

THE DEVELOPMENT OF A COMMUNITY FOOD
PRODUCTION AND CONSERVATION PROGRAM

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Agricultural Education, V. P. I.

A STUDY OF THE DEVELOPMENT OF A
FOOD PRODUCTION AND CONSERVATION PROGRAM
IN BLACKSBURG, VIRGINIA, 1943-1944

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*This term is used throughout the study to avoid confusion with the one originally used. For brevity, the initials F. P. W. T. are frequently substituted.

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INTRODUCTION

A Study of the Development of a Community Food Production and Conservation Program

Much is being done at this time to enable small communities to be as nearly self-sustaining as possible in supplying their dietary needs. To that end, state and federal agencies in Virginia have cooperated in the development of a program of food production and conservation.

Since the organization of classes and facilities mentioned in this study took place entirely in the year 1943, it is necessary to qualify it as the first year of the undertaking. The urgency of war conditions, the lack of transportation and commercial processing facilities for civilian use make increased production for home use necessary. The encouragement and assistance of trained leaders has value that is not easily measured. It is too early to evaluate these developments thoroughly; however, an analysis of the first year of such operations shows decided trends. Results for the year 1943 have been summarized as follows:

Classes in food production (Course 15)	908
Approximate enrollment	30,000
Number of canning centers	70
Number of home canning centers	838
Total quarts canned	2,106,083
Pounds food dehydrated	48,700

Pounds meat canned	1,040,310
Bushels vegetables stored	124,824
Bushels fruit stored	21,720

Locally, the year of the study has been one of great change. As in many other communities in the state, there has been in Blacksburg an influx of workers for the nearby war production plant. Many such workers have bought or rented rural homes, planted gardens, and processed food. A representative number of these are included in the study, as well as old residents whose gardening habits have been established for years. Amateur gardeners have, in many cases, started out under the direction of experienced friends. In many cases, the Food Production War Training classes answered this need for instruction. In the community studied, interest in gardening and canning was general and enthusiastic. This study is an attempt to evaluate the effectiveness of the training program and to develop procedures that may result in improvement.

There is also, at this time, an increased realization of the need for a clearer understanding of the fundamental facts of nutrition on the part of the average citizen. War conditions have caused the establishment of the National Nutrition Council which has popularized and advertised the basic principles of nutrition on the radio and by posters and periodicals. Foods were classified in groups. Slogans were used and the simplified objective, "Seven basic foods to be eaten every day", was recommended. This standard, on an annual basis, was used for estimating the needs of families studied.

During the interviews, definite evidences of malnutrition were seen, including rickets, goiter, pellagra, and crippling arthritis.

Such evidence cannot be furnished in this study.

In the Nutrition Report No. 3, "Nutrition of Virginia People, as Indicated by Diets of School Children", Geneva Parker states that: "Meat, fish, poultry, and eggs compose the only food class in which the children reached the standard. A decided deficiency in all other food classes is noted."

In the Blacksburg area, three classes in Food Production, Conservation, and Storage (Course 15) were conducted in 1943. Members of these classes were included in this study. The training received was under the direction of the local teachers of agriculture, the Blacksburg High School having an old and well-established department for teaching vocational education in agriculture.

In the Prices Fork neighborhood of the Blacksburg community a course of evening school classes was given in 1944, following the interviews. These were taught by the author of this study and by the local teacher of agriculture. Circumstances made it impossible to follow up this instruction in sufficient detail for inclusion in this thesis. However, an outline of the course and a sample lesson plan are included in the appendix to show, in part, how the findings of the study are being followed up in the community as a part of the continuing Food Production War Training Program.

PURPOSE AND SCOPE OF STUDY

There are two primary objectives of the study, as follows:

- A. To determine the extent to which the community canning center and the Food Production War Training classes have, in the first year, contributed to the food supply of families in the Blacksburg area.
- B. To estimate the needs of families in the area for providing additional food through gardening, conservation, preservation, and storage.

One hundred families of the community were interviewed; all members of F. P. W. T. classes were interviewed.

During the interview, special means of arousing and extending interest were used.

A list of seventeen subjects of instruction was then read from the interview form. (See Appendix I a.)

The subjects most often checked as of interest to the family interviewed were made the basis of an Evening School course offered to two of the locality groups.

One of these, in Prices Fork, formed a class, averaging twelve members, which met ten successive times. This experience made it possible to recommend a program of instruction suited to any typical community. (See Appendix II)

Aside from student population, the community studied, Blacksburg, has a population of approximately 5,000. The faculty of the School of Agriculture of Virginia Polytechnic Institute was not included in the study; however, a representative number of other faculty members was included. Since this community is typical of many in Virginia, it is hoped that indications found, and the record of means used, will

be of value to others in the state.

Procedure and Source of Data

To analyze the effectiveness of the Food Production War Training courses in the Blacksburg area, all members of the three courses were interviewed and the amounts of food in each group were enumerated, as it was produced, processed, stored, or bought in 1943. The members of the classes who had had previous experience in gardening were distinguished from those who had not previously gardened. These groups were compared with experienced and inexperienced gardeners who had not attended the training classes.

Fifty families who used the community canning center were interviewed as well as fifty families who had not used the center. The amounts of food produced or bought annually were enumerated and compared with amounts recommended as the annual minimum requirements by the National Food Council. The over- or under-provision of these foods was estimated in each food group for each family interviewed.

Included in the hundred families interviewed were representative occupational groups. These were compared as to adequacy of food provision, production, and processing.

Five neighborhood groups were included in the survey. Individuals were interviewed on a door-to-door basis. This method reached some families not otherwise reached by educational agencies.

To estimate the annual needs in each group of foods, the families interviewed were measured in adult units, each child under 12 being counted as a half unit.

Based on these adult units, the recommendation of the National Nutrition Council as to basic food needs (see Appendix Ic) was estimated for each family interviewed and compared to the total food provision for the family, as declared in the interview.

The needs thus estimated were seldom for a particular food, but were for a total of pounds or bushels needed in a food group; thus a choice within a group was allowed.

This material was tabulated according to the many enumeration factors of the annual food needs and supplies and pertinent data were recorded on Hollerith punched cards. Averages were calculated. After the counting, sorting, and computations were completed, the data were organized into tables.

