
<tr>
<td>Get paddle and measure water and mix</td>
<td>:26</td>
<td>16</td>
</tr>
<tr>
<td>Vegetable preparation and dumpling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>time not added in</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wash pot and ladle and store</td>
<td>1:38</td>
<td>31</td>
</tr>
<tr>
<td>Production time and steps</td>
<td>3:44</td>
<td>129</td>
</tr>
</tbody>
</table>

Total time  1 hr 6 min
### Test No. 5 (1/18/58) BEEF STOCK 30 gallons

<table>
<thead>
<tr>
<th>Conventional</th>
<th>Time</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receiving bones and meat</td>
<td>5:24</td>
<td>82</td>
</tr>
<tr>
<td>Bones and meat to storage</td>
<td>3:31</td>
<td>58</td>
</tr>
<tr>
<td>Meat from storage</td>
<td>1:20</td>
<td>34</td>
</tr>
<tr>
<td>Bones from storage</td>
<td>2:01</td>
<td>30</td>
</tr>
<tr>
<td>Meat to brown</td>
<td>3:10</td>
<td>49</td>
</tr>
<tr>
<td>Stir time and steam on</td>
<td>2:20</td>
<td>21</td>
</tr>
<tr>
<td>Wash bones</td>
<td>6:26</td>
<td>112</td>
</tr>
<tr>
<td>Dump bones into pot</td>
<td>1:10</td>
<td>10</td>
</tr>
<tr>
<td>Bones to garbage</td>
<td>1:46</td>
<td>52</td>
</tr>
<tr>
<td>Vegetable preparation</td>
<td>39:30</td>
<td>96</td>
</tr>
<tr>
<td>Seasonings</td>
<td>7:52</td>
<td>161</td>
</tr>
<tr>
<td>Water off</td>
<td>1:03</td>
<td>6</td>
</tr>
<tr>
<td>Skimming and tending time</td>
<td>8:23</td>
<td>40</td>
</tr>
<tr>
<td>Strain stock</td>
<td>23:10</td>
<td>35</td>
</tr>
<tr>
<td>Meat out</td>
<td>4:05</td>
<td>72</td>
</tr>
<tr>
<td>Bones out and into garbage can</td>
<td>2:10</td>
<td>87</td>
</tr>
<tr>
<td>Meat and stock to storage</td>
<td>4:15</td>
<td>167</td>
</tr>
<tr>
<td>Clean pot and equipment</td>
<td>15:02</td>
<td>72</td>
</tr>
</tbody>
</table>

Production time and steps 2:10:38 1,191

Total time 10 hrs 9 min

### Base

| Base from storage to pot and empty     | 4:00 | 155   |
| Wash stock pot                        | 1:42 | 38    |

Production time and steps 5:42 193

Total time 34 min

### Test No. 6 (1/18/58) BEEF STOCK 5 gallons

<table>
<thead>
<tr>
<th>Conventional</th>
<th>Time</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receiving bones and meat</td>
<td>3:08</td>
<td>117</td>
</tr>
<tr>
<td>To storage</td>
<td>1:31</td>
<td>64</td>
</tr>
<tr>
<td>To pot from storage</td>
<td>1:31</td>
<td>64</td>
</tr>
<tr>
<td>Brown meat</td>
<td>13:79</td>
<td>38</td>
</tr>
<tr>
<td>Wash bones in sink</td>
<td>2:23</td>
<td>12</td>
</tr>
<tr>
<td>Bones to pot</td>
<td>1:50</td>
<td>3</td>
</tr>
<tr>
<td>Prepare vegetables</td>
<td>10:37</td>
<td>46</td>
</tr>
<tr>
<td>Seasonings</td>
<td>2:57</td>
<td>82</td>
</tr>
<tr>
<td>Skimming and tending time</td>
<td>2:10</td>
<td>18</td>
</tr>
<tr>
<td>Wash utensils (includes pot 1:28, 18 steps)</td>
<td>3:44</td>
<td>33</td>
</tr>
<tr>
<td>Strain stock</td>
<td>7:50</td>
<td>69</td>
</tr>
<tr>
<td>Empty bones in garbage can &amp; meat to container</td>
<td>2:30</td>
<td>28</td>
</tr>
<tr>
<td>Meat and stock to refrigerator</td>
<td>1:34</td>
<td>104</td>
</tr>
</tbody>
</table>

Production time and steps 55:04 678

Total time 7 hrs 15 min

### Base

| Base from storage to pot and empty     | 3:00 | 68    |
| Wash pot                              | 1:38 | 24    |

Production time and steps 4:38 92

Production time 6 min
### Test No. 7 (1/17/58)  
**ONION GRAVY**  
1 gallon

<table>
<thead>
<tr>
<th>Conventional</th>
<th>Time</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peel onions, dice, get materials and dump fat, brown onions and add stock</td>
<td>(10:45)</td>
<td>52</td>
</tr>
<tr>
<td>Season</td>
<td>1:15</td>
<td>3</td>
</tr>
<tr>
<td>Tend time</td>
<td>1:57</td>
<td>6</td>
</tr>
<tr>
<td>Cleanup and wash pots</td>
<td>2:09</td>
<td>27</td>
</tr>
<tr>
<td>Wash kettle</td>
<td>2:10</td>
<td>18</td>
</tr>
<tr>
<td><strong>Total time</strong></td>
<td>18:16</td>
<td>170</td>
</tr>
</tbody>
</table>

Based on stock time, 1/30 of times  
4:00 40

**Production time and steps**  
22:16 210

**Total time** 42 min

<table>
<thead>
<tr>
<th>Base</th>
<th>Time</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>To storeroom and return with items</td>
<td>2:10</td>
<td>76</td>
</tr>
<tr>
<td>Roux made</td>
<td>1:28</td>
<td>4</td>
</tr>
<tr>
<td>Water added and spoon obtained</td>
<td>1:12</td>
<td>52</td>
</tr>
<tr>
<td>Season</td>
<td>1:08</td>
<td>29</td>
</tr>
<tr>
<td>Wash pots and pans, store, wash kettle</td>
<td>3:26</td>
<td>21</td>
</tr>
<tr>
<td><strong>Production time and steps</strong></td>
<td>9:24</td>
<td>182</td>
</tr>
<tr>
<td><strong>Total time</strong></td>
<td>19 min 24 sec</td>
<td></td>
</tr>
</tbody>
</table>

### Test No. 8 (1/19/58)  
**CHICKEN STOCK**  
30 gallons

<table>
<thead>
<tr>
<th>Conventional</th>
<th>Time</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receiving and storing chickens</td>
<td>4:52</td>
<td>82</td>
</tr>
<tr>
<td>From storage and wash</td>
<td>5:35</td>
<td>38</td>
</tr>
<tr>
<td>Vegetable preparation</td>
<td>31:58</td>
<td>87</td>
</tr>
<tr>
<td>Seasonings and vegetables added</td>
<td>7:58</td>
<td>168</td>
</tr>
<tr>
<td>Skim and tend time</td>
<td>6:58</td>
<td>35</td>
</tr>
<tr>
<td>Get cart</td>
<td>:34</td>
<td>42</td>
</tr>
<tr>
<td>Drain chicken</td>
<td>16:50</td>
<td>32</td>
</tr>
<tr>
<td>Strain stock</td>
<td>8:50</td>
<td>74</td>
</tr>
<tr>
<td>Clean utensils and pot</td>
<td>8:01</td>
<td>91</td>
</tr>
<tr>
<td>Chicken and stock to storage</td>
<td>1:78</td>
<td>154</td>
</tr>
<tr>
<td>Miscellaneous time</td>
<td>1:55</td>
<td>7</td>
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<td><strong>Production time and steps</strong></td>
<td>1:35:49</td>
<td>810</td>
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<tr>
<td><strong>Total time</strong></td>
<td>6 hrs 8 min</td>
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</table>

| Base | None |

---
Test No. 9 (1/19/58)  CHICKEN STOCK

Time

Steps

Conventional

Receiving and storage
To get chicken and wash
Water on chicken
Vegetable preparation
Seasonings
Boxes out
Skin and tend time
Chicken out
Strain stock
Wash utensils and clean up
Chicken to refrigerator

Total time 4 hrs 53 min

Base None

Test No. 10 (1/19/58)  CREAMED CHICKEN

Conventional

Get and blend milk into water (get whip, etc.)
Cut up chicken
Get seasonings
Get fat for roux
Make roux
Add stock and milk and mix
Add seasonings
Get chicken
Add chicken
Clean pots and utensils and store

Production time and steps

Total time 48 min

Base

Get and blend milk
Cut chicken
Get seasonings
Make roux and add Good Seasons
Add flour and mix
Add water and mix
Add milk and mix
Add seasonings
Add chicken
Clean pots

Production time and steps

Total time 1 hr 7 min
### MINESTRONE SOUP

#### Test No. 11 (1/19/58)

<table>
<thead>
<tr>
<th>Time</th>
<th>Steps</th>
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</thead>
<tbody>
<tr>
<td><strong>Conventional</strong></td>
<td></td>
</tr>
<tr>
<td>Kidney beans, get and put on 7 1/4#</td>
<td>3:12</td>
</tr>
<tr>
<td>Macaroni, 5#6 oz., get, put on and blanch</td>
<td>7:22</td>
</tr>
<tr>
<td>Get fat and weigh</td>
<td>1:50</td>
</tr>
<tr>
<td>To pot</td>
<td>1:28</td>
</tr>
<tr>
<td>Get vegetables and prepare</td>
<td>4:74</td>
</tr>
<tr>
<td>Get paddle</td>
<td>3:30</td>
</tr>
<tr>
<td>Seasonings</td>
<td>3:30</td>
</tr>
<tr>
<td>and garlic</td>
<td>3:4</td>
</tr>
<tr>
<td>Flour</td>
<td>4:09</td>
</tr>
<tr>
<td>Get okra and open</td>
<td>1:23</td>
</tr>
<tr>
<td>Get and grind tomatoes</td>
<td>5:43</td>
</tr>
<tr>
<td>Add tomatoes</td>
<td>3:39</td>
</tr>
<tr>
<td>Get and add stock</td>
<td>3:44</td>
</tr>
<tr>
<td>Add okra and cabbage</td>
<td>1:30</td>
</tr>
<tr>
<td>Add cooked macaroni</td>
<td>1:14</td>
</tr>
<tr>
<td>Add cooked beans</td>
<td>1:08</td>
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<tr>
<td>Clean up</td>
<td>8:20</td>
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<tr>
<td>Total time</td>
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#### Base

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<tr>
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**Test No. 12 (1/19/58)**  
**MINESTROKE SOUP**  
5 gallons

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<th>Task</th>
<th>Time (Hr:Min:Sec)</th>
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</thead>
<tbody>
<tr>
<td>Fat to pot and return</td>
<td>1:35</td>
<td>40</td>
</tr>
<tr>
<td>Vegetables, saute</td>
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<td></td>
</tr>
<tr>
<td>Flour</td>
<td>1:18</td>
<td>41</td>
</tr>
<tr>
<td>Seasoning, and garlic</td>
<td>(3:20)</td>
<td>(51)</td>
</tr>
<tr>
<td>Tomato</td>
<td>:32</td>
<td>14</td>
</tr>
<tr>
<td>Stock (4 gallons)</td>
<td>2:12</td>
<td>47</td>
</tr>
<tr>
<td>Add okra</td>
<td>:16</td>
<td>17</td>
</tr>
<tr>
<td>Macaroni</td>
<td>:10</td>
<td>9</td>
</tr>
<tr>
<td>Beans</td>
<td>:31</td>
<td>59</td>
</tr>
<tr>
<td>Clean up</td>
<td>4:12</td>
<td>15</td>
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<tr>
<td><strong>Total time and steps</strong></td>
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**Base**

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<tr>
<th>Task</th>
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<th>Steps</th>
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</thead>
<tbody>
<tr>
<td>Fat to pot</td>
<td>1:35</td>
<td>40</td>
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<tr>
<td>With 1 can beef</td>
<td>:28</td>
<td>35</td>
</tr>
<tr>
<td>Return fat</td>
<td>:20</td>
<td>15</td>
</tr>
<tr>
<td>Saute vegetables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tomato</td>
<td>:32</td>
<td>14</td>
</tr>
<tr>
<td>Water</td>
<td>2:42</td>
<td>15</td>
</tr>
<tr>
<td>Flour</td>
<td>1:18</td>
<td>41</td>
</tr>
<tr>
<td>Garlic</td>
<td>:34</td>
<td>28</td>
</tr>
<tr>
<td>Seasoning</td>
<td>3:20</td>
<td>51</td>
</tr>
<tr>
<td>Add okra, cabbage</td>
<td>:16</td>
<td>17</td>
</tr>
<tr>
<td>Macaroni</td>
<td>:10</td>
<td>9</td>
</tr>
<tr>
<td>Beans</td>
<td>:31</td>
<td>59</td>
</tr>
<tr>
<td>Clean up</td>
<td>3:53</td>
<td>14</td>
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<td><strong>Total time and steps</strong></td>
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**Total time**  
1 hr 30 min
**Test No. 13 (1/20/58) MULLIGATAWNY SOUP**

<table>
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<th>Time (Hr:Mn:Sec)</th>
<th>Steps</th>
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</thead>
<tbody>
<tr>
<td><strong>Conventional</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To storage, get items</td>
<td>2:34</td>
<td>66</td>
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<tr>
<td>Get margarine and flour</td>
<td>1:15</td>
<td>14</td>
</tr>
<tr>
<td>Add base, mix</td>
<td>(9:08)</td>
<td>62</td>
</tr>
<tr>
<td>add onions, cabbage, etc.</td>
<td>(3:25)</td>
<td>61</td>
</tr>
<tr>
<td>Get and add curry and seasonings</td>
<td>1:16</td>
<td>35</td>
</tr>
<tr>
<td>Get and dump stock</td>
<td>2:05</td>
<td>54</td>
</tr>
<tr>
<td>Add rice</td>
<td>:51</td>
<td>28</td>
</tr>
<tr>
<td>Dump chicken</td>
<td>1:12</td>
<td>18</td>
</tr>
<tr>
<td>Trip to garbage</td>
<td>:20</td>
<td>22</td>
</tr>
<tr>
<td>Pots and pans and store, 1 kettle</td>
<td>6:04</td>
<td>106</td>
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<td>Production time and steps</td>
<td>27:10</td>
<td>466</td>
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<tr>
<td>Total time</td>
<td>1 hr 55 min</td>
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<thead>
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<th>Time Steps</th>
<th>Time (Hr:Mn:Sec)</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Base</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To storage</td>
<td>2:10</td>
<td>50</td>
</tr>
<tr>
<td>Get fat</td>
<td>:54</td>
<td>40</td>
</tr>
<tr>
<td>Get apples and add</td>
<td>:18</td>
<td>77</td>
</tr>
<tr>
<td>Combine fat and flour</td>
<td>2:47</td>
<td>68</td>
</tr>
<tr>
<td>Get onion flakes and soak</td>
<td>:59</td>
<td>35</td>
</tr>
<tr>
<td>Get curry and seasonings and add onions</td>
<td>2:04</td>
<td>24</td>
</tr>
<tr>
<td>Season</td>
<td>4:35</td>
<td>65</td>
</tr>
<tr>
<td>Tend time</td>
<td>:23</td>
<td>3</td>
</tr>
<tr>
<td>Add rice and tend</td>
<td>1:50</td>
<td>11</td>
</tr>
<tr>
<td>Dump chicken</td>
<td>1:32</td>
<td>20</td>
</tr>
<tr>
<td>Seasoning</td>
<td>4:08</td>
<td>48</td>
</tr>
<tr>
<td>Empty trash</td>
<td>:21</td>
<td>32</td>
</tr>
<tr>
<td>Pots and pans and store and kettle</td>
<td>8:54</td>
<td>34</td>
</tr>
<tr>
<td>Production time and steps</td>
<td>31:25</td>
<td>507</td>
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<tr>
<td>Total time</td>
<td>2 hrs 11 min</td>
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</table>

Vegetable preparation time omitted for these two tests since the time is the same.
### Conventional

<table>
<thead>
<tr>
<th>Step Description</th>
<th>Time</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get fat and other ingredients and add fat to pot (1#), and onions, cabbage</td>
<td>1:85</td>
<td>38</td>
</tr>
<tr>
<td>Weigh apples and add to saute</td>
<td>1:70</td>
<td>14</td>
</tr>
<tr>
<td>Curry added and get seasonings</td>
<td>1:40</td>
<td>44</td>
</tr>
<tr>
<td>Get and dump stock, 5 gallons</td>
<td>2:52</td>
<td>45</td>
</tr>
<tr>
<td>Add water and rice; tending time</td>
<td>4:32</td>
<td>77</td>
</tr>
<tr>
<td>Chicken in</td>
<td>1:10</td>
<td>14</td>
</tr>
<tr>
<td>Seasoning time</td>
<td>1:48</td>
<td>34</td>
</tr>
<tr>
<td>Pots and pans and kettle</td>
<td>2:40</td>
<td>28</td>
</tr>
<tr>
<td>Production time and steps</td>
<td>17:17</td>
<td>294</td>
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</table>

Total time 53 min

### Base

<table>
<thead>
<tr>
<th>Step Description</th>
<th>Time</th>
<th>Steps</th>
</tr>
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<tbody>
<tr>
<td>Get items</td>
<td>1:50</td>
<td>34</td>
</tr>
<tr>
<td>Add fat to pot and saute onions and cabbage</td>
<td>2:27</td>
<td>27</td>
</tr>
<tr>
<td>Weigh apples and add</td>
<td>1:44</td>
<td>14</td>
</tr>
<tr>
<td>Get curry</td>
<td>1:55</td>
<td>16</td>
</tr>
<tr>
<td>Get seasonings and add</td>
<td>1:02</td>
<td>16</td>
</tr>
<tr>
<td>Add water and rice, measure and tend time</td>
<td>3:10</td>
<td>38</td>
</tr>
<tr>
<td>Chicken in</td>
<td>1:09</td>
<td>11</td>
</tr>
<tr>
<td>Pots and pans</td>
<td>2:06</td>
<td>24</td>
</tr>
<tr>
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<td>164</td>
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</table>

Total time 51 min
### Conventional

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<th>Steps</th>
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<tbody>
<tr>
<td>Get onions and soak</td>
<td>0:55</td>
<td>12</td>
</tr>
<tr>
<td>Get oil</td>
<td>1:15</td>
<td>60</td>
</tr>
<tr>
<td>Get stock</td>
<td>2:50</td>
<td>82</td>
</tr>
<tr>
<td>Vegetable preparation</td>
<td>0:97</td>
<td>87</td>
</tr>
<tr>
<td></td>
<td>11:52</td>
<td>186</td>
</tr>
<tr>
<td>Stir vegetables</td>
<td>0:17</td>
<td>6</td>
</tr>
<tr>
<td>Dump stock</td>
<td>0:50</td>
<td>6</td>
</tr>
<tr>
<td>Get barley and add to pot</td>
<td>0:45</td>
<td>42</td>
</tr>
<tr>
<td>Season</td>
<td>1:25</td>
<td>16</td>
</tr>
<tr>
<td>Tend time</td>
<td>1:22</td>
<td>12</td>
</tr>
<tr>
<td>Wash stock pot and utensils</td>
<td>1:35</td>
<td>55</td>
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<tr>
<td>Wash kettle</td>
<td>2:20</td>
<td>12</td>
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<tr>
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### Base

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<tr>
<td>Get onions</td>
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<td>11</td>
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<tr>
<td>Get oil</td>
<td>1:13</td>
<td>60</td>
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<tr>
<td>Get vegetables and prepare and</td>
<td></td>
<td>5:10</td>
</tr>
<tr>
<td>to pot</td>
<td>(5:10)</td>
<td>175</td>
</tr>
<tr>
<td></td>
<td>(7:12)</td>
<td>82</td>
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<tr>
<td>Get Good Seasons and add</td>
<td>0:06</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>2:48</td>
<td>14</td>
</tr>
<tr>
<td>Stir vegetables</td>
<td>0:14</td>
<td>6</td>
</tr>
<tr>
<td>Run water and tend time</td>
<td>2:25</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>1:12</td>
<td>14</td>
</tr>
<tr>
<td>Barley from storage and to pot</td>
<td>2:30</td>
<td>48</td>
</tr>
<tr>
<td>Wash utensils and store</td>
<td>1:08</td>
<td>16</td>
</tr>
<tr>
<td>Wash pot</td>
<td>2:25</td>
<td>12</td>
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<tr>
<td>To garbage</td>
<td>1:12</td>
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**Total time**

- Conventional: 50 min
- Base: 57 min
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<th>Steps</th>
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<tbody>
<tr>
<td>Get meat</td>
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<td>43</td>
</tr>
<tr>
<td>Onions and tomatoes</td>
<td>4:50</td>
<td>28</td>
</tr>
<tr>
<td>Soak onions, get pot</td>
<td>2:45</td>
<td>22</td>
</tr>
<tr>
<td>Open tomatoes</td>
<td>6:48</td>
<td>56</td>
</tr>
<tr>
<td>Meat in pot and stir</td>
<td>4:20</td>
<td>14</td>
</tr>
<tr>
<td>Tend meat and beans</td>
<td>3:10</td>
<td>34</td>
</tr>
<tr>
<td>Tend meat</td>
<td>1:20</td>
<td>12</td>
</tr>
<tr>
<td>Add onions</td>
<td>1:05</td>
<td>10</td>
</tr>
<tr>
<td>Seasonings</td>
<td>5:30</td>
<td>191</td>
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<tr>
<td>Paper out</td>
<td>1:40</td>
<td>40</td>
</tr>
<tr>
<td>Dump 2/3 tomato</td>
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<td>92</td>
</tr>
<tr>
<td>Tending</td>
<td>2:43</td>
<td>15</td>
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<tr>
<td>Wash onion container</td>
<td>1:22</td>
<td>40</td>
</tr>
<tr>
<td>Add last tomato</td>
<td>1:45</td>
<td>22</td>
</tr>
<tr>
<td>Cans out</td>
<td>1:28</td>
<td>59</td>
</tr>
<tr>
<td>Clean up</td>
<td>7:42</td>
<td>12</td>
</tr>
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<td><strong>Production time and steps</strong></td>
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<tr>
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<th>Time</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get meat</td>
<td>1:50</td>
<td>44</td>
</tr>
<tr>
<td>Brown meat in pot</td>
<td>4:10</td>
<td>10</td>
</tr>
<tr>
<td>Get paddle and mix meat</td>
<td>1:12</td>
<td>24</td>
</tr>
<tr>
<td>Tend meat and paper out</td>
<td>2:40</td>
<td>44</td>
</tr>
<tr>
<td>Tend</td>
<td>1:50</td>
<td>12</td>
</tr>
<tr>
<td>Add beans</td>
<td>1:42</td>
<td>12</td>
</tr>
<tr>
<td>Tend</td>
<td>1:13</td>
<td>10</td>
</tr>
<tr>
<td>Add Good Seasons and chili</td>
<td>2:30</td>
<td>56</td>
</tr>
<tr>
<td>Tending</td>
<td>2:23</td>
<td>12</td>
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<tr>
<td>Open puree</td>
<td>1:28</td>
<td>5</td>
</tr>
<tr>
<td>Tending</td>
<td>1:08</td>
<td>6</td>
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<td>Add puree</td>
<td>1:42</td>
<td>32</td>
</tr>
<tr>
<td>Cans out</td>
<td>1:35</td>
<td>49</td>
</tr>
<tr>
<td>Clean up</td>
<td>7:12</td>
<td>38</td>
</tr>
<tr>
<td><strong>Production time and steps</strong></td>
<td>31:35</td>
<td>354</td>
</tr>
<tr>
<td><strong>Total time</strong></td>
<td>2 hrs 34 min</td>
<td></td>
</tr>
</tbody>
</table>
Test No. 17 (1/23/58)  SWISS STEAK GRAVY  10 gallons

### Conventional

<table>
<thead>
<tr>
<th>Step</th>
<th>Time (Hr:Mn:Sec)</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fat to pot</td>
<td>24.50</td>
<td>6</td>
</tr>
<tr>
<td>Flour to pot to make roux</td>
<td>1:36</td>
<td>5</td>
</tr>
<tr>
<td>Season</td>
<td>1:46</td>
<td>18</td>
</tr>
<tr>
<td>Drippings to pot</td>
<td>29:00</td>
<td>585</td>
</tr>
<tr>
<td>Add onions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Puree added</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tend time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wash pots</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wash kettle</td>
<td></td>
<td></td>
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</table>

### Production time and steps

Total time 47 min

### Base

<table>
<thead>
<tr>
<th>Step</th>
<th>Time (Hr:Mn:Sec)</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get flour and fat and to pot</td>
<td>8:55</td>
<td>15</td>
</tr>
<tr>
<td>Get base and base to pot</td>
<td>9:00</td>
<td>22</td>
</tr>
<tr>
<td>Get celery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Get tomatoes</td>
<td>2:53</td>
<td>42</td>
</tr>
<tr>
<td>Open tomatoes and celery and tomatoes to pot</td>
<td>1:42</td>
<td>31</td>
</tr>
<tr>
<td>Tend time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wash pans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wash kettle</td>
<td></td>
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</table>

### Production time and steps

Total time 47 min
Test No. 18 (1/24/58)  BECHAMEL SAUCE  1 1/2 gallons

<table>
<thead>
<tr>
<th>Conventional</th>
<th>Time</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get chicken broth</td>
<td>4:30</td>
<td>78</td>
</tr>
<tr>
<td>Flour and shortening and stir</td>
<td>1:45</td>
<td>32</td>
</tr>
<tr>
<td>Add stock and stir</td>
<td>1:35</td>
<td>9</td>
</tr>
<tr>
<td>Add evaporated milk</td>
<td>1:15</td>
<td>6</td>
</tr>
<tr>
<td>Season</td>
<td>2:20</td>
<td>95</td>
</tr>
<tr>
<td>Tend</td>
<td>1:15</td>
<td>4</td>
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<tr>
<td>Clean up</td>
<td>2:09</td>
<td>35</td>
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</table>

Production time and steps 11:49  259

Total time  27 min

<table>
<thead>
<tr>
<th>Base</th>
<th>Time</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetable preparation</td>
<td>2:09</td>
<td>38</td>
</tr>
<tr>
<td>Measure water, add vegetables to cook and seasonings</td>
<td>4:45</td>
<td>141</td>
</tr>
<tr>
<td>Strain off at end</td>
<td>0:09</td>
<td>18</td>
</tr>
<tr>
<td>Get flour</td>
<td>1:44</td>
<td>34</td>
</tr>
<tr>
<td>Add flour, shortening and base</td>
<td>3:45</td>
<td>21</td>
</tr>
<tr>
<td>Add stock and milk</td>
<td>1:15</td>
<td>5</td>
</tr>
<tr>
<td>Tend time</td>
<td>1:14</td>
<td>12</td>
</tr>
<tr>
<td>Clean up</td>
<td>2:46</td>
<td>38</td>
</tr>
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</table>

Production time and steps 15:47 307

Total time 34 min

Test No. 19 (1/26/58)  CHICKEN GRAVY  1 gallon

<table>
<thead>
<tr>
<th>Conventional</th>
<th>Time</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get stock</td>
<td>3:20</td>
<td>133</td>
</tr>
<tr>
<td>Get ship and materials</td>
<td>0:04</td>
<td>8</td>
</tr>
<tr>
<td>Add stock</td>
<td>1:15</td>
<td>12</td>
</tr>
<tr>
<td>Season</td>
<td>1:15</td>
<td>45</td>
</tr>
<tr>
<td>Add milk and mix</td>
<td>1:25</td>
<td>3</td>
</tr>
<tr>
<td>Clean up</td>
<td>2:15</td>
<td>40</td>
</tr>
<tr>
<td>Pots and pans</td>
<td>2:15</td>
<td>43</td>
</tr>
</tbody>
</table>

Production time and steps 10:49 284

Total time 47 min

<table>
<thead>
<tr>
<th>Base</th>
<th>Time</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shortening and base, get flour and other ingredients</td>
<td>0:21</td>
<td>11</td>
</tr>
<tr>
<td>Melt shortening and make roux</td>
<td>3:50</td>
<td>76</td>
</tr>
<tr>
<td>Tending time</td>
<td>1:10</td>
<td>12</td>
</tr>
<tr>
<td>Add evaporated milk and tend</td>
<td>1:50</td>
<td>16</td>
</tr>
<tr>
<td>To garbage can and clean up</td>
<td>0:55</td>
<td>20</td>
</tr>
<tr>
<td>Pots and pans and store kettle</td>
<td>4:55</td>
<td>43</td>
</tr>
</tbody>
</table>

Production time and steps 13:01 178

Total time 20 min
Test No. 20 (1/27/58)  VEGETABLE SOUP  5 gallons

### Conventional

<table>
<thead>
<tr>
<th>Step Description</th>
<th>Time</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get stock</td>
<td>1:20</td>
<td>83</td>
</tr>
<tr>
<td>Dump stock and pot to sink</td>
<td>1:33</td>
<td>49</td>
</tr>
<tr>
<td>Tomatoes</td>
<td>1:43</td>
<td>24</td>
</tr>
<tr>
<td>1 pt. carrots</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 pt. turnips</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 pt. onions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 pt. celery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 pt. onions, soaked</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 pt. cabbage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Get oil, 20 min. saute</td>
<td>6:00</td>
<td>15</td>
</tr>
<tr>
<td>Add vegetables</td>
<td>:15</td>
<td>10</td>
</tr>
<tr>
<td>To storage, 1 qt. peas</td>
<td>1:25</td>
<td>28</td>
</tr>
<tr>
<td>Rice cooked, 2 qts.</td>
<td>1:23</td>
<td>24</td>
</tr>
<tr>
<td>Season</td>
<td>2:55</td>
<td>89</td>
</tr>
<tr>
<td>Tend time</td>
<td>2:17</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>:45</td>
<td>8</td>
</tr>
<tr>
<td>Pots to sink and wash</td>
<td>1:56</td>
<td>35</td>
</tr>
<tr>
<td>Pot wash, 5 gal. cart</td>
<td>1:38</td>
<td>16</td>
</tr>
<tr>
<td>Production time and steps</td>
<td>23:26</td>
<td>428</td>
</tr>
<tr>
<td>Total time</td>
<td>42 min.</td>
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### Base

<table>
<thead>
<tr>
<th>Step Description</th>
<th>Time</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measure water and empty Good Seasons</td>
<td>1:45</td>
<td>9</td>
</tr>
<tr>
<td>Get tomatoes and oil, open tomatoes and to pot</td>
<td>1:32</td>
<td>22</td>
</tr>
<tr>
<td>Add oil and vegetables:</td>
<td>6:00</td>
<td>15</td>
</tr>
<tr>
<td>1 pt. carrots</td>
<td>:17</td>
<td>10</td>
</tr>
<tr>
<td>1 pt. turnips</td>
<td>:16</td>
<td>24</td>
</tr>
<tr>
<td>1 pt. onions soaked</td>
<td></td>
<td></td>
</tr>
<tr>
<td>To refrigerator, 1 qt. peas</td>
<td>1:25</td>
<td>28</td>
</tr>
<tr>
<td>Rice cooked, 2 qts.</td>
<td>1:03</td>
<td>27</td>
</tr>
<tr>
<td>Tend time</td>
<td>2:23</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>:37</td>
<td>8</td>
</tr>
<tr>
<td>Pots to sink and wash</td>
<td>1:48</td>
<td>35</td>
</tr>
<tr>
<td>Pot wash</td>
<td>1:33</td>
<td>14</td>
</tr>
<tr>
<td>Production time and steps</td>
<td>18:39</td>
<td>218</td>
</tr>
<tr>
<td>Total time</td>
<td>30 min.</td>
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</tbody>
</table>

-50-
### Test No. 21 (1/28/58)  SPLIT PEA SOUP

<table>
<thead>
<tr>
<th>Conventional</th>
<th>Time</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get hocks</td>
<td>33</td>
<td>51</td>
</tr>
<tr>
<td>Put hocks and paper to garbage</td>
<td>55</td>
<td>6</td>
</tr>
<tr>
<td>Get peas and add</td>
<td>35</td>
<td>37</td>
</tr>
<tr>
<td>Add bacon fat</td>
<td>16</td>
<td>9</td>
</tr>
<tr>
<td>Tending</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td>Get vegetables, add vegetables and flour</td>
<td>107</td>
<td>45</td>
</tr>
<tr>
<td>Get beef stock and add</td>
<td>127</td>
<td>57</td>
</tr>
<tr>
<td>Strain soup and add seasonings</td>
<td>610</td>
<td>3</td>
</tr>
<tr>
<td>Wash pots</td>
<td>2:25</td>
<td>16</td>
</tr>
<tr>
<td>Wash containers</td>
<td>1:35</td>
<td>14</td>
</tr>
<tr>
<td>Production time and steps</td>
<td>10:36</td>
<td>244</td>
</tr>
<tr>
<td>Total time</td>
<td>3 hrs 15 min</td>
<td></td>
</tr>
</tbody>
</table>