Number of Cases and Classification

	<u>No. families interviewed</u>
A. Users of Blacksburg canning center - - - - -	50
Non-users - - - - -	50
B. 1. Members of Food Production War Training Classes:	
a. Having previous gardening experience - -	8
b. Having no previous experience - - - - -	13
2. Non-members of F. P. W. T. classes:	
a. Experienced in gardening - - - - -	59
b. Not experienced - - - - -	20
C. Five areas of Blacksburg community:	
1. Town of Blacksburg	
a. Members of V. P. I. faculty - - - - -	18
b. White families, not of faculty - - - - -	32
c. Negro - - - - -	10
2. Outlying neighborhoods	
a. High Top - - - - -	8
b. Prices Fork - - - - -	32
D. Occupational groups:	
1. Labor - - - - -	17
This group includes: farm labor, laundry	
and restaurant help, miners, janitors,	
factory labor, household help	

2. Defense plant employees - - - - - 25

This group includes: foremen, operators,
technicians, mechanics, truck drivers.

3. Professional - - - - - 23

This group includes: doctors, ministers,
professors, instructors, engineers,
military officers.

4. Tradesmen - - - - - 22

These include: linesmen, steam fitters,
painters, plumbers, carpenters, barbers,
storekeepers, clerks.

5. Farmers and "retired" - - - - - 13

These two groups were combined because
both groups were small and most of the
"retired" were farming on a small scale.

Explanation of Form Used in Interview

(See Appendix I)

The first part of this form includes, beside general information about the family interviewed, an indication of interest in class study or pamphlets, plans made for such a class, and the extent of their previous attendance of F. P. W. T. classes.

The second part of the form indicates the amounts of particular fruits, vegetables, or other foods produced, processed, stored, or bought under group headings. The method of processing is indicated. The difference between need and provision was indicated as "to be added". "Provision" included amounts bought and amounts produced.

The third part, (Appendix I c) was used chiefly for the information of the family being interviewed since it states clearly the foods as they are grouped, their values, the health effects of their use or lack. The amounts needed by the particular family interviewed were compared with the provision made so that deficiencies or surpluses were clearly indicated.

Explanation of Terms Used

National Food Standard: a statement issued in 1942 by the government agency, the National Nutrition Council, concerning seven basic foods needed in the diet, daily. See Appendix I c.

Adult Units: to standardize food needs, each adult member of the family was counted as one, each child under 12 as one half. In the case of milk needs, this count was reversed, the adult need being half that of the child.

Family Food Needs: The number of units in the family, multiplied by the individual needs as stated in the tables of the National Food Standard.

Extent to Which the National Food Standard

Was Met by Users and Non-users of

Blacksburg Canning Center, 1943

In making this study, it was thought advisable to contact users of the canning center on a neighborhood basis, interviewing also non-users who lived nearby. Fifty of each were interviewed.

The provision of fruits and vegetables was found to be much more nearly adequate among the users of the cannery than among non-users (Table 1).

Non-users used $1/3$ more than the requirement of potatoes. These families used 100 per cent more dried beans than the required amount.

The number of quarts processed, per adult unit, was:

Foods in Group I, 100% greater for users than for non-users

Foods in Group II, 50% greater for users than for non-users

Foods in Group IIIb, 200% greater for users than for non-users

Foods in Group IIIc, 40% greater for users than for non-users

Foods in Group V, 900% greater for users than for non-users

Whole grains were provided inadequately for nearly all families interviewed; however, the lack was 33% less among families of cannery users.

Very little meat was canned at home, whereas an average of 7 quarts per adult unit was processed by cannery users.

Tomatoes were canned in the home more than at the canning center; however, cannery users provided more quarts of processed tomatoes than did non-users, by 32 per cent.

Both groups provided more than the requirement in milk, eggs, dried beans, and the food group called "other fruit and vegetables."

Table 1. Extent to which the National Food Standard was met by users and non-users of canning center, 1943

Per average family	Group I Green and yellow vegetables		Group II				Group III					
	Users	Non-users	Users		Non-users		Users			Non-users		
	lbs.	lbs.	Toma- toes bu.	Raw veg- etables bu.	Toma- toes bu.	Raw veg- etables lbs.	Pota- toes bu.	Ap- ples bu.	Other veg- etables lbs.	Pota- toes bu.	Ap- ples bu.	Other vegetables lbs.
Need	528	627	9.6	9.6	11.4	11.4	6.4	6.4	160	7.6	7.6	190
Amount provided	459	356	5.7	5.0	5.9	3.5	6.3	2.5	246	9.8	3.5	242
Amount to be added	69	271	3.9	4.6	5.5	7.9	.1	3.9	-86*	-2.2	4.1	-52
Amount produced	329	263	4.8	2.5	5.7	1.3	5.5	.5	197	9.8	1.4	207
Quarts:												
Canned at home	40	54	31		50			13	24		10	39
Canned at center	41		26					12	19			
Canned, total	81	54	57		50			25	43		10	
Average per adult unit	25	14	18		13			7.8	14		2.5	10

1. Size of average family: cannery users, 3.2 adult units
 Non-users 3.8 adult units

*Use of minus in column "to be added", indicates supply beyond basic need.

Table 1 (continued). Extent to which the National Food Standard was met by users and non-users of the canning center, 1943

Per average family	Group IV - Milk (qts. per day)		Group V						Group VI Whole Grain Cereals		Group VII - Butter	
	Users	Non-users	Users			Non-users			Users	Non-users	Users	Non-users
			Meat, nuts, cheese lbs.	Eggs doz.	Dried beans lbs.	Meat, nuts, cheese lbs.	Eggs doz.	Dried beans lbs.	lbs.	lbs.	lbs.	lbs.
Need	2.4	3.2	560	96	32	665	114	38	576	684	83	99
Amount provided	2.7	4.5	454	115	46	445	120	74	106	114	76	85
Amount to be added	-.3	-1.3	106	-19	-14	220	-12	-36	470	570	7	14
Amount produced	.7	2.7	189	51	6.5	230	59	.4			10	16
Quarts:												
Canned at home			2.5			2.2						
Canned at center			20.1									
Canned, total			22.6			2.2						
Average per adult unit			7			.7						

Extent to Which the National Food
Standard Was Met by Members and Non-Members of
Food Production War Training Courses, 1943

The number of families represented in these classes was small; therefore, significance is found chiefly in comparisons between those who had gardened or processed foods previously and those who had not.