### Base

| Get peas and Good Seasons, add to pot | 2:08 | 45 |
| and add 1 1/2 gal. water | 08 | 12 |
| Tending | 1:15 | 43 |
| Get salt pork | 1:03 | 4 |
| Dice salt pork and add | 1:58 | 10 |
| Tending soup | 2:15 | 14 |
| Wash pot | 1:32 | 16 |
| Wash containers | 10:40 | 144 |
| Production time and steps |  |
| Total time | 3 hrs 20 min |
### Test No. 22 (1/29/50)  
**NAVY BEAN SOUP**

#### Conventional

<table>
<thead>
<tr>
<th>Task</th>
<th>Time</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beans on</td>
<td>0:21</td>
<td>20</td>
</tr>
<tr>
<td>Get and cut salt pork</td>
<td>2:04</td>
<td>34</td>
</tr>
<tr>
<td>Onions to soak</td>
<td>0:58</td>
<td>46</td>
</tr>
<tr>
<td>Add bacon drippings and onions</td>
<td>0:35</td>
<td>10</td>
</tr>
<tr>
<td>Get and add catsup and tomato puree</td>
<td>1:42</td>
<td>42</td>
</tr>
<tr>
<td>Get carrots and mustard</td>
<td>0:60</td>
<td>63</td>
</tr>
<tr>
<td>Mustard and carrots to pot</td>
<td>0:32</td>
<td>12</td>
</tr>
<tr>
<td>Season</td>
<td>2:34</td>
<td>62</td>
</tr>
<tr>
<td>Cans to garbage</td>
<td>0:14</td>
<td>27</td>
</tr>
<tr>
<td>Wash pots and store</td>
<td>1:38</td>
<td>16</td>
</tr>
<tr>
<td>Wash kettles</td>
<td>2:20</td>
<td>32</td>
</tr>
</tbody>
</table>

**Production time and steps**

Total time: 2 hrs 3 min

#### Base

<table>
<thead>
<tr>
<th>Task</th>
<th>Time</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beans on</td>
<td>0:21</td>
<td>22</td>
</tr>
<tr>
<td>Get and cut salt pork</td>
<td>2:04</td>
<td>34</td>
</tr>
<tr>
<td>Get tomato and Good Seasons and empty</td>
<td>0:58</td>
<td>(23)</td>
</tr>
<tr>
<td>Get celery, and bring water up to mark</td>
<td>1:48</td>
<td>86</td>
</tr>
<tr>
<td>Cans to garbage</td>
<td>0:13</td>
<td>27</td>
</tr>
<tr>
<td>Wash pots</td>
<td>1:38</td>
<td>17</td>
</tr>
<tr>
<td>Wash kettles</td>
<td>2:15</td>
<td>32</td>
</tr>
</tbody>
</table>

**Production time and steps**

Total time: 1 hr 57 min

---

### Test No. 23 (2/1/58)  
**CONSOMME**

#### Conventional

<table>
<thead>
<tr>
<th>Task</th>
<th>Time</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get onions, meat and stock, brown onions, put stock in, pot to sink</td>
<td>4:38</td>
<td>105</td>
</tr>
<tr>
<td>Add onions and meat</td>
<td>0:26</td>
<td>9</td>
</tr>
<tr>
<td>Get eggs and break</td>
<td>2:03</td>
<td>53</td>
</tr>
<tr>
<td>Mix in eggs and meat</td>
<td>2:13</td>
<td>23</td>
</tr>
<tr>
<td>Add seasonings</td>
<td>1:54</td>
<td>48</td>
</tr>
<tr>
<td>Get pot and cap and cloth</td>
<td>2:15</td>
<td>59</td>
</tr>
<tr>
<td>Strain</td>
<td>1:43</td>
<td>10</td>
</tr>
<tr>
<td>Wash pots and clean kettle</td>
<td>7:12</td>
<td>48</td>
</tr>
</tbody>
</table>

**Production time and steps**

Total time: 3 hrs 13 min

#### Base

<table>
<thead>
<tr>
<th>Task</th>
<th>Time</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run 5 gallons water</td>
<td>2:35</td>
<td>14</td>
</tr>
<tr>
<td>Get stock and add</td>
<td>0:43</td>
<td>31</td>
</tr>
<tr>
<td>Clean kettle</td>
<td>1:13</td>
<td>28</td>
</tr>
</tbody>
</table>

**Production time and steps**

Total time: 14 min
<table>
<thead>
<tr>
<th>Test No. 24 (2/4/58)</th>
<th>CHICKEN NOODLE SOUP</th>
<th>5 gallons</th>
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</thead>
<tbody>
<tr>
<td><strong>Conventional</strong></td>
<td><strong>Time</strong></td>
<td><strong>Steps</strong></td>
</tr>
<tr>
<td>Stock to pot and dump</td>
<td>2:08</td>
<td>54</td>
</tr>
<tr>
<td>Dump onions and steam on</td>
<td>1:15</td>
<td>12</td>
</tr>
<tr>
<td>Dump noodles</td>
<td>1:11</td>
<td>10</td>
</tr>
<tr>
<td>Season</td>
<td>2:45</td>
<td>59</td>
</tr>
<tr>
<td>Wash pots</td>
<td>1:38</td>
<td>37</td>
</tr>
<tr>
<td>Tend</td>
<td>0:06</td>
<td>6</td>
</tr>
<tr>
<td>Wash kettle</td>
<td>2:15</td>
<td>18</td>
</tr>
<tr>
<td>Dice chicken and add</td>
<td>1:42</td>
<td>6</td>
</tr>
<tr>
<td>Production time and steps</td>
<td>10:00</td>
<td>202</td>
</tr>
<tr>
<td>Total time</td>
<td>30 min</td>
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<table>
<thead>
<tr>
<th>Base</th>
<th><strong>Time</strong></th>
<th><strong>Steps</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Run water</td>
<td>2:05</td>
<td>12</td>
</tr>
<tr>
<td>Dump Good Seasons</td>
<td>1:37</td>
<td>10</td>
</tr>
<tr>
<td>Dump onions</td>
<td>1:12</td>
<td>12</td>
</tr>
<tr>
<td>Dump noodles</td>
<td>1:11</td>
<td>13</td>
</tr>
<tr>
<td>Tend</td>
<td>0:05</td>
<td>6</td>
</tr>
<tr>
<td>Dice chicken and add</td>
<td>1:43</td>
<td>6</td>
</tr>
<tr>
<td>Can to garbage</td>
<td>1:12</td>
<td>22</td>
</tr>
<tr>
<td>Wash kettle</td>
<td>2:05</td>
<td>21</td>
</tr>
<tr>
<td>Production time and steps</td>
<td>6:10</td>
<td>102</td>
</tr>
<tr>
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<td>26 min</td>
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</tbody>
</table>

<table>
<thead>
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<th>CHICKEN NOODLE SOUP</th>
<th>30 gallons</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Conventional</strong></td>
<td><strong>Time</strong></td>
<td><strong>Steps</strong></td>
</tr>
<tr>
<td>Dump stock</td>
<td>2:25</td>
<td>53</td>
</tr>
<tr>
<td>Dump onions</td>
<td>1:15</td>
<td>12</td>
</tr>
<tr>
<td>Dump noodles</td>
<td>1:12</td>
<td>10</td>
</tr>
<tr>
<td>Season</td>
<td>3:25</td>
<td>64</td>
</tr>
<tr>
<td>Tend</td>
<td>1:43</td>
<td>28</td>
</tr>
<tr>
<td>Add chickens</td>
<td>5:13</td>
<td>26</td>
</tr>
<tr>
<td>Wash pots, etc.</td>
<td>3:20</td>
<td>41</td>
</tr>
<tr>
<td>Production time and steps</td>
<td>16:33</td>
<td>234</td>
</tr>
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<td>2 hrs 17 min</td>
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<table>
<thead>
<tr>
<th>Base</th>
<th><strong>Time</strong></th>
<th><strong>Steps</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Run water - 20 min</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Open and dump flavoring</td>
<td>1:12</td>
<td>14</td>
</tr>
<tr>
<td>Add onions, 1½#</td>
<td>25</td>
<td>6</td>
</tr>
<tr>
<td>Add noodles and mix</td>
<td>1:40</td>
<td>18</td>
</tr>
<tr>
<td>Add chicken</td>
<td>5:13</td>
<td>26</td>
</tr>
<tr>
<td>Dump cans, etc.</td>
<td>3:11</td>
<td>40</td>
</tr>
<tr>
<td>Tend time</td>
<td>2:05</td>
<td>38</td>
</tr>
<tr>
<td>Clean up</td>
<td>4:15</td>
<td>38</td>
</tr>
<tr>
<td>Chicken</td>
<td>5:13</td>
<td></td>
</tr>
<tr>
<td>Production time and steps</td>
<td>19:34</td>
<td>170</td>
</tr>
<tr>
<td>Total time</td>
<td>34 min</td>
<td></td>
</tr>
</tbody>
</table>
Test No. 26 (2/6/58)  

**ONION SOUP**  

<table>
<thead>
<tr>
<th><strong>Conventional</strong></th>
<th><strong>Time</strong></th>
<th><strong>Steps</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Get onions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Put on water</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turn on steam</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Get stock and add onions and shortening</td>
<td>2:50</td>
<td>106</td>
</tr>
<tr>
<td>Tend time</td>
<td>:15</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>:15</td>
<td>6</td>
</tr>
<tr>
<td>Season: 1 C salt</td>
<td>:52</td>
<td>15</td>
</tr>
<tr>
<td>2 T pepper</td>
<td></td>
<td></td>
</tr>
<tr>
<td>coloring</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measure and add stock</td>
<td>2:23</td>
<td>6</td>
</tr>
<tr>
<td>Wash utensils</td>
<td>2:04</td>
<td>34</td>
</tr>
<tr>
<td>Wash pot</td>
<td>1:10</td>
<td>12</td>
</tr>
<tr>
<td>Production time and steps</td>
<td>10:01</td>
<td>191</td>
</tr>
</tbody>
</table>

**Total time**  

<table>
<thead>
<tr>
<th><strong>Base</strong></th>
<th><strong>Time</strong></th>
<th><strong>Steps</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Get and add base</td>
<td>1:23</td>
<td>15</td>
</tr>
<tr>
<td>Tend time</td>
<td>:06</td>
<td>6</td>
</tr>
<tr>
<td>Wash measure</td>
<td>:14</td>
<td>12</td>
</tr>
<tr>
<td>Wash pot</td>
<td>1:20</td>
<td>24</td>
</tr>
<tr>
<td>Production time and steps</td>
<td>3:03</td>
<td>57</td>
</tr>
</tbody>
</table>

**Total time**  

5 gallons

28 min

23 min
Conventional

Yield: 30 gallons

196 lbs. Chicken, fowl, eviscerated
45 gal. Water
3.5 lbs. Celery, chopped
7 lbs. Carrots, chopped
7 lbs. Onions, chopped
3/4 cup Peppercorns
20 leaves Bay leaf
2 1/2 lbs. Salt
1-2/3 Tb. Egg coloring
1-1/2 Tb. Celery salt

Directions:
1. Remove giblets and wash chickens.
2. Add cold water and bring slowly to boil. Simmer 3 to 4 hours.
3. Remove scum.
4. Add vegetables and seasonings. Cook for 30 minutes or until vegetables are well cooked. Remove chickens.
6. Remove fat from the top.
7. Color as desired.

Base

6 cans Good Seasons chicken flavor base (add to water, stir)
30 gallons Boiling water

Test No. 2 (1/14/58)

Conventional

Yield: 5 gallons

32 1/2 lbs. Chicken, fowl, eviscerated
7 1/2 gals. Water
14 oz. (3 1/2 c.) Celery, chopped
13 oz. (3 1/2 c.) Carrots, chopped
2 tsp. Peppercorns
3 1/2 leaves Bay leaf
6 1/2 oz. (3/4 c.) Salt
1 1/2 tsp. Celery salt
As needed Egg coloring

Directions: Same as above

Base

1 can Good Seasons chicken flavor base
5 gallons Water, boiling

Directions: Add Good Seasons chicken flavor to water. Stir to dissolve.
DANISH DUMPLING SOUP

Recipe

Conventional

Yield: 30 gallons

Same as below except: in place of 6 jars chicken flavor soup base
30 gallons water

Use: 30 gallons chicken stock

Base

Soup:
6 jars (6 lbs.) Good Seasons chicken flavor soup base
30 gallons Boiling water
12½ lbs. EP Diced chicken
27 lbs. EP Carrots
22½ lbs. EP Cabbage
8 lbs. AP Celery
4 bunches Parsley

Directions for Soup:
1. Add Good Seasons to water.
2. Add vegetables to stock and bring to boil.

Dumplings:
12 lbs. Bread flour
6 lbs. Margarine
7½ lbs. Milk, dry
4 Tbsp. Salt

Directions for Dumplings:
1. Melt margarine in small steam kettle.
2. Add flour all at once and beat until mixture leaves sides of kettle.
3. Remove from heat, partly cool.
4. Add eggs slowly, beating vigorously after each addition.
5. Drop into hot soup mixture with #40 scoop and cook until done.

Test No. 4 (1/15/58)

DANISH DUMPLING SOUP

Recipe

Conventional

5 gals. Chicken stock
Ingredients 1/6 of those used in Test No. 3

Base

1 jar (1 lb.) Good Seasons chicken flavor soup base
Ingredients 1/6 of those used in Test No. 3
### Conventional BEEF STOCK Recipe

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef shank meat</td>
<td>78 lbs.</td>
</tr>
<tr>
<td>Beef bones</td>
<td>170 lbs.</td>
</tr>
<tr>
<td>Cold water</td>
<td>45 gals.</td>
</tr>
<tr>
<td>Celery, chopped</td>
<td>21 lbs.</td>
</tr>
<tr>
<td>Onions, chopped</td>
<td>7 lbs.</td>
</tr>
<tr>
<td>Carrots, chopped</td>
<td>5 lbs.</td>
</tr>
<tr>
<td>Turnips, chopped</td>
<td>4 lbs.</td>
</tr>
<tr>
<td>Peppercorns</td>
<td>5 Tbsp.</td>
</tr>
<tr>
<td>Bay leaf</td>
<td>30 leaves</td>
</tr>
<tr>
<td>Cloves, whole</td>
<td>3 Tbsp.</td>
</tr>
<tr>
<td>Salt</td>
<td>2 1/2 lbs.</td>
</tr>
</tbody>
</table>

**Directions:**
1. Brown one-half of meat in marrow. Place with remainder of meat and bones in stock kettle. Allow to stand in cold water for 30 minutes. Bring slowly to boil. Simmer 2 or 3 hours.
2. Remove scum by skimming. Add vegetables and seasonings. Cook until vegetables are tender.

**Base**
- 6 cans (6 lbs.) Good Seasons beef flavor soup base
- 30 gallons Boiling water

**Directions:**
1. Add Good Seasons beef flavor to boiling water. Stir to dissolve.
2. Serve at once or keep covered.

### Test No. 6 (1/18/58) BEEF STOCK Recipe

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef shank boneless</td>
<td>12 lbs.</td>
</tr>
<tr>
<td>Beef bones, shank</td>
<td>28 lbs.</td>
</tr>
<tr>
<td>Cold water</td>
<td>7 1/2 gals.</td>
</tr>
<tr>
<td>Celery, chopped</td>
<td>7 oz.</td>
</tr>
<tr>
<td>Onions, chopped</td>
<td>18 oz.</td>
</tr>
<tr>
<td>Carrots, chopped</td>
<td>14 oz.</td>
</tr>
<tr>
<td>Turnips, chopped</td>
<td>8 oz.</td>
</tr>
<tr>
<td>Peppercorns</td>
<td>2 1/2 tsp.</td>
</tr>
<tr>
<td>Bay leaf</td>
<td>5 leaves</td>
</tr>
<tr>
<td>Cloves, whole</td>
<td>1 1/2 tsp.</td>
</tr>
<tr>
<td>Salt</td>
<td>7 oz.</td>
</tr>
</tbody>
</table>

**Base**
- 1 can (1 lb.) Good Seasons beef flavor base
- 5 gallons Boiling water

**Directions for both:** Same as Test No. 5 above.
Test No. 7 (1/17/58)  
ONION GRAVY  
Recipe (Terrell, pg. 186)

Conventional

1 qt. Chopped onions
1 lb. (2 cups) Beef suet fat or drippings
8 oz. (2 cups) Flour, pastry
8 lb. (1 gal.) Meat stock
1 oz. (2 Tbsp.) Salt
2 tsp. Pepper

Directions:
1. Place onions in fat and cook until slightly browned.
2. Stir in flour and make into a roux.
3. Add hot stock, stirring until mixture boils and thickens.
   Add seasonings.
4. Adjust flavor and color as needed.

Base

1 gallon Boiling water
14 oz. (2 cups) Shortening
8 oz. Good Seasons onion soup base
8 oz. (2 cups) Flour
As desired Kitchen bouquet to color if desired.

Directions:
1. Add soup base to boiling water. Cover and simmer 20 minutes.
2. Melt shortening and blend in flour to make a paste
   Add to soup and continue cooking until slightly thickened.

Test No. 8 (1/19/58)  
CHICKEN STOCK  
Recipe

Conventional

120 lbs. and bones Chicken, fowl, eviscerated
45 gals. Water
5½ lbs. Celery chopped
7 lbs. Carrots, chopped
7 lbs. Onions, chopped
3/4 cup Peppercorns
2½ lbs. Salt
2½ Tbsp. Celery salt
1 Tbsp, 1 tsp. Egg coloring
20 leaves Bay leaf

Directions:
1. Wash chickens and remove giblets.
2. Add cold water and bring slowly to boil. Simmer for 3 to 4 hours.
3. Remove scum
4. Add vegetables and seasonings. Cook for 30 minutes or until vegetables are well cooked.

Base

6 cans Good Seasons chicken flavor soup base. (add to water, stir.)
30 gallons Boiling water.
Test No. 9 (1/19/58)  

CHICKEN STOCK Recipe

Conventional

Yield: 5 gallons

32 1/2 lbs. Chicken, fowl, eviscerated
7 1/2 gals. Water
14 oz. Celery, chopped
18 oz. Onions, chopped
18 oz. Carrots, chopped
2 tsp. Peppercorns
3 1/2 leaves Bay leaf
6 1/2 oz. Salt
1 1/2 Tbsp. Celery salt
1 tsp. Egg coloring

Base

1 can Good Seasons chicken flavor soup base
5 gals. Boiling water

Directions for both: Same as in Test No. 8

---

Test No. 10 (1/19/58)  

CREAMED CHICKEN Recipe (Terrell, pg. 156)

Conventional

Yield: 5 gallons

2 lbs. (2 qts.) Flour
2 lbs. (4 cups) Chicken fat
5 cts. (10 lbs.) Hot milk (5 lb dry milk)
4 Tbsp. (2 oz.) Salt
1 tsp. (1 t.) Pepper
16 lbs. (4 gal.) Chicken, cooked, diced

Directions:
1. Add flour to fat and make into a roux.
2. Add broth and milk. Cook until thick and smooth.
3. Add seasonings.
4. Add chicken

Base

3 1/2 lbs. Margarine
2 lbs. Flour
1 1/2 lbs. Good Seasons chicken flavor soup base
4 gals. Milk, hot (4# dry milk)
16 lbs. (4 gal.) Chicken, cooked, diced

Directions:
1. Melt shortening. Add flour and soup base and blend.
2. Combine with scalded milk, stirring vigorously. Cook until smooth and thickened.
3. Add chicken.
### Conventional

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salad macaroni</td>
<td>4 lbs.</td>
</tr>
<tr>
<td>Kidney beans</td>
<td>7 1/2 lbs.</td>
</tr>
<tr>
<td>Dried onion flakes</td>
<td>1 lb.</td>
</tr>
<tr>
<td>Margarine</td>
<td>4 1/2 lbs.</td>
</tr>
<tr>
<td>Cabbage, chopped</td>
<td>6 lbs.</td>
</tr>
<tr>
<td>Carrots, chopped</td>
<td>9 lbs.</td>
</tr>
<tr>
<td>Celery, chopped</td>
<td>9 lbs.</td>
</tr>
<tr>
<td>Garlic, chopped</td>
<td>4 oz.</td>
</tr>
<tr>
<td>Flour</td>
<td>5 1/2 lbs.</td>
</tr>
<tr>
<td>Water</td>
<td>5 gals.</td>
</tr>
<tr>
<td>Stock</td>
<td>15 gals.</td>
</tr>
<tr>
<td>Tomatoes</td>
<td>4 cans (#10)</td>
</tr>
<tr>
<td>Okra</td>
<td>3 cans (#303)</td>
</tr>
<tr>
<td>Oregano</td>
<td>2 Tbsp.</td>
</tr>
<tr>
<td>Thyme</td>
<td>2 Tbsp.</td>
</tr>
</tbody>
</table>

**Directions:**

1. Cook and blanch macaroni.
2. Cook and blanch beans.
4. Melt margarine in a large stock pot, add onions, cabbage, celery and garlic and cook until wilted.
5. Add flour.
6. Add water and stock. Bring to boil and cook about 30 minutes.
7. Add macaroni, beans and other ingredients and cook slowly until well blended.

### Base

Use same recipe as above except in place of 15 gals. stock

- Use 15 gals. water
- 3 jars Good Seasons beef flavor base

---

### Test No. 12 (1/19/58)

**MINESTRONE SOUP**

**Recipe**

**Conventional and Base**

Use 1/4 of recipes for 20 gallons in Test No. 11 above
Test No. 13 (1/20/58) MULLIGATAWNY SOUP Recipe

Conventional Yield: 20 gallons

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Margarine</td>
<td>6 lbs.</td>
<td></td>
</tr>
<tr>
<td>Onions, dried flakes</td>
<td>1 lb.</td>
<td>soak first</td>
</tr>
<tr>
<td>Apples, peeled and diced</td>
<td>20 lbs. AP</td>
<td></td>
</tr>
<tr>
<td>Flour, bread</td>
<td>4 lbs.</td>
<td></td>
</tr>
<tr>
<td>Curry powder</td>
<td>1/2 cup</td>
<td></td>
</tr>
<tr>
<td>Chicken stock</td>
<td>30 gals.</td>
<td></td>
</tr>
<tr>
<td>Rice</td>
<td>6 lbs.</td>
<td></td>
</tr>
<tr>
<td>Chicken, diced</td>
<td>20 lbs.</td>
<td></td>
</tr>
<tr>
<td>Cream, 1/2 &amp; 1/2</td>
<td>3 qts.</td>
<td></td>
</tr>
<tr>
<td>Salt</td>
<td>To taste</td>
<td></td>
</tr>
<tr>
<td>Pepper</td>
<td>To taste</td>
<td></td>
</tr>
</tbody>
</table>

Directions:
1. Saute onions in butter or margarine for 5 minutes.
2. Add apples and cook 10 minutes.
3. Combine flour and curry powder. Add to onion mixture.
5. Add rice and boil gently for 20 minutes.
6. Add chicken, cream and seasonings.

Note: The amount of diced chicken may be reduced.

Base

Same recipe as above except for 30 gallons of chicken stock, substitute soup base stock made as follows:

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good Seasons chicken flavor</td>
<td>6 cans (6 lbs.)</td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>30 gallons</td>
<td></td>
</tr>
</tbody>
</table>

Directions: Add Good Seasons chicken flavor to water. Stir to dissolve.

Test No. 14 (1/20/58) MULLIGATAWNY SOUP Recipe

Conventional and Base

Use 1/6 of 30 gallon recipe as in Test No. 13 above.
### Test No. 15 (1/22/58) BEEF BARLEY SOUP Recipe

**Conventional**

Yield: 20 gallons

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 lbs.</td>
<td>Onions, dried flakes</td>
</tr>
<tr>
<td>7 lbs.</td>
<td>Cabbage, diced</td>
</tr>
<tr>
<td>15 lbs.</td>
<td>Celery, diced</td>
</tr>
<tr>
<td>12 lbs.</td>
<td>Carrots, diced</td>
</tr>
<tr>
<td>1 lb. 2 oz.</td>
<td>Salt pork, cubed</td>
</tr>
<tr>
<td>11 oz.</td>
<td>Cooking oil</td>
</tr>
<tr>
<td>6 lbs.</td>
<td>Barley</td>
</tr>
<tr>
<td>2 1/2 cans (No. 10s)</td>
<td>Tomatoes</td>
</tr>
<tr>
<td>5 lbs.</td>
<td>Beef, cooked and diced</td>
</tr>
<tr>
<td>30 gals.</td>
<td>Beef Stock</td>
</tr>
</tbody>
</table>

**Directions:**

1. Simmer first five ingredients in cooking oil to sauté for 30 minutes.
2. Add remaining ingredients and simmer 2 hours.

**Base**

Same recipe as above except for 30 gallons of beef stock, substitute soup base stock made as follows:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 cans (6 lbs.)</td>
<td>Good Seasons beef flavor base</td>
</tr>
<tr>
<td>30 gals.</td>
<td>Water</td>
</tr>
</tbody>
</table>

*Note: Above recipes reduced to yield 5 gallons*

### Test No. 16 (1/23/58) CHILI CON CARNE Recipe

**Conventional**

Yield: 25 gallons

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>45 lbs.</td>
<td>Red kidney beans</td>
</tr>
<tr>
<td>1 lb. 6 oz.</td>
<td>Garlic, finely minced</td>
</tr>
<tr>
<td>2 lbs.</td>
<td>Onions, dried flakes - soak first</td>
</tr>
<tr>
<td>2 lbs.</td>
<td>Fat (bacon, etc.)</td>
</tr>
<tr>
<td>6 1/2 lbs.</td>
<td>Ground beef</td>
</tr>
<tr>
<td>16 cans (No. 10s)</td>
<td>Tomatoes</td>
</tr>
<tr>
<td>1 lb.</td>
<td>Chili powder</td>
</tr>
<tr>
<td>2 lbs.</td>
<td>Salt</td>
</tr>
<tr>
<td>2 lbs.</td>
<td>Sugar</td>
</tr>
<tr>
<td>4 Tbsp.</td>
<td>Cayenne</td>
</tr>
</tbody>
</table>

**Directions:**

2. Add water and cook until tender. Drain.
3. Saute garlic and onions until tender. Add hamburger and brown.
4. Mix all ingredients together. Cook until flavors are well blended and beans are tender.

**Base**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>45 lbs.</td>
<td>Red kidney beans</td>
</tr>
<tr>
<td>63 lbs.</td>
<td>Ground beef, coarse</td>
</tr>
<tr>
<td>1 1/2 lbs.</td>
<td>Shortening</td>
</tr>
<tr>
<td>3 cans (No. 10s)</td>
<td>Tomato puree</td>
</tr>
<tr>
<td>1 1/2 lbs.</td>
<td>Chili powder</td>
</tr>
<tr>
<td>8 jars (4 lbs.)</td>
<td>Good Seasons onion soup base</td>
</tr>
<tr>
<td>1 1/4 lbs.</td>
<td>Salt</td>
</tr>
</tbody>
</table>

**Directions:**

1. Sort over and soak kidney beans in water to cover.
2. Brown meat in shortening.
3. Simmer beans until tender - about two hours.
4. Blend all ingredients together and cook for one hour.

-62-
Conventional

Yield: 10 gallons

160 lbs. (400 count) Flank steaks, cut 7 oz. each
16 lbs. Flour
2 lbs. Salt dredge meat in this
3 oz. Pepper
1 lb. Lard - brown meat in this
10 gals. Stock, beef

2 gals. Water

3 gals. (No. 10s) Tomato puree
4 lbs. Flour
4 2/3 lbs. Fat drippings from meat
1 lb. Onions, dried flakes - soak first
2 oz. Celery salt
1/4 cup Broken bay leaves

To taste Salt and pepper

Directions:
1. Roll meat in first amount of flour and brown in hot shortening.
2. Remove meat to roasting pans. Blend second amount of flour into hot drippings, add remaining ingredients. Cook and stir until slightly thickened gravy is formed.
3. Pour gravy mixture over meat and bake in slow oven (325°F.) for 2 1/2 hours or until meat is tender.

Base

128 lbs. Flank steaks, cut 7 oz. each
8 lbs. (8 qts.) Flour
7 1/2 lbs. Shortening
2 2/3 lbs. (2 2/3 qts.) Flour
4 lbs. (8 jars) Good Seasons onion soup base
10 gals. Water
2 gals. Chopped celery
8 cans (No. 10s) Tomatoes

Directions:
1. Roll meat in first amount of flour and brown in hot shortening.
2. Remove meat to roasting pans. Blend second amount of flour into hot drippings. Add soup base, water, and vegetables. Cook and stir until slightly thickened gravy is formed.
3. Pour gravy mixture over meat and bake in slow oven (325°F.) 2 1/2 hours, or until meat is tender.
Test No. 18 (1/24/53) BECHAMEL SAUCE Recipe (Terrell, 100)

Yield: 1 1/4 gallons

Conventional

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shortening</td>
<td>1 lb.</td>
</tr>
<tr>
<td>Flour</td>
<td>10 oz. (2 1/4 cups)</td>
</tr>
<tr>
<td>Chicken broth</td>
<td>3 qts.</td>
</tr>
<tr>
<td>Dry milk</td>
<td>1 lb.</td>
</tr>
<tr>
<td>Salt</td>
<td>1 1/3 oz.</td>
</tr>
<tr>
<td>Pepper</td>
<td>1 tsp.</td>
</tr>
<tr>
<td>Cayenne</td>
<td>1/8 tsp.</td>
</tr>
<tr>
<td>Evaporated milk</td>
<td>29 oz.</td>
</tr>
</tbody>
</table>

Directions:

1. Melt shortening. Add flour, stirring until smooth. Add strained stock and dry milk and heat, stirring constantly until mixture is thick and flour loses its raw taste.

Base

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrot, sliced</td>
<td>1 medium</td>
</tr>
<tr>
<td>Onion, sliced</td>
<td>1 small</td>
</tr>
<tr>
<td>Bay leaf</td>
<td>2 leaves</td>
</tr>
<tr>
<td>Parsley</td>
<td>3 sprigs</td>
</tr>
<tr>
<td>Water</td>
<td>3 1/2 qts.</td>
</tr>
<tr>
<td>Shortening</td>
<td>14 oz. (2 cups)</td>
</tr>
<tr>
<td>Flour</td>
<td>8 oz. (2 cups)</td>
</tr>
<tr>
<td>Good Seasons chicken flavor soup base</td>
<td>6 oz. (3/4 cup)</td>
</tr>
<tr>
<td>Milk (2 oz. dry milk used)</td>
<td>2 cups</td>
</tr>
<tr>
<td>Evaporated milk</td>
<td>1 cup</td>
</tr>
</tbody>
</table>

Directions:

2. Melt shortening and add milk and cook until smooth.
3. Let stand about 15 minutes to blend flavors.
**Test No. 19 (1/26/58)**

**FRIED CHICKEN GRAVY**

*Recipe*

**Conventional**

| 8 oz. | Margarine |
| 8 oz. | Flour |
| 14 gals. | Water |
| To taste | Salt |
| To taste | Pepper |
| As needed | Yellow color |

**Directions:**

1. Melt margarine; add flour, cook
2. Add water which has been used to pick up meat drippings from fried chicken.
3. Add seasonings.

**Base** *(Note: above recipe reduced for experiment to yield 1 gallon)*

| 14 oz. (2 cups) | Shortening |
| 8 oz. (2 cups) | Flour |
| 6 oz. (3/4 cup) | Good Seasons chicken soup base |
| 1 gal. | Hot water |

**Directions:**

1. Melt shortening; add flour and soup base. Cook and stir over low heat until mixture bubbles and is well blended.
2. Stir in hot water and continue cooking and stirring until thickened.

---

**Test No. 20 (1/27/58)**

**VEGETABLE SOUP**

*Recipe*

**Conventional**

| 1 can (No. 10) | Tomatoes |
| 1 1/2 lb. (1 pt.) | Carrots, diced ............... |
| 1 1/4 lb. (1 pt.) | Turnips, chopped |
| 1 1/2 lb. (1 pt.) | Celery, chopped |
| 4 oz. | Onions, dried flakes, soaked |
| 5 lbs. | Potatoes, diced |
| 1 qt. | Peas |
| 2 qts. | Cooked rice |
| To taste | Salt |
| To taste | Pepper |
| 5 gallons | Beef stock |

**Directions:**

1. Prepare carrots, turnips, onions, celery and cabbage and saute in oil for 20 minutes.
2. Add remaining ingredients and simmer about 30 minutes.