In the F. P. W. T. classes, nearly 70% of the members were beginners at gardening (Table 2).

Experienced gardeners not attending classes produced the greatest bulk of green and yellow vegetables but canned the least. The other groups averaged one-third more quarts per adult unit than experienced non-members.

Experienced class members produced the greatest average of tomatoes, six bushels per family. They canned none at the community canning center. The other groups supplied their families with only one-third, approximately, of their families' needs of this food group, which supplies Vitamin C.

Inexperienced class members put up as many quarts of tomatoes, per adult unit, as did experienced gardeners not attending classes. Dried vegetables were chiefly "shade-dried" green beans, prepared by inexperienced non-members. Very few families used the dehydration method experimentally. These expressed satisfaction with the results.

Vegetables to be eaten raw were produced in almost equal amounts by the four groups. This was approximately one-third of the amount recommended for the diet.

The only group over-producing potatoes was the non-member group, experienced in gardening.

The apple crop failed in the year of this study; therefore, none of the groups produced the requirements in this food. A third of the need was met by each group, chiefly by purchased apples. The greatest number of quarts of applesauce was processed by inexperienced gardeners, members and non-members of the classes.

Milk was supplied adequately by all but the inexperienced class members who lacked an average of a pint per day. Experienced non-members provided a surplus. This group included farmers who sold milk.

Meat provision by all groups averaged 80% adequacy. Members of the F. P. W. T. classes used the community cannery to process meat. They averaged 700% more quarts per unit than non-members who preferred to smoke or brine meats.

Fifty per cent more than the requirement of eggs was provided by inexperienced non-members. Of this amount, less than half was produced at home.

Over one hundred per cent more than the requirement of dried beans was used by experienced non-members. Fifty per cent more than the need was used by inexperienced non-members. Members of the classes provided very closely the amounts needed.

Less than one-third of the requirement of butter was provided by inexperienced members of the classes. Non-members were supplied adequately.

Table 2. Extent to which the National Food Standard was met by members and non-members of F. P. W. T. classes, 1943

Item	Members of F. P. W. T. Classes		Non-members of F. P. W. T. Classes	
	Experien- ced in gar- dening	Inexper- ienced	Experien- ced	Inexper- ienced
Number of families	8	13	59	20
Average size of family, adult units	3.3	3.1	3.7	3
Average size of garden, -acres	.6	.8	.8	.2
<u>Group I Green, yellow vegetables</u>				
Average per family:				
Pounds: Needed annually	544	511	610	495
Supplied, 1943	320	302	456	368
To be added	224	209	154	127
Produced, 1943	215	224	341	243
Quarts: Canned at home	51	35	60	16
Canned at center	25	23	12	41
Total	76	58	72	57
Av. no. qts. per adult unit	23	19	14	19
Pounds dried or dehydrated	0.0	.6	4.0	5.2
<u>Group II Tomatoes</u>				
Bushels: Needed annually	9.9	9.3	11.1	9.0
Supplied, 1943	5.4	3.0	4.8	2.0
To be added	4.5	6.0	5.3	6.7
Produced, 1943	6.1	3.0	5.0	4.3
Quarts: Canned at home	9	9	11	9
Canned at center	-	7	7	4
Total	9	16	18	13
Av. no. qts. per adult unit	3	5	5	4
Raw vegetables				
Bushels: Needed per year	9.9	9.3	10.8	9.0
Supplied, 1943	3.0	4.0	4.0	5.5
To be added	6.9	5.3	6.2	3.5
Produced, 1943	2.0	1.7	1.9	1.9
Bushels provided per adult unit	.06	.05	.05	.06
<u>Group III Potatoes</u>				
Bushels: Needed annually	6.6	6.2	7.4	6.0
Provided, 1943	6.2	4.8	9.9	5.5
To be added*	.4	1.4	-2.5*	.5
Produced, 1943	6.1	4.0	9.6	4.0

*Where the minus sign is used, provision beyond basic need is indicated.

Table 2 (continued). Extent to which National Food Standard was met by members and non-members of F. P. W. T. Classes, 1943

Item	Members of F. P. W. T. Classes		Non-members of F. P. W. T. Classes	
	Experienced in gardening	Inexperienced	Experienced	Inexperienced
Apples				
Bushels: Needed annually	6.6	6.2	7.4	6.0
Provided	2.1	2.6	3.3	2.8
To be added	4.5	3.6	4.1	3.2
Produced, 1943	1.7	.3	1.2	.1
Quarts: Canned at home	15	12	11	11
Canned at center	-	19	2	16
Total canned	15	31	13	27
Other Fruits and Vegetables				
Pounds: Needed annually	165	155	185	150
Provided, 1943	211	149	276	227
To be added	-46*	6	-91*	-77*
Produced, 1943	181	100	240	161
Quarts: Canned at home	38	26	35	21
Canned at center	11	16	6.5	17
Total canned	49	42	41.5	38
Av. no. qts. per adult unit	16	13	11	12.6
Group IV Milk				
Quarts: Needed daily	2.5	2.2	3.0	2.4
Provided	2.2	1.7	4.6	2.4
To be added	.3	.5	-1.6*	0.0
Produced	.5	0.0	2.7	.2
Group V Meat				
Pounds: Needed annually	577	542	630	525
Provided, 1943	455	363	489	388
To be added	122	179	141	137
Produced	4	9	25	8
Quarts: Canned at home	-	.1	3	1
Canned at center	23	26	3	11
Total canned	23	27	6	12
Av. no. qts. per adult unit	7.7	8.5	1.8	3.6
Eggs				
Dozens: Needed annually	99	93	108	90
Provided, 1943	89	85	127	136
To be added	10	8	-19*	-46*
Produced	77	28	56	60
No. of hens	24	9	96	9
Dried Beans				
Pounds: Needed annually	33	31	37	30
Provided, 1943	33	28	76	46
To be added	-	3	-40*	-16*
Produced	-	.4	5.5	.7

*Where minus is used provision beyond basic need is indicated.

Table 2 (continued). Extent to which National Food Standard was met by members and non-members at F. P. W. T. classes, 1943

Item	Members of F. P. W. T. Classes		Non-members of F. P. W. T. Classes	
	Experien- ced in gar- dening	Inexper- ienced	Experien- ced	Inexper- ienced
	<u>Group VI</u> Whole grains (white flour and bread not included)			
Pounds: Needed annually	569	560	609	544
Provided, 1943	54	85	130	87
To be added	515	485	479	457
<u>Group VII</u> Butter				
Pounds: Needed annually	86	81	94	78
Provided	71	57	89	73
To be added	15	24	5	5
Produced	13	12	18	9

Production of Food and Further Needs
by Members and Non-members of
Evening School in Prices Fork, 1944

The enumeration data tabulated here are of production and processing of foods in 1943. Instruction followed and therefore was no factor in this provision of food. It is analysed to discover the extent of the need of instruction.

Emphasis is given to influences causing people to be interested in the Evening School class. A comparison of the food habits of members and non-members is made to see whether we are reaching those who should be reached.

Of the thirty-two families in Prices Fork who were interviewed and invited to attend an Evening School at the schoolhouse, only three stated that they had no interest in such a class. Of these three, two attended several of the classes. Twelve families attended regularly.

Those attending classes had smaller families than those not attending (see Table 3).

During the preceding season, class members had produced over twice as many green and yellow vegetables as had the non-members. The lack of these vegetables in the diet of families not attending was an average of 300 pounds a year per family. Those attending the class lacked only a negligible amount.

The amounts of tomatoes and raw vegetables to be added annually was found to be about a bushel and a half in each case.

Potatoes were heavily over-produced by members of the class.

Both groups should add about thirty pounds of "other fruits and vegetables" and three bushels of apples to the diet of each family.

Families not attending classes were farmers producing milk beyond family needs. Class members produced for their own need adequately.

Class members produced 75% more eggs than they needed; non-members produced nearly one-fourth less than they needed.

Dried beans were used in excess of needs by both groups. The class members were the only ones producing them to any extent.

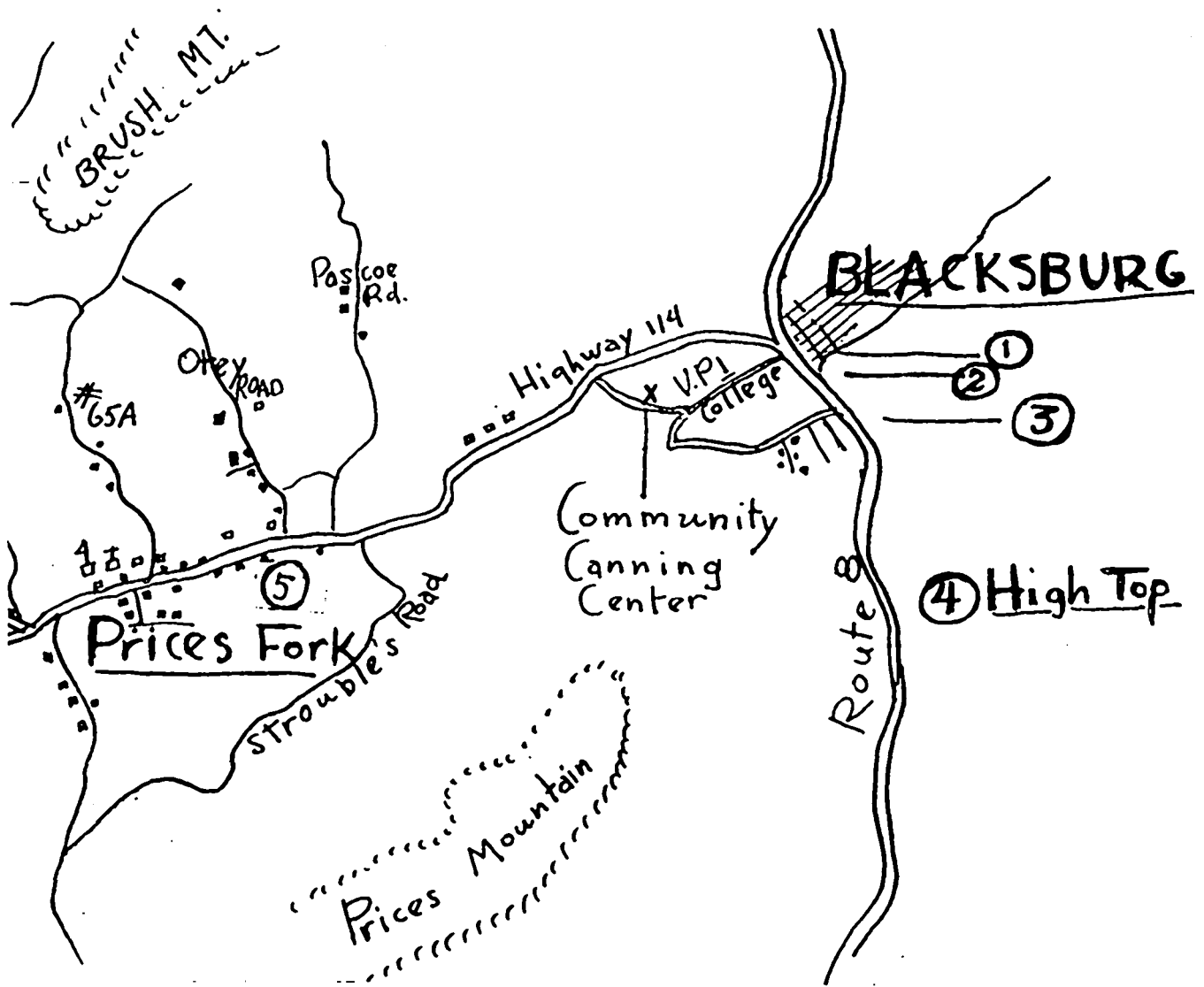
Both groups provided about one-fourth of the whole grains needed for adequate Vitamin B complex.

Only the group not attending classes produced butter. The group attending bought butter and met the requirement more than adequately.