**Base**

Same recipe as above except for 5 gallons of beef stock, substitute soup base stock made as follows:

| 1 can | Good Seasons beef flavor soup base |
| 5 gals. | Hot water |
### Conventional yield:

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Split peas</td>
<td>4 lbs (1-1/2 qt)</td>
</tr>
<tr>
<td>Bacon fat</td>
<td>4 oz. (1/2 cup)</td>
</tr>
<tr>
<td>Onions, finely chopped</td>
<td>1 lb. (1 1/4 cups)</td>
</tr>
<tr>
<td>Celery, finely chopped</td>
<td>1 lb. (1 pt.)</td>
</tr>
<tr>
<td>Carrots, finely chopped</td>
<td>4 1/3 lbs (1-2/3 cup)</td>
</tr>
<tr>
<td>Flour</td>
<td>1 oz. (1/4 cup)</td>
</tr>
<tr>
<td>Beef stock</td>
<td>2 1/2 gals. (12 lb.)</td>
</tr>
<tr>
<td>Ham bones (bones from two hams)</td>
<td>3/4 lbs.</td>
</tr>
<tr>
<td>Salt</td>
<td>3/4 tsp.</td>
</tr>
<tr>
<td>Pepper</td>
<td>1/2 Tbsp (1/4 oz.)</td>
</tr>
<tr>
<td>Sugar</td>
<td></td>
</tr>
</tbody>
</table>

**Directions:**

1. Soak peas overnight and drain.
2. Simmer vegetables in bacon fat for 20 minutes. Add flour.
3. Cook peas and ham bones in stock until split peas are tender.
4. Combine all ingredients and cook until vegetables are tender.
5. Add water if evaporative loss is such that 2 1/4 gallons are not obtained.

### Base yield:

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Split peas</td>
<td>4 lbs.</td>
</tr>
<tr>
<td>Water</td>
<td>1 gal.</td>
</tr>
<tr>
<td>Hot water</td>
<td>4 1/2 qts.</td>
</tr>
<tr>
<td>Good Seasons onion soup base</td>
<td>1 jar (8 oz.)</td>
</tr>
<tr>
<td>Salt pork, cut in 1/4-inch cubes</td>
<td>8 oz.</td>
</tr>
</tbody>
</table>

**Directions:**

1. Soak peas overnight in first amount of water.
2. Add remaining ingredients and simmer 2 1/2 hours.
**Conventional**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity/Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Navy beans</td>
<td>5 lbs.</td>
</tr>
<tr>
<td>Chopped ham</td>
<td>1 lb. 6 oz.</td>
</tr>
<tr>
<td>Bacon drippings</td>
<td>1/4 cup</td>
</tr>
<tr>
<td>Dried onion flakes, soaked</td>
<td>3 oz.</td>
</tr>
<tr>
<td>Carrots, minced</td>
<td>1 lb.</td>
</tr>
<tr>
<td>Tomato puree</td>
<td>1/2 can (No. 10)</td>
</tr>
<tr>
<td>Catsup</td>
<td>2/3 cup</td>
</tr>
<tr>
<td>Prepared mustard</td>
<td>2/3 cup</td>
</tr>
</tbody>
</table>

**Directions:**
2. Cook to a mush in fresh water to cover.
3. Add remaining ingredients and simmer 2 hours.
4. Add water if evaporative loss is such that 5 gallons are not obtained.

**Base**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity/Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dried navy beans</td>
<td>5 lbs.</td>
</tr>
<tr>
<td>Water</td>
<td>5 qts.</td>
</tr>
<tr>
<td>Hot water</td>
<td>3-3/4 gal.</td>
</tr>
<tr>
<td>Good Seasons onion soup base</td>
<td>2 1/2 jars</td>
</tr>
<tr>
<td>Chopped celery tops</td>
<td>2 1/2 cups</td>
</tr>
<tr>
<td>Salt pork, cut in 1/2-inch cubes</td>
<td>2 1/2 lbs.</td>
</tr>
<tr>
<td>Tomato juice</td>
<td>1/4 qts.</td>
</tr>
</tbody>
</table>

**Directions:**
1. Soak beans overnight in first amount of water.
2. Add remaining ingredients. Cover and simmer about 4 hours, or until beans are tender. If desired, puree the beans with the liquid and reheat before serving.
Conventional Base

**CHICKEN RISSOTTO**

Yield: 600 servings

- Shortening
- Chicken, eviscerated
- Green onions, chopped
- Garlic, finely chopped
- Good Seasons chicken soup base
- Hot water
- Uncooked rice
- Onion tops, finely chopped

**Directions:**
2. Add soup base and water; stir in rice. Cover with water and bake in oven about an hour or until tender.
3. Sprinkle with onion tops and serve.

---

Test No. 23 (2/1/58) **CONSOMME**

**Yield:** 5 gallons

- Onions, sliced
- Celery
- Carrots
- Beef stock
- Salt
- Peppercorns
- Clove sticks
- Hamburger
- eggs

**Directions:**
2. Add onions and vegetables to stock.
3. Whip hamburger and broken eggs and shells into cold stock.
4. Add seasonings.
5. Bring to a simmering temperature.
6. Let stand at 180°F. for about 2 hours.
7. Strain through cloth carefully from a pet cock or valve on the bottom. Do not disturb coagulated layer of meat and eggs.

**Base**

- Jar (5 lbs.) Good Seasons Beef flavor soup base
- Boiling water

**Directions:** Add Good Seasons beef flavor to boiling water. Stir to dissolve.

---

-68-
Test No. 24 (2/4/58)  

CHICKEN NOODLE SOUP  

Recipe  

Conventional  

Yield: 5 gallons  

| 4 oz.      | Dried onion flakes      |
| 1 lb. EP   | Celery, chopped         |
| 1 lb. EP   | Carrots, chopped        |
| 14 oz.     | Chicken fat             |
| 12 oz.     | Flour                   |
| 5 gals.    | Chicken stock           |
| 1 lb. 5 oz.| Noodles                 |
| 3/4 lb.    | Diced chicken           |

Directions:  
1. Presoak onions.  
2. Saute vegetables.  
3. When almost cooked, add flour.  
4. Add stock and bring to boil.  
5. Add noodles and cook until done.  
6. Add diced chicken and serve.

Base  

Yield: 30 gallons  

| 4 oz.      | Dried onion flakes      |
| 1 lb. EP   | Celery, chopped         |
| 1 lb. EP   | Carrots, chopped        |
| 14 oz.     | Margarine               |
| 1 jar (1 lb.) | Good Seasons chicken flavor soup base |
| 5 gals.    | Water                   |
| 1 lb. 5 oz.| Noodles                 |
| 3/4 lb.    | Diced chicken           |

Directions:  
Proceed as in control with exception--instead of adding stock add water and then soup base.

---

Test No. 25 (2/4/58)  

CHICKEN NOODLE SOUP  

Recipe  

Conventional and Base  

Increase Test No. 24 by 6
### Conventional

Yield: 5 gallons

<table>
<thead>
<tr>
<th>12 oz.</th>
<th>Dried onion flakes, soak</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 oz.</td>
<td>Suet</td>
</tr>
<tr>
<td>5 gals.</td>
<td>Beef stock</td>
</tr>
<tr>
<td>1 cup</td>
<td>Salt</td>
</tr>
<tr>
<td>2 Tbsp.</td>
<td>Pepper</td>
</tr>
</tbody>
</table>

**Directions:**
1. Saute the onions in the suet.
2. Add to beef stock and add seasonings.

### Base

<table>
<thead>
<tr>
<th>4 jars (2 lbs.)</th>
<th>Good Seasons onion soup base</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 gals.</td>
<td>Boiling water</td>
</tr>
</tbody>
</table>

**Directions:**
1. Add soup base to boiling water. Stir to dissolve.
   Cover and simmer 20 minutes
<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
<th>Price/Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Soup Bases</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Onion Soup Base &amp; Seasoning</td>
<td>8 oz.</td>
<td>.67</td>
</tr>
<tr>
<td>Beef Flavor Soup Base &amp; Seasoning</td>
<td>16 oz.</td>
<td>1.33</td>
</tr>
<tr>
<td>Chicken Soup Base &amp; Seasoning</td>
<td>16 oz.</td>
<td>1.49</td>
</tr>
<tr>
<td><strong>Meat &amp; Poultry</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hens, eviscerated</td>
<td>16 oz.</td>
<td>.45</td>
</tr>
<tr>
<td>Chicken, diced</td>
<td>16 oz.</td>
<td>.65</td>
</tr>
<tr>
<td>Beef, boned</td>
<td>16 oz.</td>
<td>.51</td>
</tr>
<tr>
<td>Beef bones</td>
<td>16 oz.</td>
<td>.05</td>
</tr>
<tr>
<td>Salt pork</td>
<td>16 oz.</td>
<td>.83</td>
</tr>
<tr>
<td>Hamburger</td>
<td>16 oz.</td>
<td>.49</td>
</tr>
<tr>
<td><strong>Dairy Products</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milk, powdered</td>
<td>16 oz.</td>
<td>.1725</td>
</tr>
<tr>
<td>Milk, canned</td>
<td>14 1/2 oz.</td>
<td>.13</td>
</tr>
<tr>
<td>Cream 1/2 &amp; 1/2</td>
<td>quart</td>
<td>.50</td>
</tr>
<tr>
<td>Hydrogenated fats, primex</td>
<td>16 oz.</td>
<td>.24</td>
</tr>
<tr>
<td>Lard</td>
<td>16 oz.</td>
<td>.20</td>
</tr>
<tr>
<td>Oil, salad</td>
<td>16 oz.</td>
<td>.40</td>
</tr>
<tr>
<td>Oleomargarine, Kraft</td>
<td>16 oz.</td>
<td>.1996</td>
</tr>
<tr>
<td>Oleomargarine, Armours</td>
<td>16 oz.</td>
<td>.2040</td>
</tr>
<tr>
<td>Oleomargarine</td>
<td>16 oz.</td>
<td>.219</td>
</tr>
<tr>
<td>Eggs, fresh</td>
<td>dozen</td>
<td>.62</td>
</tr>
<tr>
<td>Eggs, frozen</td>
<td>16 oz.</td>
<td>.389</td>
</tr>
<tr>
<td><strong>Dry Goods</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flour</td>
<td>16 oz.</td>
<td>.07</td>
</tr>
<tr>
<td>Macaroni</td>
<td>16 oz.</td>
<td>.16</td>
</tr>
<tr>
<td>Noodles, egg</td>
<td>16 oz.</td>
<td>.21</td>
</tr>
<tr>
<td>Onion flakes</td>
<td>16 oz.</td>
<td>.86</td>
</tr>
<tr>
<td>Rice, regular</td>
<td>16 oz.</td>
<td>.1675</td>
</tr>
<tr>
<td><strong>Condiments, Spices &amp; Seasonings</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catsup (6/10 -$5.25 cs.)</td>
<td>tin</td>
<td>.88</td>
</tr>
<tr>
<td>Kitchen Bouquet ($4.50 / gal.)</td>
<td>cup</td>
<td>.22</td>
</tr>
<tr>
<td>Egg Coloring</td>
<td>quart</td>
<td>.20</td>
</tr>
<tr>
<td>Garlic</td>
<td>16 oz.</td>
<td>.40</td>
</tr>
<tr>
<td>Mustard, prepared (4/1 gal. -$3.24/cs.)</td>
<td>cup</td>
<td>.81</td>
</tr>
<tr>
<td>Curry Powder (1 tin $3.72)</td>
<td>cup</td>
<td>.36</td>
</tr>
<tr>
<td>Salt</td>
<td>16 oz.</td>
<td>.0188</td>
</tr>
<tr>
<td>Pepper</td>
<td>16 oz.</td>
<td>.58</td>
</tr>
</tbody>
</table>

-71-
<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
<th>Price/Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condiments, Spices &amp; Seasonings (cont.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tumeric</td>
<td>1 tin</td>
<td>.50</td>
</tr>
<tr>
<td>Chili Powder</td>
<td>16 oz.</td>
<td>.61</td>
</tr>
<tr>
<td>Bay leaves</td>
<td>16 oz.</td>
<td>.70</td>
</tr>
<tr>
<td>Saligen</td>
<td>16 oz.</td>
<td>2.42</td>
</tr>
<tr>
<td>Parsley</td>
<td>dozen</td>
<td>.90</td>
</tr>
<tr>
<td>Thyme</td>
<td>tin</td>
<td>.11</td>
</tr>
<tr>
<td>Peppercorns (48/7 oz - $5.12/48)</td>
<td>each</td>
<td>.11</td>
</tr>
<tr>
<td>Cayene</td>
<td>16 oz.</td>
<td>1.15</td>
</tr>
<tr>
<td>Oragano</td>
<td>12 oz.</td>
<td>1.17</td>
</tr>
<tr>
<td>Pimentoes (24/2½ cups)</td>
<td>3½ cups</td>
<td>.61</td>
</tr>
<tr>
<td>Vegetables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Okra (24/303)</td>
<td>cup</td>
<td>.085</td>
</tr>
<tr>
<td>Beans, chili</td>
<td>16 oz.</td>
<td>.095</td>
</tr>
<tr>
<td>Beans, lima</td>
<td>16 oz.</td>
<td>.095</td>
</tr>
<tr>
<td>Beans, navy</td>
<td>16 oz.</td>
<td>.095</td>
</tr>
<tr>
<td>Beans, kidney</td>
<td>16 oz.</td>
<td>1.015</td>
</tr>
<tr>
<td>Peas, split</td>
<td>16 oz.</td>
<td>.0825</td>
</tr>
<tr>
<td>Potatoes, prepeeled</td>
<td>16 oz.</td>
<td>.08</td>
</tr>
<tr>
<td>Peas, frozen</td>
<td>16 oz.</td>
<td>.239</td>
</tr>
<tr>
<td>Vegetables - Fresh</td>
<td>a.p. per pound</td>
<td>e.p. per pound</td>
</tr>
<tr>
<td>Turnips</td>
<td>.10</td>
<td>.13</td>
</tr>
<tr>
<td>Celery (2½ dz. - 1 crate - $6.50)</td>
<td>.11</td>
<td>.12</td>
</tr>
<tr>
<td>Onions</td>
<td>.06</td>
<td>.07</td>
</tr>
<tr>
<td>Cabbage</td>
<td>.10</td>
<td>.12</td>
</tr>
<tr>
<td>Carrots, machine scraped</td>
<td>.095</td>
<td>.12</td>
</tr>
<tr>
<td>Carrots, hand scraped</td>
<td>.095</td>
<td>.12</td>
</tr>
<tr>
<td>Green onions, topped</td>
<td>.06</td>
<td>.10</td>
</tr>
<tr>
<td>Fruit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apples</td>
<td>40 pound</td>
<td>.88</td>
</tr>
<tr>
<td>Tomatoes (6/10)</td>
<td>13 cups</td>
<td>.68</td>
</tr>
<tr>
<td>Tomato Paste (6/10)</td>
<td>13 cups</td>
<td>.558</td>
</tr>
<tr>
<td>Tomato Puree (6/10)</td>
<td>13 cups</td>
<td>.558</td>
</tr>
<tr>
<td>Tomato Juice</td>
<td>46 oz.</td>
<td>.23</td>
</tr>
</tbody>
</table>
## Test No. 1 (1/14/58)

**CHICKEN STOCK**

### Conventional

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicken, fowl, eviscerated</td>
<td>196 lbs.</td>
<td>$8.82</td>
</tr>
<tr>
<td>Water</td>
<td>45 gals.</td>
<td>--</td>
</tr>
<tr>
<td>Celery, chopped</td>
<td>5 1/2 lbs.</td>
<td>.66</td>
</tr>
<tr>
<td>Carrots, chopped</td>
<td>7 lbs.</td>
<td>.83</td>
</tr>
<tr>
<td>Onions, chopped</td>
<td>7 lbs.</td>
<td>.47</td>
</tr>
<tr>
<td>Peppercorns</td>
<td>3/4 cup</td>
<td>.11</td>
</tr>
<tr>
<td>Bay leaf</td>
<td>20 leaves</td>
<td>.01</td>
</tr>
<tr>
<td>Salt</td>
<td>2 1/2 Tb.</td>
<td>.05</td>
</tr>
<tr>
<td>Egg coloring</td>
<td>1-2/3 Tb.</td>
<td>.01</td>
</tr>
<tr>
<td>Celery salt</td>
<td>1-1/2 Tb.</td>
<td>.01</td>
</tr>
</tbody>
</table>

**Ingredient and Labor Cost**

<table>
<thead>
<tr>
<th>Component</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base</td>
<td>$10.84</td>
</tr>
<tr>
<td>Good Seasons chicken flavor base</td>
<td>$1.80</td>
</tr>
</tbody>
</table>

**Total Ingredient and Labor Cost**

$12.64

### Base

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good Seasons chicken flavor base</td>
<td>6 cans</td>
<td>$8.94</td>
</tr>
<tr>
<td>Water</td>
<td>30 gals.</td>
<td>--</td>
</tr>
</tbody>
</table>

**Ingredient and Labor Cost**

<table>
<thead>
<tr>
<th>Component</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base</td>
<td>$8.94</td>
</tr>
<tr>
<td>Good Seasons chicken flavor base</td>
<td>$2.23</td>
</tr>
</tbody>
</table>

**Total Ingredient and Labor Cost**

$11.17

---

## Test No. 2 (1/14/58)

**CHICKEN STOCK**

### Conventional

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicken, fowl, eviscerated</td>
<td>32 1/2 lbs.</td>
<td>$1.46</td>
</tr>
<tr>
<td>Water</td>
<td>7 1/2 gals.</td>
<td>--</td>
</tr>
<tr>
<td>Celery, chopped</td>
<td>14 oz.</td>
<td>.10</td>
</tr>
<tr>
<td>Carrots, chopped</td>
<td>18 oz.</td>
<td>.13</td>
</tr>
<tr>
<td>Onion, chopped</td>
<td>18 oz.</td>
<td>.08</td>
</tr>
<tr>
<td>Peppercorns</td>
<td>2 tsp.</td>
<td>.02</td>
</tr>
<tr>
<td>Bay leaf</td>
<td>3 1/2 leaves</td>
<td>.01</td>
</tr>
<tr>
<td>Salt</td>
<td>6 1/2 oz.</td>
<td>.01</td>
</tr>
<tr>
<td>Celery salt</td>
<td>1 1/2 tsp.</td>
<td>.01</td>
</tr>
<tr>
<td>Egg coloring</td>
<td></td>
<td>--</td>
</tr>
</tbody>
</table>

**Ingredient and Labor Cost**

<table>
<thead>
<tr>
<th>Component</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base</td>
<td>$1.82</td>
</tr>
<tr>
<td>Good Seasons chicken flavor base</td>
<td>$1.75</td>
</tr>
</tbody>
</table>

**Total Ingredient and Labor Cost**

$3.57

### Base

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good Seasons chicken flavor base</td>
<td>1 can</td>
<td>$1.49</td>
</tr>
<tr>
<td>Water</td>
<td>5 gal.</td>
<td>--</td>
</tr>
</tbody>
</table>

**Ingredient and Labor Cost**

<table>
<thead>
<tr>
<th>Component</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base</td>
<td>$1.49</td>
</tr>
<tr>
<td>Good Seasons chicken flavor base</td>
<td>$.10</td>
</tr>
</tbody>
</table>

**Total Ingredient and Labor Cost**

$1.59

---
### Test No. 3 (1/15/58)  
**DANISH DUMPLING SOUP**  
**Ingredient and Labor Cost**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Yield: 30 gallons</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Conventional</strong></td>
<td></td>
</tr>
<tr>
<td>Chicken stock</td>
<td>30 gals.</td>
</tr>
<tr>
<td>Diced chicken</td>
<td>12½ lbs.</td>
</tr>
<tr>
<td>Carrots, E.P.</td>
<td>27 lbs.</td>
</tr>
<tr>
<td>Cabbage, E.P.</td>
<td>22½ lbs.</td>
</tr>
<tr>
<td>Celery, A.P.</td>
<td>8 lbs.</td>
</tr>
<tr>
<td>Parsley</td>
<td>4 bunches</td>
</tr>
<tr>
<td><strong>Dumplings:</strong></td>
<td></td>
</tr>
<tr>
<td>Bread flour</td>
<td>12 lbs.</td>
</tr>
<tr>
<td>Margarine</td>
<td>6 lbs.</td>
</tr>
<tr>
<td>Eggs, frozen</td>
<td>7½ lbs.</td>
</tr>
<tr>
<td>Milk, dry</td>
<td>1½ lbs.</td>
</tr>
<tr>
<td>Salt</td>
<td>4 Tbsp.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Ingredient Cost</strong></td>
<td>$ 35.99</td>
</tr>
<tr>
<td><strong>Labor Cost</strong></td>
<td>$ .95</td>
</tr>
<tr>
<td><strong>Total Ingredient and Labor Cost</strong></td>
<td>$ 36.94</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Yield: 5 gallons</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Base</strong></td>
<td></td>
</tr>
<tr>
<td>Good Seasons</td>
<td>6 jars</td>
</tr>
<tr>
<td>Boiling water</td>
<td>30 gals.</td>
</tr>
<tr>
<td>Diced chicken</td>
<td>12½ lbs.</td>
</tr>
<tr>
<td>Carrots, E.P.</td>
<td>27 lbs.</td>
</tr>
<tr>
<td>Cabbage, E.P.</td>
<td>22½ lbs.</td>
</tr>
<tr>
<td>Celery, A.P.</td>
<td>8 lbs.</td>
</tr>
<tr>
<td>Parsley</td>
<td>4 bunches</td>
</tr>
<tr>
<td><strong>Dumplings:</strong></td>
<td></td>
</tr>
<tr>
<td>Bread flour</td>
<td>12 lbs.</td>
</tr>
<tr>
<td>Margarine</td>
<td>6 lbs.</td>
</tr>
<tr>
<td>Eggs, frozen</td>
<td>7½ lbs.</td>
</tr>
<tr>
<td>Milk, dry</td>
<td>1½ lbs.</td>
</tr>
<tr>
<td>Salt</td>
<td>4 Tbsp.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Ingredient Cost</strong></td>
<td>$ 32.18</td>
</tr>
<tr>
<td><strong>Labor Cost</strong></td>
<td>$ .78</td>
</tr>
<tr>
<td><strong>Total Ingredient and Labor Cost</strong></td>
<td>$ 32.96</td>
</tr>
</tbody>
</table>

---

### Test No. 4 (1/15/58)  
**DANISH DUMPLING SOUP**  
**Ingredient and Labor Cost**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Yield: 5 gallons</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Conventional</strong></td>
<td></td>
</tr>
<tr>
<td>1/6 of ingredients used in Test No. 3</td>
<td></td>
</tr>
<tr>
<td><strong>Ingredient Cost</strong></td>
<td>$ 5.99</td>
</tr>
<tr>
<td><strong>Labor Cost</strong></td>
<td>$ .28</td>
</tr>
<tr>
<td><strong>Total Ingredient and Labor Cost</strong></td>
<td>$ 6.27</td>
</tr>
</tbody>
</table>

| Ingredients       |                  |
|-------------------|                  |
| **Base**          |                  |
| 1/6 of ingredients used in Test No. 3 | |
| **Ingredient Cost** | $ 5.36    |
| **Labor Cost**    | $ .10            |
| **Total Ingredient and Labor Cost** | $ 5.46 |
### Test No. 5 (1/18/58)  
#### BEEF STOCK  
**Ingredient and Labor Cost**

**Yield:** 30 gallons

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef shank meat</td>
<td>78 lbs.</td>
<td>$3.98</td>
</tr>
<tr>
<td>Beef bones</td>
<td>170 lbs.</td>
<td>8.50</td>
</tr>
<tr>
<td>Cold water</td>
<td>4.5 gals.</td>
<td>—</td>
</tr>
<tr>
<td>Celery, chopped</td>
<td>2 lbs.</td>
<td>.30</td>
</tr>
<tr>
<td>Onions, chopped</td>
<td>7 lbs.</td>
<td>.47</td>
</tr>
<tr>
<td>Carrots, chopped</td>
<td>5 lbs.</td>
<td>.59</td>
</tr>
<tr>
<td>Turnips, chopped</td>
<td>14 lbs.</td>
<td>.50</td>
</tr>
<tr>
<td>Peppercorns</td>
<td>15 Tbsp.</td>
<td>.05</td>
</tr>
<tr>
<td>Bay leaf</td>
<td>30 leaves</td>
<td>.02</td>
</tr>
<tr>
<td>Cloves, whole</td>
<td>3 Tbsp.</td>
<td>.01</td>
</tr>
<tr>
<td>Salt</td>
<td>21/2 lbs.</td>
<td>.05</td>
</tr>
</tbody>
</table>

**Ingredient Cost:** $14.47  
**Labor Cost:** $3.28  
**Total Ingredient and Labor Cost:** $17.75

---

### Base

- **Good Seasons beef flavor base:** 6 cans  
  **Ingredient Cost:** $7.98

- **Boiling water:** 30 gals.  
  **Ingredient Cost:** $7.98

**Total Ingredient and Labor Cost:** $8.13

---

### Test No. 6 (1/18/58)  
#### BEEF STOCK  
**Ingredient and Labor Cost**

**Yield:** 5 gallons

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef shank meat</td>
<td>12 lbs.</td>
<td>.61</td>
</tr>
<tr>
<td>Beef bones</td>
<td>28 lbs.</td>
<td>1.40</td>
</tr>
<tr>
<td>Cold water</td>
<td>71/2 gals.</td>
<td>—</td>
</tr>
<tr>
<td>Celery, chopped</td>
<td>7 oz.</td>
<td>.05</td>
</tr>
<tr>
<td>Onions, chopped</td>
<td>18 oz.</td>
<td>.08</td>
</tr>
<tr>
<td>Carrots, chopped</td>
<td>14 oz.</td>
<td>.10</td>
</tr>
<tr>
<td>Turnips, chopped</td>
<td>8 oz.</td>
<td>.06</td>
</tr>
<tr>
<td>Peppercorns</td>
<td>21/2 tsp.</td>
<td>.02</td>
</tr>
<tr>
<td>Bay leaf</td>
<td>5 leaves</td>
<td>.01</td>
</tr>
<tr>
<td>Cloves, whole</td>
<td>11/2 tsp.</td>
<td>.01</td>
</tr>
<tr>
<td>Salt</td>
<td>7 oz.</td>
<td>.01</td>
</tr>
</tbody>
</table>

**Ingredient Cost:** $2.35  
**Labor Cost:** $1.38  
**Total Ingredient and Labor Cost:** $3.73

---

### Base

- **Good Seasons beef flavor base:** 1 can  
  **Ingredient Cost:** $1.33

- **Boiling water:** 5 gals.  
  **Ingredient Cost:** $1.33

**Total Ingredient and Labor Cost:** $2.66
Test No. 7 (1/17/58)

**ONION GRAVY**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Conventional</th>
<th>Base</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Onions, chopped</strong></td>
<td>1 qt.</td>
<td></td>
</tr>
<tr>
<td><strong>Beef suet fat or drippings</strong></td>
<td>1 lb.</td>
<td></td>
</tr>
<tr>
<td><strong>Flour, pastry</strong></td>
<td>8 oz.</td>
<td></td>
</tr>
<tr>
<td><strong>Meat stock</strong></td>
<td>8 lbs.</td>
<td></td>
</tr>
<tr>
<td><strong>Salt</strong></td>
<td>1 oz.</td>
<td></td>
</tr>
<tr>
<td><strong>Pepper</strong></td>
<td>2 tsp.</td>
<td></td>
</tr>
<tr>
<td><strong>Ingredient Cost</strong></td>
<td>$0.79</td>
<td></td>
</tr>
<tr>
<td><strong>Labor Cost</strong></td>
<td>$0.55</td>
<td></td>
</tr>
<tr>
<td><strong>Total Ingredient and Labor Cost</strong></td>
<td>$1.34</td>
<td></td>
</tr>
</tbody>
</table>

| **Boiling water**                 | 1 gal.       |      |
| **Shortening**                    | 14 oz.       |      |
| **Good Seasons onion base**       | 8 oz.        |      |
| **Flour**                         | 8 oz.        |      |
| **Kitchen bouquet to color**      |              |      |
| **Ingredient Cost**               | $0.92        | |
| **Labor Cost**                    | $0.22        | |
| **Total Ingredient and Labor Cost** | $1.15       | |

Test No. 8 (1/19/58)

**CHICKEN STOCK**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Conventional</th>
<th>Base</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chicken, fowl, eviscerated</strong></td>
<td>120 lbs.</td>
<td></td>
</tr>
<tr>
<td><strong>Water</strong></td>
<td>45 gals.</td>
<td></td>
</tr>
<tr>
<td><strong>Celery, chopped</strong></td>
<td>5½ lbs.</td>
<td></td>
</tr>
<tr>
<td><strong>Carrots, chopped</strong></td>
<td>7 lbs.</td>
<td></td>
</tr>
<tr>
<td><strong>Onions, chopped</strong></td>
<td>7 lbs.</td>
<td></td>
</tr>
<tr>
<td><strong>Peppercorns</strong></td>
<td>3/4 cup</td>
<td></td>
</tr>
<tr>
<td><strong>Salt</strong></td>
<td>2½ lbs.</td>
<td></td>
</tr>
<tr>
<td><strong>Celery salt</strong></td>
<td>2 Tbsp.</td>
<td></td>
</tr>
<tr>
<td><strong>Egg coloring</strong></td>
<td>1 Tbsp., 1 tsp.</td>
<td></td>
</tr>
<tr>
<td><strong>Bay leaf</strong></td>
<td>20 leaves</td>
<td></td>
</tr>
<tr>
<td><strong>Ingredient Cost</strong></td>
<td>$7.55</td>
<td></td>
</tr>
<tr>
<td><strong>Labor Cost</strong></td>
<td>$2.40</td>
<td></td>
</tr>
<tr>
<td><strong>Total Ingredient and Labor Cost</strong></td>
<td>$9.95</td>
<td></td>
</tr>
</tbody>
</table>

**Base**

NO COMPARABLE TEST MADE
### Test No. 9 (1/19/58) \( \text{CHICKEN STOCK} \) Ingredient and Labor Cost

#### Conventional

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicken, fowl, eviscerated</td>
<td>32 1/2 lbs.</td>
<td>$1.46</td>
</tr>
<tr>
<td>Water</td>
<td>7 1/2 gals.</td>
<td></td>
</tr>
<tr>
<td>Celery, chopped</td>
<td>1 1/4 oz.</td>
<td>.10</td>
</tr>
<tr>
<td>Onions, chopped</td>
<td>1 1/8 oz.</td>
<td>.13</td>
</tr>
<tr>
<td>Carrots, chopped</td>
<td>1 1/8 oz.</td>
<td>.08</td>
</tr>
<tr>
<td>Peppercorns</td>
<td>2 tsp.</td>
<td>.02</td>
</tr>
<tr>
<td>Bay leaf</td>
<td>3 1/2 leaves</td>
<td>.01</td>
</tr>
<tr>
<td>Salt</td>
<td>6 1/4 oz.</td>
<td>.01</td>
</tr>
<tr>
<td>Celery salt</td>
<td>1 1/2 Tbsp.</td>
<td>.01</td>
</tr>
<tr>
<td>Egg coloring</td>
<td>1 tsp.</td>
<td></td>
</tr>
</tbody>
</table>

**Ingredient Cost**: $1.82  
**Labor Cost**: $.93  
**Total Ingredient and Labor Cost**: $2.75

#### Base

*NO COMPARABLE TEST MADE*

### Test No. 10 (1/19/58) \( \text{CREAMED CHICKEN} \) Ingredient and Labor Cost

#### Conventional

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flour</td>
<td>2 lbs.</td>
<td>$.14</td>
</tr>
<tr>
<td>Chicken fat</td>
<td>2 lbs.</td>
<td>$.16</td>
</tr>
<tr>
<td>Chicken broth</td>
<td>5 qts.</td>
<td>.53</td>
</tr>
<tr>
<td>Hot milk (5 # dry milk)</td>
<td>5 qts.</td>
<td>.86</td>
</tr>
<tr>
<td>Salt</td>
<td>4 Tbsp.</td>
<td>.01</td>
</tr>
<tr>
<td>Pepper</td>
<td>1 tsp.</td>
<td></td>
</tr>
<tr>
<td>Chicken, cooked, diced</td>
<td>16 lbs.</td>
<td>10.40</td>
</tr>
</tbody>
</table>

**Ingredient Cost**: $12.10  
**Labor Cost**: $.98  
**Total Ingredient and Labor Cost**: $13.08

#### Base

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Margarine</td>
<td>3 1/2 lbs.</td>
<td>$.67</td>
</tr>
<tr>
<td>Flour</td>
<td>2 lbs.</td>
<td>$.14</td>
</tr>
<tr>
<td>Good Seasons chicken flavor base</td>
<td>1 1/2 lbs.</td>
<td>2.24</td>
</tr>
<tr>
<td>Milk, hot (4 # dry milk)</td>
<td>4 gals.</td>
<td>.69</td>
</tr>
<tr>
<td>Chicken, cooked, diced</td>
<td>16 lbs.</td>
<td>10.40</td>
</tr>
</tbody>
</table>