Table 3. Production of food and further need by members and non-members of Evening School, 1944, in Prices Fork, of the Blacksburg Community

Item	Attended evening class	Did not attend evening class
Number of families	12	20
Average adult units per family	2.9	3.9
<u>Foods</u>		
<u>Group I. Green, yellow vegetables</u>		
Average pounds per family:		
Produced 1943	342	190
To be added, by production or purchase	61	300
<u>Group II. Tomatoes</u>		
Bushels produced, 1943	3.9	5
To be added, by production or purchase	1.3	1.5
<u>Raw vegetables</u>		
Bushels produced, 1943	1.9	1.1
To be added, by production or purchase	1.5	1.9
<u>Group III. Potatoes</u>		
Bushels produced, 1943	9	8
To be added, by production or purchase	-3.2*	-.2*
<u>Apples</u>		
Bushels produced	.7	.8
To be added, by production or purchase	3.5	3.1
<u>Other vegetables</u>		
Pounds produced, 1943	249	196
To be added, by production or purchase	31	36
<u>Group IV. Milk</u>		
Quarts per day, produced	1.6	5.3
To be added, by production or purchase	.4	-3 *
<u>Group V. Meat, nuts, cheese</u>		
Pounds produced	299	346
To be added, by production or purchase	20	80
<u>Eggs</u>		
Dozens produced annually	58	51
To be added, by production or purchase	-46*	15
<u>Dried beans</u>		
Pounds produced annually	26	.2
To be added, by production or purchase	-6.5*	-5.5*
<u>Group VI. Whole grains</u>		
Pounds provided 1943	101	174
To be added, by production or purchase	418	531
<u>Group VII. Butter</u>		
Pounds produced annually	8	26
To be added, by production or purchase	-1*	8

*The minus indicates the exceeding of minimum requirements. This is related to amounts provided, including purchases, not to production.



1. Blacksburg, Faculty
2. Blacksburg, Non-faculty
3. Blacksburg, Negro
4. High-Top
5. Prices Fork

Figure 1. Five Areas of the Blacksburg Community

The Extent to Which the National Food
Standard Was Met by Five
Areas of the Blacksburg Community, 1943

The accompanying map indicates the location of areas of this study. (Figure 1)

The largest families interviewed were in High Top (Table 4). About fifty per cent of the green and yellow vegetables needed by these families was provided. Few of these were purchased. This area was greatly influenced by F. P. W. T. course given in the community center there in 1943. Most of the quarts canned were processed at the Blacksburg canning center; no tomatoes were processed there, however.

The most adequate provision of green and yellow vegetables was made by families of faculty members of V. P. I. This group also processed the largest amount of these vegetables, followed closely by the negro group.

The faculty group was the only one that dehydrated these vegetables.

All groups failed to provide enough tomatoes throughout the year.

28% more was needed by the faculty group
 85% more was needed by the non-faculty, white
 350% more was needed by the negroes
 80% more was needed by High Top
 100% more was needed by Prices Fork

The greatest amount of tomatoes canned, an average of 26 quarts per adult unit was canned by the faculty group. This was done chiefly at the canning center.

High Top families, canning tomatoes at home, nearly equaled that amount.

The faculty group was twenty per cent short of the requirement of raw vegetables. The High Top group was eighty per cent short. Prices Fork families were seventy per cent short. The faculty and negro groups produced these most abundantly.

Potatoes were provided far beyond the needs of High Top and Prices Fork families.

The faculty group canned by far the most apple sauce, chiefly at the canning center.

"Other fruits and vegetables", not the leafy types, were provided more than adequately by all groups. The canning of these was led by the High Top group, chiefly in their homes. They averaged 16 quarts per adult unit.

The faculty and Prices Fork groups provided more milk than was needed although the latter was the only milk-producing group.

Faculty and High Top groups were the leading ones in canning meat. The former produced only poultry meat.

All groups, except negroes, consumed more eggs than were necessary. The only group producing them, to any extent, was at High Top. Nearly fifty per cent more than the need was provided by the faculty.

Dried beans were used by Prices Fork people one hundred and sixty per cent more than the minimum requirement. They produced only eleven per cent of their supply.

The lack of whole grains was most serious in the diet of High Top and white non-faculty groups.

The negro group provided fifty per cent more butter than was needed.

Only the white non-faculty group bought or produced honey to any great extent.

Table 4. Extent to which the National Food Standard was met by five areas of the Blacksburg community, 1943

Item	Blacksburg			High Top	Prices Fork
	V.P.I. faculty members	White non-faculty	Negro		
Number of families interviewed	18	32	10	8	32
Average adult units per family	3.2	3.7	3	4.2	3.5
Average no. adults helping in garden	2.4	2.5	2.1	3.0	2.6
Average size of garden, acres	0.17	0.11	0.09	0.1	0.2
<u>Foods</u>					
<u>Group I</u>					
Average per family					
Pounds: Needed annually	567	580	531	691	601
Provided, 1943	504	398	368	324	396
To be added	63	182	163	367	205
Produced, 1943	357	299	188	306	290
Quarts: Canned at home	30	60	37	50	46
Canned at center	51	8	29	31	11
Total	81	68	66	81	57
Average per adult unit	25	18	22	20	16
Pounds dried or dehydrated	6.5	3.5		1	3.6
<u>Group II. Tomatoes</u>					
Bushels: Needed annually	9.6	11.1	9.0	12.6	10.5
Provided, 1943	7.0	6.0	2.0	7.0	5.0
To be added	2.6	5.1	7.0	5.6	5.5
Produced	5.0	6.0	2.7	9.0	4.6
Quarts: Canned at home	27	47	16	76	41
Canned at center	56	3	4	4	4
Total	83	50	20	80	45
Average per adult unit	26	13	6	19	13
<u>Raw Vegetables</u>					
Bushels: Needed annually	9.6	11.0	9.0	12.6	10.5
Provided, 1943	7.4	4.4	3.6	2.9	2.9
To be added	2.2	6.6	5.4	9.7	7.6
Produced, 1943	3	1.7	2.5	1.2	1.4

Table 4 (continued). Extent to which the National Food Standard was met by five areas of the Blacksburg community, 1943

Item	Blacksburg				Prices Fork
	V.P.I. faculty members	White non- faculty	Negro	High Top	
Group III. Potatoes					
Bushels: Needed annually	6.4	7.4	6.0	8.4	7.0
Provided, 1943	5.4	7.5	3.8	16.6	9.3
To be added	1.0	0.0	2.2	-8.2*	-2.3*
Produced, 1943	3.8	7.6	3.2	16.6	8.4**
Apples					
Bushels: Needed annually	6.4	7.4	6.0	8.4	7.0
Provided, 1943	3.0	3.0	2.0	4.0	4.0
To be added	3.4	4.4	4.0	4.4	3.0
Produced, 1943	.6	1.2	.4	1.9	.8
Quarts: Canned at home	14	11	15	4	11
Canned at center	24	1	8	-	2
Total	38	12	23	4	13
Average per adult unit	11	3	8	1	3
Other fruits and vegetables					
Pounds: Needed annually	157	167	151	209	178
Provided, 1943	269	251	198	226	244
To be added*	-112	-84	-47	-17	-66
Produced, 1943	195	211	145	192	215
Quarts: Canned at home	22	28	10	61	40
Canned at center	26	4	21	8	3
Total	48	32	31	69	43
Average per adult unit	15	9	10	16	12
Group IV. Milk					
Quarts: Needed daily	2.4	2.7	1.9	3.9	2.9
Provided	3.0	2.5	1.4	3.2	6.0
To be added	-.6*	.2	.5	.7	-3.1*
Produced	.2	1.2	-	-	4.0

*Amounts provided in excess of need.