**Ingredient Cost**: $14.14  
**Labor Cost**: $.13  
**Total Ingredient and Labor Cost**: $15.27
### Test No. 11 (1/19/58)  
**MINESTRONE SOUP**  
Ingredient and Labor Cost

**Conventional**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
<th>Unit</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salad macaroni</td>
<td>4 lbs.</td>
<td></td>
<td>$0.68</td>
</tr>
<tr>
<td>Kidney beans</td>
<td>7 lbs.</td>
<td></td>
<td>$0.76</td>
</tr>
<tr>
<td>Dried onion flakes</td>
<td>1 lb.</td>
<td></td>
<td>$0.86</td>
</tr>
<tr>
<td>Margarine</td>
<td>4 lbs.</td>
<td></td>
<td>$0.99</td>
</tr>
<tr>
<td>Cabbage, chopped</td>
<td>6 lbs.</td>
<td></td>
<td>$0.76</td>
</tr>
<tr>
<td>Carrots, chopped</td>
<td>9 lbs.</td>
<td></td>
<td>$1.07</td>
</tr>
<tr>
<td>Celery, chopped</td>
<td>9 lbs.</td>
<td></td>
<td>$1.08</td>
</tr>
<tr>
<td>Garlic, chopped</td>
<td>4 oz.</td>
<td></td>
<td>$0.06</td>
</tr>
<tr>
<td>Flour</td>
<td>5 lbs.</td>
<td></td>
<td>$0.39</td>
</tr>
<tr>
<td>Water</td>
<td>5 gals.</td>
<td></td>
<td>—</td>
</tr>
<tr>
<td>Stock, beef</td>
<td>15 gals.</td>
<td></td>
<td>$8.86</td>
</tr>
<tr>
<td>Tomatoes</td>
<td>4 cans</td>
<td></td>
<td>$2.72</td>
</tr>
<tr>
<td>Okra</td>
<td>3 cans</td>
<td></td>
<td>$0.51</td>
</tr>
<tr>
<td>Oregano</td>
<td>2 Tbsp.</td>
<td></td>
<td>$0.02</td>
</tr>
<tr>
<td>Thyme</td>
<td>2 Tbsp.</td>
<td></td>
<td>$0.02</td>
</tr>
</tbody>
</table>

**Total Ingredient and Labor Cost**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base</td>
<td>$18.80</td>
</tr>
<tr>
<td>Labor Cost</td>
<td>$1.23</td>
</tr>
<tr>
<td>Total</td>
<td>$20.03</td>
</tr>
</tbody>
</table>

---

### Test No. 12 (1/19/58)  
**MINESTRONE SOUP**  
Ingredient and Labor Cost

**Conventional**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
<th>Unit</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salad macaroni</td>
<td>4 lbs.</td>
<td></td>
<td>$0.68</td>
</tr>
<tr>
<td>Kidney beans</td>
<td>7 lbs.</td>
<td></td>
<td>$0.76</td>
</tr>
<tr>
<td>Dried onion flakes</td>
<td>1 lb.</td>
<td></td>
<td>$0.86</td>
</tr>
<tr>
<td>Margarine</td>
<td>4 lbs.</td>
<td></td>
<td>$0.99</td>
</tr>
<tr>
<td>Cabbage, chopped</td>
<td>6 lbs.</td>
<td></td>
<td>$0.76</td>
</tr>
<tr>
<td>Carrots, chopped</td>
<td>9 lbs.</td>
<td></td>
<td>$1.07</td>
</tr>
<tr>
<td>Celery, chopped</td>
<td>9 lbs.</td>
<td></td>
<td>$1.08</td>
</tr>
<tr>
<td>Garlic, chopped</td>
<td>4 oz.</td>
<td></td>
<td>$0.06</td>
</tr>
<tr>
<td>Flour</td>
<td>5 lbs.</td>
<td></td>
<td>$0.39</td>
</tr>
<tr>
<td>Water</td>
<td>20 gals.</td>
<td></td>
<td>—</td>
</tr>
<tr>
<td>Good Seasons beef flavor base</td>
<td>3 jars</td>
<td></td>
<td>$3.99</td>
</tr>
<tr>
<td>Tomatoes</td>
<td>4 cans</td>
<td></td>
<td>$2.72</td>
</tr>
<tr>
<td>Okra</td>
<td>3 cans</td>
<td></td>
<td>$0.51</td>
</tr>
<tr>
<td>Oregano</td>
<td>2 Tbsp.</td>
<td></td>
<td>$0.02</td>
</tr>
<tr>
<td>Thyme</td>
<td>2 Tbsp.</td>
<td></td>
<td>$0.02</td>
</tr>
</tbody>
</table>

**Total Ingredient and Labor Cost**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base</td>
<td>$13.91</td>
</tr>
<tr>
<td>Labor Cost</td>
<td>$1.25</td>
</tr>
<tr>
<td>Total</td>
<td>$15.16</td>
</tr>
</tbody>
</table>

---

**1/4 of ingredients used in Test No. 11**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4 of ingredients used in Test No. 11</td>
<td>$4.70</td>
</tr>
<tr>
<td>Ingredient Cost</td>
<td></td>
</tr>
<tr>
<td>Labor Cost</td>
<td>$0.53</td>
</tr>
<tr>
<td>Total Ingredient and Labor Cost</td>
<td>$5.23</td>
</tr>
</tbody>
</table>

---

**1/4 of ingredients used in Test No. 12**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4 of ingredients used in Test No. 12</td>
<td>$3.48</td>
</tr>
<tr>
<td>Ingredient Cost</td>
<td></td>
</tr>
<tr>
<td>Labor Cost</td>
<td>$0.53</td>
</tr>
<tr>
<td>Total Ingredient and Labor Cost</td>
<td>$4.01</td>
</tr>
</tbody>
</table>
Test No. 13 (1/20/58)  

MULLIGATAWNY SOUP  

Ingredient and Labor Cost

### Conventional

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Margarine</td>
<td>6 lbs.</td>
<td>$1.31</td>
</tr>
<tr>
<td>Onions, dried flakes – soak first</td>
<td>1 lb.</td>
<td>.86</td>
</tr>
<tr>
<td>Apples, peeled and diced</td>
<td>20 lbs. (AP)</td>
<td>2.25</td>
</tr>
<tr>
<td>Flour, bread</td>
<td>4 lb.</td>
<td>.28</td>
</tr>
<tr>
<td>Curry powder</td>
<td>½ cup</td>
<td>.18</td>
</tr>
<tr>
<td>Chicken stock</td>
<td>30 gals.</td>
<td>12.75</td>
</tr>
<tr>
<td>Rice</td>
<td>6 lbs.</td>
<td>1.01</td>
</tr>
<tr>
<td>Chicken, diced</td>
<td>20 lbs.</td>
<td>13.00</td>
</tr>
<tr>
<td>Cream, ⅔ &amp; ½</td>
<td>3 qts.</td>
<td>1.50</td>
</tr>
<tr>
<td>Salt</td>
<td>To taste</td>
<td>.03</td>
</tr>
<tr>
<td>Pepper</td>
<td>To taste</td>
<td>.02</td>
</tr>
</tbody>
</table>

**Ingredient Cost:** $33.19  
**Labor Cost:** .68  
**Total Ingredient and Labor Cost:** $33.87

### Base

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Margarine</td>
<td>6 lbs.</td>
<td>$1.31</td>
</tr>
<tr>
<td>Onions, dried flakes – soak first</td>
<td>1 lb.</td>
<td>.86</td>
</tr>
<tr>
<td>Apples, peeled and diced</td>
<td>20 lbs. (AP)</td>
<td>2.25</td>
</tr>
<tr>
<td>Flour, bread</td>
<td>4 lb.</td>
<td>.28</td>
</tr>
<tr>
<td>Curry powder</td>
<td>½ cup</td>
<td>.18</td>
</tr>
<tr>
<td>Water</td>
<td>30 gals.</td>
<td>—</td>
</tr>
<tr>
<td>Good Seasons chicken flavor base</td>
<td>6 jars</td>
<td>8.94</td>
</tr>
<tr>
<td>Rice</td>
<td>6 lbs.</td>
<td>1.01</td>
</tr>
<tr>
<td>Chicken, diced</td>
<td>20 lbs.</td>
<td>13.00</td>
</tr>
<tr>
<td>Cream, ⅔ &amp; ½</td>
<td>3 qts.</td>
<td>1.50</td>
</tr>
<tr>
<td>Salt</td>
<td>To taste</td>
<td>.03</td>
</tr>
<tr>
<td>Pepper</td>
<td>To taste</td>
<td>.02</td>
</tr>
</tbody>
</table>

**Ingredient Cost:** $29.38  
**Labor Cost:** .78  
**Total Ingredient and Labor Cost:** $30.16

Test No. 14 (1/20/58)  

MULLIGATAWNY SOUP  

Ingredient and Labor Cost

### Conventional

<table>
<thead>
<tr>
<th>1/6 of ingredients used in Test No. 13</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ingredient Cost</td>
<td>$5.53</td>
</tr>
<tr>
<td>Labor Cost</td>
<td>$ .43</td>
</tr>
<tr>
<td><strong>Total Ingredient and Labor Cost</strong></td>
<td>$5.96</td>
</tr>
</tbody>
</table>

Yield: 5 gallons

### Base

<table>
<thead>
<tr>
<th>1/6 of ingredients used in Test No. 13</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ingredient Cost</td>
<td>$4.90</td>
</tr>
<tr>
<td>Labor Cost</td>
<td>$ .30</td>
</tr>
<tr>
<td><strong>Total Ingredient and Labor Cost</strong></td>
<td>$5.20</td>
</tr>
</tbody>
</table>

Yield: 5 gallons
### Test No. 15 (1/22/58)  
**BEEF BARLEY SOUP**  
**Ingredient and Labor Cost**  
**Yield:** 5 gallons

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
<th>Labor Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dried onion flakes</td>
<td>5 oz.</td>
<td>$0.27</td>
</tr>
<tr>
<td>Cabbage, diced</td>
<td>1 lb.</td>
<td>$0.13</td>
</tr>
<tr>
<td>Celery, diced</td>
<td>2 lb. 2 oz.</td>
<td>$0.24</td>
</tr>
<tr>
<td>Carrots, diced</td>
<td>1 lb.12 oz.</td>
<td>$0.21</td>
</tr>
<tr>
<td>Salt pork, cubed</td>
<td>2½ oz.</td>
<td>$0.12</td>
</tr>
<tr>
<td>Cooking oil</td>
<td>1.4 oz.</td>
<td>$0.60</td>
</tr>
<tr>
<td>Tomatoes</td>
<td>1 can</td>
<td>$0.68</td>
</tr>
<tr>
<td>Barley</td>
<td>1½ oz.</td>
<td>$0.14</td>
</tr>
<tr>
<td>Beef, cooked, diced</td>
<td>11½ oz.</td>
<td>$0.37</td>
</tr>
<tr>
<td>Beef stock§</td>
<td>5 gals.</td>
<td>$2.96</td>
</tr>
<tr>
<td><strong>Ingredient Cost</strong></td>
<td></td>
<td>$5.72</td>
</tr>
<tr>
<td><strong>Labor Cost</strong></td>
<td></td>
<td>$0.68</td>
</tr>
<tr>
<td><strong>Total Ingredient and Labor Cost</strong></td>
<td></td>
<td>$6.40</td>
</tr>
</tbody>
</table>

#### Base

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
<th>Labor Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dried onion flakes</td>
<td>5 oz.</td>
<td>$0.27</td>
</tr>
<tr>
<td>Cabbage, diced</td>
<td>1 lb.</td>
<td>$0.13</td>
</tr>
<tr>
<td>Celery, diced</td>
<td>2 lb. 2 oz.</td>
<td>$0.24</td>
</tr>
<tr>
<td>Carrots, diced</td>
<td>1 lb.12 oz.</td>
<td>$0.21</td>
</tr>
<tr>
<td>Salt pork, cubed</td>
<td>2½ oz.</td>
<td>$0.12</td>
</tr>
<tr>
<td>Cooking oil</td>
<td>1.4 oz.</td>
<td>$0.60</td>
</tr>
<tr>
<td>Tomatoes</td>
<td>1 can</td>
<td>$0.68</td>
</tr>
<tr>
<td>Barley</td>
<td>1½ oz.</td>
<td>$0.14</td>
</tr>
<tr>
<td>Beef, cooked, diced</td>
<td>11½ oz.</td>
<td>$0.37</td>
</tr>
<tr>
<td>Good Seasons beef flavor base</td>
<td>1 jar</td>
<td>$1.33</td>
</tr>
<tr>
<td><strong>Ingredient Cost</strong></td>
<td></td>
<td>$4.09</td>
</tr>
<tr>
<td><strong>Labor Cost</strong></td>
<td></td>
<td>$0.75</td>
</tr>
<tr>
<td><strong>Total Ingredient and Labor Cost</strong></td>
<td></td>
<td>$4.84</td>
</tr>
</tbody>
</table>

### Test No. 16 (1/23/58)  
**CHILI CON CARNE**  
**Ingredient and Labor Cost**  
**Yield:** 25 gallons

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
<th>Labor Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red kidney beans</td>
<td>45 lbs.</td>
<td>$4.57</td>
</tr>
<tr>
<td>Garlic, finely minced</td>
<td>1 lb. -6 oz.</td>
<td>$0.34</td>
</tr>
<tr>
<td>Onions, dried flakes - soak first</td>
<td>2 lbs.</td>
<td>$1.72</td>
</tr>
<tr>
<td>Fat (bacon, etc.)</td>
<td>2 lbs.</td>
<td>$0.16</td>
</tr>
<tr>
<td>Ground beef</td>
<td>63 lbs.</td>
<td>$24.57</td>
</tr>
<tr>
<td>Tomatoes</td>
<td>18 cans (No.10)</td>
<td>$12.24</td>
</tr>
<tr>
<td>Chili Powder</td>
<td>1 lb.</td>
<td>$0.61</td>
</tr>
<tr>
<td>Salt</td>
<td>2 lbs.</td>
<td>$0.04</td>
</tr>
<tr>
<td>Sugar</td>
<td>2 lbs.</td>
<td>$0.20</td>
</tr>
<tr>
<td>Cayenne</td>
<td>4 Tbsp.</td>
<td>$0.05</td>
</tr>
<tr>
<td><strong>Ingredient Cost</strong></td>
<td></td>
<td>$44.50</td>
</tr>
<tr>
<td><strong>Labor Cost</strong></td>
<td></td>
<td>$1.45</td>
</tr>
<tr>
<td><strong>Total Ingredient and Labor Cost</strong></td>
<td></td>
<td>$45.95</td>
</tr>
</tbody>
</table>
### Test No. 16 (1/23/58)  
**CHILI CON CARNE**  
**Ingredient and Labor Cost**

<table>
<thead>
<tr>
<th>Base</th>
<th>Yield: 25 gallons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red kidney beans</td>
<td></td>
</tr>
<tr>
<td>Ground beef, coarse</td>
<td></td>
</tr>
<tr>
<td>Shortening</td>
<td></td>
</tr>
<tr>
<td>Tomato puree</td>
<td></td>
</tr>
<tr>
<td>Chili powder</td>
<td></td>
</tr>
<tr>
<td>Good Seasons onion base</td>
<td></td>
</tr>
<tr>
<td>Salt</td>
<td></td>
</tr>
</tbody>
</table>

**Yield:** 25 gallons  
**Ingredient Cost:** $4.57  
**Labor Cost:** $.36  
**Total Ingredient and Labor Cost:** $4.93

### Test No. 17 (1/23/58)  
**SWISS STEAK GRAVY**  
**Ingredient and Labor Cost**

**Conventional**  
**Yield:** 10 gallons  
**Beef stock**  
**Water**  
**Tomato puree**  
**Flour**  
**Fat drippings from meat**  
**Onions, dried flakes**  
**Celery salt**  
**Bay leaves, broken**  
**Salt and Pepper**  