**Amounts produced in excess of amounts needed for family use were sold, in some cases.

Table 4 (continued). Extent to which the National Food Standard was met by five areas of the Blacksburg community, 1943

Item	Blacksburg				Prices Fork
	V.P.I. faculty members	White non- faculty	Negro	High Top	
<u>Group V. Meats, nuts, cheese</u>					
Pounds: Needed annually	367	591	533	699	623
Provided, 1943	423	370	363	617	528
To be added	144	221	170	82	95
Produced	-	130	9	536	329
Quarts: Canned at home	8	1	-	-	10
Canned at center	12	5	3	73	10
Total	20	6	3	73	20
Average per adult unit	6	1.5	3.6	17	6
	2.40	.5	1.2	2.0	1.9
<u>Eggs</u>					
Dozens: Needed annually	96	111	90	126	105
Provided, 1943	141	129	62	140	113
To be added*	-45*	-18*	28	-14*	-8*
Produced	45	54	13	137	54
<u>Dried Beans</u>					
Pounds: Needed	32	37	30	42	35
Provided, 1943	27	58	41	42	91
To be added	5	-21*	-11*	-	*56*
Produced	8	.5	.4	-	10
<u>Group VI. Whole Grains</u>					
Pounds: Needed annually	576	666	540	756	630
Provided, 1943	113	83	74	71	147
To be added	463	583	466	685	483
<u>Group VII. Butter</u>					
Pounds: Needed annually	84	88	79	104	93
Provided	83	75	40	97	94
To be added	1	13	39	7	-1
Produced	-	10	-	52	19
No. hens kept per average family	5	11	2	19	7
No. pounds honey bought or produced	.9	2.2	1.5		

*Amounts provided in excess of need.

The Extent to Which the National
Food Standard Was Met by
Occupational Groups, 1943

Very nearly the full amount of green and yellow vegetables recommended was provided by families of the professional group.

Laborers, defense plant workers, and the farmer and retired group lacked approximately one-half of the required amounts.

Approximately the same amounts of such vegetables were produced in the gardens of the various groups. The professional group, however, canned two to three times the number of quarts per individual. More of these quarts were processed in the canning center than in the home.

Tomatoes canned averaged 22 quarts per individual except in the case of the farmer and retired group. They averaged half of that amount and canned none in the canning center.

Professional and farmer groups led in the consumption of raw vegetables.

Defense plant families consumed annually two bushels of potatoes more than were required. These were chiefly produced at home.

Professional and farmer groups were the principle canners of apples. These groups led with "other fruits and vegetables". All groups over-produced these. Farmers canned the least of these. Defense plant families canned theirs at home chiefly, whereas the professional group canned as many at the center as at home.

The labor group was the only one inadequately provided with milk. That lack was a pint a day per family.

Defense plant workers produced almost as much meat as the farmers. They canned four times as much, chiefly at the cannery. Although families of the professional group produced only poultry meat, they ranked second in the amount of meat canned.

The labor group was the only one that provided insufficient quantities of eggs. Over a third more should be added to their diet.

From fifty to fifty-five per cent more dried beans than were required were used by defense plant and farmer groups. These also provided more than the requirement of butter.

Only the trade and the farmer groups produced or bought much honey.

Table 5. Extent to which the National Food Standard was met by occupational groups, 1943

Item	Labor	Defense plant employee	Profes- sional	Trades- man	Farmer and retired
Number of families interviewed	17	25	23	22	13
Average adult units per family	3.8	3.5	3.1	3.5	3.2
Average no. helping in garden	3	2.6	2.3	2.2	2.6
Average size of garden, acres	.5	.3	.15	.11	.6
<u>Foods</u>					
<u>Group I</u>					
Average per family:					
Pounds: Needed annually	625	627	553	582	542
Provided, 1943	316	428	515	365	367
To be added	309	199	38	217	175
Produced	212	319	352	303	254
Quarts: Canned at home	63	58	34	42	42
Canned at center	-	14	49	14	11
Total	63	72	83	36	53
Average per adult unit	16	20	27	10	17
<u>Group II. Tomatoes</u>					
Bushels: Needed annually	11.4	10.5	9.3	10.5	9.6
Provided, 1943	4.1	6.0	7.0	5.7	5.5
To be added	7.3	4.5	2.3	4.8	4.1
Produced	3.8	5	5.6	5.6	6.2
Quarts: Canned at home	36	48	31	45	42
Canned at center	26	38	46	45	-
Total	62	86	77	90	42
Average per adult unit	16.6	24.5	25.8	25.7	13
<u>Raw Vegetables</u>					
Bushels: Needed annually	11.0	10.0	9.0	10.5	10.0
Provided, 1943	3.0	4.7	6.5	3.5	2.7
To be added	8.0	5.3	2.5	7	7.3
Produced	1.7	1.6	2.8	1.2	2.3

Table 5 (continued). Extent to which the National Food Standard was met by occupational groups, 1943