**Base**  
**Flour**  
**Good Seasons onion base**  
**Water**  
**Celery, chopped**  
**Tomatoes**

**Ingredient Cost:** $6.45  
**Labor Cost:** $.75  
**Total Ingredient and Labor Cost:** $7.20

### Test No. 18 (1/24/58)  
**BECHAMEL SAUCE**  
**Ingredient and Labor Cost**

**Conventional**  
**Yield:** 1½ gallons  
**Primex**  
**Flour**  
**Chicken broth**  
**Dry milk**  
**Salt**  
**Pepper**  
**Cayenne**  
**Evaporated milk**

**Ingredient Cost:** $1.07  
**Labor Cost:** $.30  
**Total Ingredient and Labor Cost:** $1.37
## Test No. 18 (1/24/58)

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
<th>Unit</th>
<th>Labor Cost</th>
<th>Ingredient Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrot, sliced</td>
<td>1</td>
<td>medium</td>
<td>.03</td>
<td></td>
</tr>
<tr>
<td>Onion, sliced</td>
<td>1</td>
<td>small</td>
<td>.02</td>
<td></td>
</tr>
<tr>
<td>Bay leaf</td>
<td>2</td>
<td>leaves</td>
<td>.04</td>
<td></td>
</tr>
<tr>
<td>Parsley</td>
<td>3</td>
<td>sprigs</td>
<td>.20</td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>3½</td>
<td>qts.</td>
<td>.04</td>
<td></td>
</tr>
<tr>
<td>Shortening</td>
<td>14</td>
<td>oz.</td>
<td>.26</td>
<td></td>
</tr>
<tr>
<td>Flour</td>
<td>8</td>
<td>oz.</td>
<td>.04</td>
<td></td>
</tr>
<tr>
<td>Evaporated milk</td>
<td>6</td>
<td>oz.</td>
<td>.56</td>
<td></td>
</tr>
<tr>
<td>Milk (2 oz. dry milk used)</td>
<td>2</td>
<td>cups</td>
<td>.04</td>
<td></td>
</tr>
<tr>
<td>Good Seasons chicken flavor base</td>
<td>1</td>
<td>cup</td>
<td>.26</td>
<td></td>
</tr>
</tbody>
</table>

**Yield:** 1½ gallons

**Total Ingredient and Labor Cost:** $1.55

## Test No. 19 (1/26/58)

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
<th>Unit</th>
<th>Labor Cost</th>
<th>Ingredient Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Margarine</td>
<td>8</td>
<td>oz.</td>
<td>.11</td>
<td></td>
</tr>
<tr>
<td>Flour</td>
<td>8</td>
<td>oz.</td>
<td>.03</td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salt</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pepper</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yellow color</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Yield:** 1 gallon

**Total Ingredient and Labor Cost:** $.42

## FRIED CHICKEN GRAVY

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
<th>Unit</th>
<th>Labor Cost</th>
<th>Ingredient Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shortening</td>
<td>14</td>
<td>oz.</td>
<td>.20</td>
<td></td>
</tr>
<tr>
<td>Flour</td>
<td>8</td>
<td>oz.</td>
<td>.04</td>
<td></td>
</tr>
<tr>
<td>Good Seasons chicken base</td>
<td>6</td>
<td>oz.</td>
<td>.56</td>
<td></td>
</tr>
<tr>
<td>Hot water</td>
<td>1</td>
<td>gal.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Yield:** 1 gallon

**Total Ingredient and Labor Cost:** $1.13
### Conventional

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
<th>Unit</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tomatoes</td>
<td>1</td>
<td>can</td>
<td>$0.68</td>
</tr>
<tr>
<td>Carrots, diced</td>
<td>0.25</td>
<td>lb.</td>
<td>$0.06</td>
</tr>
<tr>
<td>Turnips, chopped</td>
<td>0.25</td>
<td>lb.</td>
<td>$0.06</td>
</tr>
<tr>
<td>Celery, chopped</td>
<td>0.25</td>
<td>lb.</td>
<td>$0.06</td>
</tr>
<tr>
<td>Cabbage, chopped</td>
<td>0.25</td>
<td>lb.</td>
<td>$0.06</td>
</tr>
<tr>
<td>Onion, dried flakes, soaked</td>
<td>1</td>
<td>cup</td>
<td>$0.43</td>
</tr>
<tr>
<td>Oil</td>
<td>1</td>
<td>cup</td>
<td>$0.20</td>
</tr>
<tr>
<td>Potatoes, diced</td>
<td>5</td>
<td>lbs.</td>
<td>$0.40</td>
</tr>
<tr>
<td>Peas</td>
<td>1</td>
<td>qt.</td>
<td>$0.48</td>
</tr>
<tr>
<td>Cooked rice</td>
<td>2</td>
<td>qts.</td>
<td>$0.07</td>
</tr>
<tr>
<td>Salt &amp; Pepper</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beef stock</td>
<td>5</td>
<td>gals.</td>
<td>$2.96</td>
</tr>
</tbody>
</table>

**Yield:** 5 gallons

**Ingredient Cost**  $5.46  
**Labor Cost**  $0.58  
**Total Ingredient and Labor Cost**  $6.04

### Base

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
<th>Unit</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tomatoes</td>
<td>1</td>
<td>can</td>
<td>$0.68</td>
</tr>
<tr>
<td>Carrots, diced</td>
<td>0.25</td>
<td>lb.</td>
<td>$0.06</td>
</tr>
<tr>
<td>Turnips, chopped</td>
<td>0.25</td>
<td>lb.</td>
<td>$0.06</td>
</tr>
<tr>
<td>Celery, chopped</td>
<td>0.25</td>
<td>lb.</td>
<td>$0.06</td>
</tr>
<tr>
<td>Cabbage, chopped</td>
<td>0.25</td>
<td>lb.</td>
<td>$0.06</td>
</tr>
<tr>
<td>Onion, dried flakes, soaked</td>
<td>1</td>
<td>cup</td>
<td>$0.43</td>
</tr>
<tr>
<td>Oil</td>
<td>1</td>
<td>cup</td>
<td>$0.20</td>
</tr>
<tr>
<td>Potatoes, diced</td>
<td>5</td>
<td>lbs.</td>
<td>$0.40</td>
</tr>
<tr>
<td>Peas</td>
<td>1</td>
<td>qt.</td>
<td>$0.48</td>
</tr>
<tr>
<td>Cooked rice</td>
<td>2</td>
<td>qts.</td>
<td>$0.07</td>
</tr>
<tr>
<td>Salt &amp; Pepper</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hot water</td>
<td>5</td>
<td>gals.</td>
<td></td>
</tr>
<tr>
<td>Good Seasons beef flavor base</td>
<td>1</td>
<td>jar</td>
<td>$1.33</td>
</tr>
</tbody>
</table>

**Ingredient Cost**  $3.83  
**Labor Cost**  $0.48  
**Total Ingredient and Labor Cost**  $4.31
### Conventional

#### SPLIT PEA SOUP

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Qty</th>
<th>Unit</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Split peas</td>
<td>4</td>
<td>lbs.</td>
<td>$0.34</td>
</tr>
<tr>
<td>Bacon fat</td>
<td>4</td>
<td>oz.</td>
<td>$0.02</td>
</tr>
<tr>
<td>Onions, finely chopped</td>
<td>1/2</td>
<td>lb.</td>
<td>$0.05</td>
</tr>
<tr>
<td>Celery, finely chopped</td>
<td>1</td>
<td>pt.</td>
<td>$0.06</td>
</tr>
<tr>
<td>Carrots, finely chopped</td>
<td>1-2/3</td>
<td>cups</td>
<td>$0.06</td>
</tr>
<tr>
<td>Flour</td>
<td>1</td>
<td>oz.</td>
<td>$0.01</td>
</tr>
<tr>
<td>Beef stock</td>
<td>1</td>
<td>lbs.</td>
<td>$0.60</td>
</tr>
<tr>
<td>Ham bones</td>
<td>3/4</td>
<td>oz.</td>
<td>$1.04</td>
</tr>
<tr>
<td>Salt</td>
<td>3/4</td>
<td>tsp.</td>
<td>$0.03</td>
</tr>
<tr>
<td>Sugar</td>
<td>1/2</td>
<td>Tbsp.</td>
<td></td>
</tr>
</tbody>
</table>

**Yield:** 2 1/2 gallons

**Ingredient Cost:** $2.21

**Labor Cost:** $0.43

**Total Ingredient and Labor Cost:** $2.64

### Base

#### SPLIT PEA SOUP

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Qty</th>
<th>Unit</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Split peas</td>
<td>4</td>
<td>lbs.</td>
<td>$0.34</td>
</tr>
<tr>
<td>Water</td>
<td>1</td>
<td>gal.</td>
<td></td>
</tr>
<tr>
<td>Hot water</td>
<td>4 1/4</td>
<td>qts.</td>
<td></td>
</tr>
<tr>
<td>Good Seasons onion base</td>
<td>1</td>
<td>jar</td>
<td>$0.78</td>
</tr>
<tr>
<td>Salt pork, 1/2&quot; cubes</td>
<td>8</td>
<td>oz.</td>
<td>$0.16</td>
</tr>
</tbody>
</table>

**Ingredient Cost:** $1.28

**Labor Cost:** $0.28

**Total Ingredient and Labor Cost:** $2.56

### Conventional

#### NAVY BEAN SOUP

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Qty</th>
<th>Unit</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Navy beans</td>
<td>5</td>
<td>lbs.</td>
<td>$0.48</td>
</tr>
<tr>
<td>Chopped ham</td>
<td>1</td>
<td>lb.</td>
<td>$1.20</td>
</tr>
<tr>
<td>Bacon drippings</td>
<td>1/2</td>
<td>cup</td>
<td>$0.02</td>
</tr>
<tr>
<td>Dried onion flakes, soaked</td>
<td>1</td>
<td>oz.</td>
<td>$0.07</td>
</tr>
<tr>
<td>Carrots, minced</td>
<td>1</td>
<td>lb.</td>
<td>$0.12</td>
</tr>
<tr>
<td>Tomato puree</td>
<td>1/2</td>
<td>can</td>
<td>$0.28</td>
</tr>
<tr>
<td>Catsup</td>
<td>2/3</td>
<td>cup</td>
<td>$0.04</td>
</tr>
<tr>
<td>Prepared mustard</td>
<td>2/3</td>
<td>cup</td>
<td>$0.04</td>
</tr>
</tbody>
</table>

**Ingredient Cost:** $2.25

**Labor Cost:** $0.35

**Total Ingredient and Labor Cost:** $2.60

### Base

#### NAVY BEAN SOUP

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Qty</th>
<th>Unit</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Navy beans</td>
<td>5</td>
<td>lbs.</td>
<td>$0.48</td>
</tr>
<tr>
<td>Water</td>
<td>5</td>
<td>qts.</td>
<td>$0.15</td>
</tr>
<tr>
<td>Hot water</td>
<td>3-3/4</td>
<td>gals.</td>
<td></td>
</tr>
<tr>
<td>Good Seasons onion base</td>
<td>2 1/3</td>
<td>jars</td>
<td>$1.95</td>
</tr>
<tr>
<td>Celery tops, chopped</td>
<td>2/3</td>
<td>cups</td>
<td>$0.08</td>
</tr>
<tr>
<td>Salt pork, 1/2&quot; cubes</td>
<td>2 1/3</td>
<td>lbs.</td>
<td>$0.70</td>
</tr>
<tr>
<td>Tomato juice</td>
<td>1/2</td>
<td>ozs.</td>
<td>$0.20</td>
</tr>
</tbody>
</table>

**Ingredient Cost:** $3.41

**Labor Cost:** $0.28

**Total Ingredient and Labor Cost:** $3.69
### Test No. 23 (2/1/58)

**CONSDMME**

<table>
<thead>
<tr>
<th>Ingredient and Labor Cost</th>
<th>Yield: 5 gallons</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Conventional</strong></td>
<td></td>
</tr>
<tr>
<td>Onions, sliced</td>
<td>$ .43</td>
</tr>
<tr>
<td>Celery</td>
<td>$.12</td>
</tr>
<tr>
<td>Carrots</td>
<td>$.12</td>
</tr>
<tr>
<td>Beef stock</td>
<td>2.96</td>
</tr>
<tr>
<td>Cloves</td>
<td>$.01</td>
</tr>
<tr>
<td>Peppercorns</td>
<td>$.02</td>
</tr>
<tr>
<td>Clove sticks</td>
<td>$.01</td>
</tr>
<tr>
<td>Hamburger</td>
<td>2.45</td>
</tr>
<tr>
<td>Eggs</td>
<td>$.62</td>
</tr>
<tr>
<td><strong>Total Ingredient and Labor Cost</strong></td>
<td>$ 7.29</td>
</tr>
</tbody>
</table>

#### Base

<table>
<thead>
<tr>
<th>Ingredient and Labor Cost</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Good Seasons beef flavor base</td>
<td>$ 1.33</td>
</tr>
<tr>
<td>Boiling water</td>
<td>$ .13</td>
</tr>
<tr>
<td><strong>Total Ingredient and Labor Cost</strong></td>
<td>$ 1.46</td>
</tr>
</tbody>
</table>

### Test No. 24 (2/4/58)

**CHICKEN NOODLE SOUP**

<table>
<thead>
<tr>
<th>Ingredient and Labor Cost</th>
<th>Yield: 5 gallons</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Conventional</strong></td>
<td></td>
</tr>
<tr>
<td>Dried onion flakes</td>
<td>$.22</td>
</tr>
<tr>
<td>Celery, chopped</td>
<td>$.16</td>
</tr>
<tr>
<td>Carrots, chopped</td>
<td>$.12</td>
</tr>
<tr>
<td>Chicken fat</td>
<td>$.07</td>
</tr>
<tr>
<td>Flour</td>
<td>$.05</td>
</tr>
<tr>
<td>Chicken stock</td>
<td>2.13</td>
</tr>
<tr>
<td>Noodles</td>
<td>$.28</td>
</tr>
<tr>
<td>Diced chicken</td>
<td>$.49</td>
</tr>
<tr>
<td><strong>Total Ingredient and Labor Cost</strong></td>
<td>$ 3.77</td>
</tr>
</tbody>
</table>

#### Base

<table>
<thead>
<tr>
<th>Ingredient and Labor Cost</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dried onion flakes</td>
<td>$.22</td>
</tr>
<tr>
<td>Celery, chopped</td>
<td>$.16</td>
</tr>
<tr>
<td>Carrots, chopped</td>
<td>$.12</td>
</tr>
<tr>
<td>Margarine</td>
<td>$.20</td>
</tr>
<tr>
<td>Good Seasons chicken flavor base</td>
<td>1.49</td>
</tr>
<tr>
<td>Water</td>
<td>$ .28</td>
</tr>
<tr>
<td>Noodles</td>
<td>3/4</td>
</tr>
<tr>
<td>Diced chicken</td>
<td>$.49</td>
</tr>
<tr>
<td><strong>Total Ingredient and Labor Cost</strong></td>
<td>$ 3.11</td>
</tr>
</tbody>
</table>

---
### Test No. 25 (2/4/58)  
**CHICKEN NOODLE SOUP**  
Ingredient and Labor Cost  

**Conventional**

Yield: 30 gallons

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Cost</th>
<th>Labor Cost</th>
<th>Total Ingredient and Labor Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase ingredients in Test No. 24 by 6</td>
<td>$21.12</td>
<td>$ .43</td>
<td>$21.55</td>
</tr>
</tbody>
</table>

**Base**

Increase ingredients in Test No. 24 by 6  

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Cost</th>
<th>Labor Cost</th>
<th>Total Ingredient and Labor Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$17.76</td>
<td>$ .50</td>
<td>$18.26</td>
</tr>
</tbody>
</table>

### Test No. 26 (2/6/58)  
**ONION SOUP**  
Ingredient and Labor Cost  

**Conventional**

Yield: 5 gallons

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Cost</th>
<th>Labor Cost</th>
<th>Total Ingredient and Labor Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dried onion flakes, soak</td>
<td>12 oz. $ .65</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suet</td>
<td>6 oz.  $ .03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beef stock</td>
<td>5 gals. 3.46</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salt</td>
<td>1 cup</td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td>Pepper</td>
<td>2 Tbsp.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Cost</th>
<th>Labor Cost</th>
<th>Total Ingredient and Labor Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$4.15</td>
<td>$ .25</td>
<td>$4.40</td>
</tr>
</tbody>
</table>

**Base**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Cost</th>
<th>Labor Cost</th>
<th>Total Ingredient and Labor Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good Seasons onion base</td>
<td>4 jars $ 3.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiling water</td>
<td>5 gals. $3.12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Cost</th>
<th>Labor Cost</th>
<th>Total Ingredient and Labor Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$3.12</td>
<td>$ .08</td>
<td>$3.20</td>
</tr>
</tbody>
</table>

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