Item	Labor	Defense plant employee	Profes- sional	Trades- man	Farmer and retired
Group III. Potatoes					
Bushels: Needed annually	7.6	7.0	6.2	7.0	6.4
Provided, 1943	7.0	9.0	5.7	6.0	15
To be added	0.6	-2 *	.5	1.0	-8.6*
Produced	6.7	8.0	4.0	6.0	14.6
Apples					
Bushels: Needed annually	7.6	7.0	6.2	7.0	6.4
Provided, 1943	2.0	3.0	3.5	2.5	3.6
To be added	5.6	4.0	2.7	4.5	2.8
Produced	.5	.8	.7	.5	2.5
Quarts: Canned at home	8	8	14	11	18
Canned at center	-	-	23	4	-
Total	8	8	37	15	18
Average per adult unit	2.1	2.2	12.0	4.0	6.0
Other fruits and vegetables					
Pounds: Needed annually	190	175	155	175	160
Provided, 1943	197	206	252	235	289
To be added*	-7	-31	-97	-60	-129
Produced	182	98	197	184	253
Quarts: Canned at home	32	46	22	26	30
Canned at center	8	4	23	9	2
Total	40	50	45	35	32
Average per adult unit	13	14	15	10	10
Group IV. Milk					
Quarts: Needed daily	3.2	3.3	2.3	2.5	2.5
Provided	2.6	3.5	2.5	2.8	8.4
To be added	.6	-.2*	-.2*	-.3*	-6.0*
Produced	1.3	1.9	.4	1.9	3.3

*Amounts provided in excess of need.

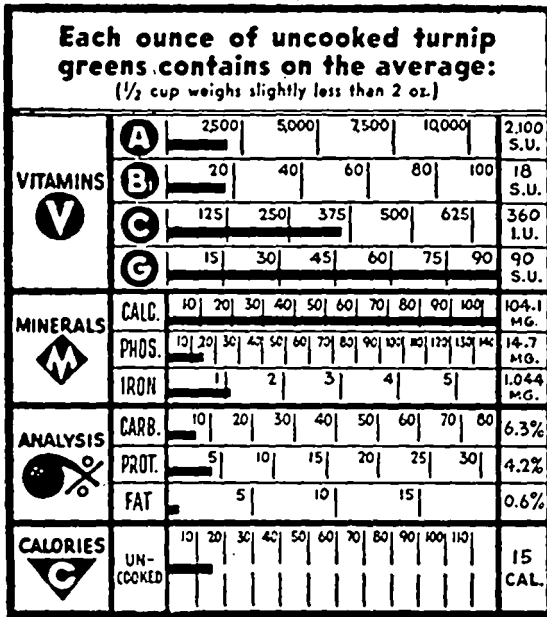
Table 5 (continued). Extent to which the National Food Standard was met by occupational groups, 1943

Item		Labor	Defense plant employee	Profes- sional	Trades- man	Farmer and retired
<u>Group V. Meat, nuts, cheese</u>						
Pounds:	Needed annually	662	614	546	614	558
	Produced, 1943	337	536	400	421	512
	To be added	325	78	146	193	46
	Produced	184	309	48	165	409
Quarts:	Canned at home	1	2	5	2	-
	Canned at center	5	23	9	2	6
	Total	6	25	14	4	6
	Average per adult unit	1.6	7	4.6	1.1	1.8
<u>Eggs</u>						
Dozens:	Needed annually	114	105	94	105	96
	Provided, 1943	86	136	128	126	112
	To be added	28	-31*	-34*	-21*	-16*
	Produced	40	74	39	46	81
<u>Dried Beans</u>						
Pounds:	Needed annually	38	35	31	35	32
	Provided, 1943	78	88	25	48	68
	To be added	-40*	-53*	6	13	36
	Produced	.3	.2	.7	.8	23
<u>Group VI. Whole Grains</u>						
Pounds:	Needed annually	747	635	563	666	574
	Provided, 1943	105	118	112	77	153
	To be added	642	517	451	589	421
<u>Group VII. Butter</u>						
Pounds:	Needed annually	99	93	81	91	83
	Provided, 1943	71	101	78	58	100
	To be added	28	-8*	3	33	-17*
	Produced	6	18	-	5	52
<u>Honey, bought or produced</u>		-	.4	.7	2.1	2.3

*Amounts provided in excess of need.

T U R N I P S

ROOTS AND GREENS



HEALTH FACTORS:

Popular misconception held not many years ago was that turnips harmed the teeth. Ridiculousness of this belief is apparent in light of nutritive value of turnips. Excellent source of Vitamin C (particularly when served raw), and therefore helpful, not harmful, in maintaining tooth health. Ancient Greeks gave turnips to soldiers to prevent scurvy. Rich in potassium.

Turnip greens a superior food nutritionally. Outstanding source of Vitamin C; excellent source of Vitamins A, B₁ and G. An unusually rich source of calcium. Calcium of turnip greens may not be entirely available to the body, but nevertheless the amount is significantly large.

Roots and greens alkaline-ash. Not recommended for soft diets, as fairly high in roughage. (Roots may be mashed and puréed, however.) Low in calorie content; hence excellent for reducers. Occasionally cause allergic reactions. Roots tend to produce flatulence, although much distress may often be traced to improper cooking rather than turnips themselves.

Turnip greens once thought to be inedible; today known to be very valuable food.

SELECTION AND CARE:

Available fresh or canned (rare). Use liquid of canned variety. Choose smooth, firm, regularly shaped roots with fresh, dark green tops. Avoid wrinkled or soft turnips. White usually preferred for sweetness and fine texture. If turnips have many scars at crowns, are abnormally large in size, or have many thin rootlets trailing at bottom, they are too mature and not desirable. A pound of medium-sized roots (about 4) yields 2 cups diced and cooked.

If turnip roots have already had tops torn off, ask grocer for them if they are still fresh. Be sure greens are not old, withered, discolored or dirty.

Keep roots in a cold, not-too-dry place, preferably a cool part of the cellar or a cool window sill. Wash greens thoroughly, dry and store in refrigerator in hydrator, cellophane bag or damp cloth.

PREPARATION:

Scrub roots thoroughly; pare; slice, dice or cut into large pieces. Remove any wilted or discolored leaves and very coarse stems of greens; wash well, removing all sand and dirt which may be present.

BASIC METHODS OF COOKING:

To mash roots: Place pieces of turnips in boiling water to cover; cook uncovered about 20 to 30 minutes (until soft) if young, about 50 minutes or longer if old. Drain, rice or mash and season with salt, pepper and butter. Raw turnips excellent pared, sliced into thin strips and served with lemon juice or French dressing as appetizer.

To quick-cook greens: Place in boiling water to cover. Cook uncovered about 15 to 20 minutes, just until tender. Drain, chop, season and dress to taste. Delicious served with lemon juice, cider vinegar or butter.

GENERAL NOTES: Turnips a close relative of cabbage, cauliflower, kale, etc., because a member of the mustard family. Thought to be native to Russia; were grown in this country by the earliest settlers in Virginia.

Figure 2. Example of Bar Graphs Used

from "You Are What You Eat" - Dr. Victor Lindlahr

MEANS OF MEETING EDUCATIONAL OBJECTIVES

Securing Interest in Food Conservation

at the Time of the Interview

The inquiry into the extent of food produced, stored, or bought (Part I), was in itself a stimulus to further planning and the desire for instruction.

Of the hundred families interviewed, all welcomed the interview. Pleasure and pride in the accomplishments of the previous season were evident. Dissatisfaction in poor results was evident in some cases.

The food standard established by government agencies (Appendix I c) was explained and charts shown on which were indicated basic foods needed daily. The conversion of these needs into an annual food budget and adequate garden plans was explained.

The comparative value of foods was graphically shown in two small handbooks which aroused much interest. They were: "You Are What You Eat", by Dr. Victor Lindlahr and "Food and Nutrition" published by the American Red Cross, Washington, D. C. Each used bar graphs (Figure 2) showing food values. The former placed these in alphabetical order. Analyses of vegetables discussed during the interview were easily referred to.

Color photographs of salads, garnishes, and ways of serving vegetables were mounted on ten-by-twelve-inch cards of colored Bristol board (Figure 3). These small posters were easily handled during the interview and led to discussion of food value of vegetables. Children, especially, showed interest in such visual aids. One mother suggested



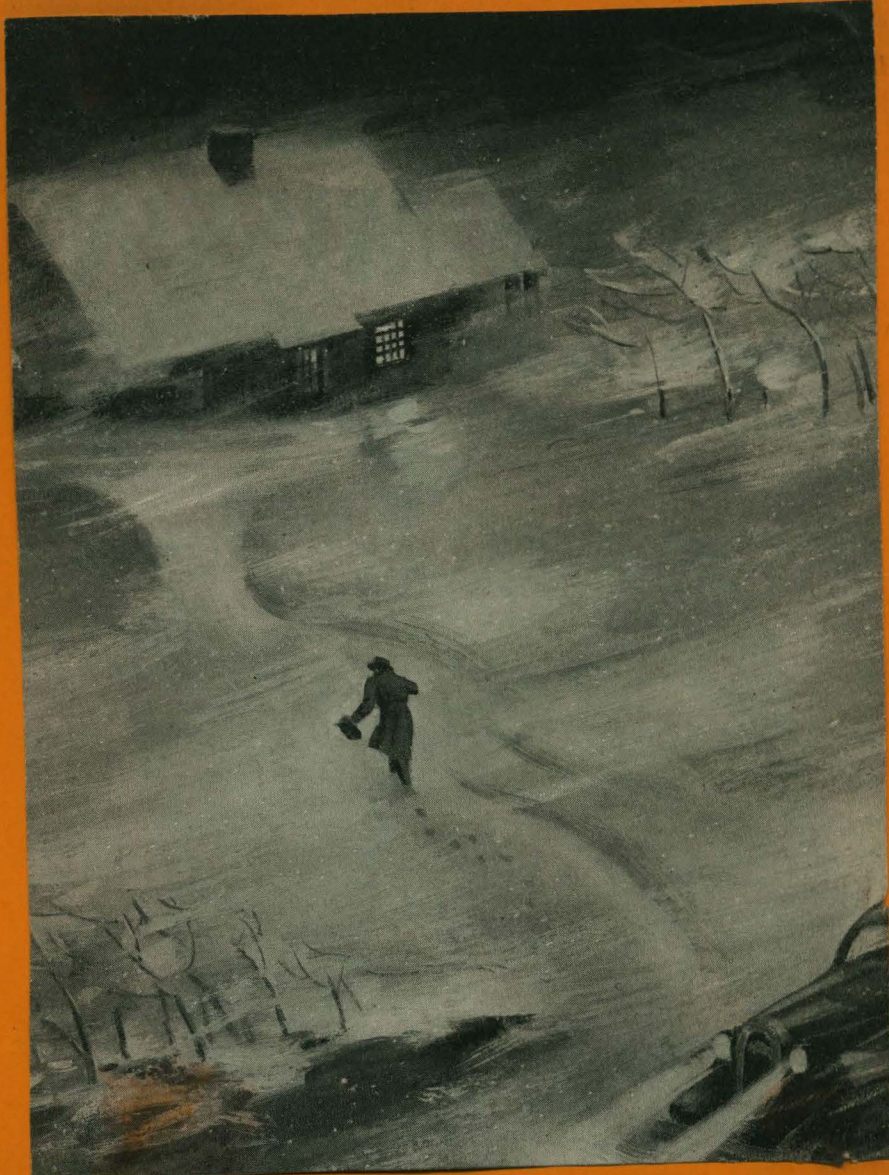
vitamin C



Several centuries ago, sea voyages held the promise of romantic adventure. . . . However, sailing vessels were slow and small. Juicy fruits and vegetables were scarce on sailors' plates. Scurvy lurked in every ship's hold. But help appeared when it was found that orange, lemon, or lime juice in the rations put an end to scurvy. . . . This led to the discovery of Vitamin C which reaches potent proportions in citrus fruits and tomatoes.

Vitamin C is essential for formation of the "cement substance" which holds cells together in bones, teeth, and tissues. *It helps build positive buoyant health!* Since it cannot be stored, a fresh supply must be taken every day. Vitamin C is elusive, easily shattered by heating in the presence of air, by drying and by aging. Coddle it!

Figure 3. Example of Small Poster Used



SPARE THE DOCTOR!

EAT PROTECTIVE FOODS:

VEGETABLES, especially Tomatoes
 FRUITS
 WHOLE GRAINS

Figure 3. Example of Small Poster Used

that the eating of vegetables and fruit in her own family would be encouraged by such pictures. The Evening School class later made use of the suggestion, members making such posters for their own homes and the school.

Educational Approach to Increase the
Use of the Community Canning Center

During the first season of the operation of the canning center, many families failed to make use of the opportunity, for the following reasons:

1. They had adequate canning facilities at home.

It was suggested that the foods most suitably canned at home were tomatoes and fruits, whereas non-acid foods were safer from botulism development if processed in pressure cooker or cannery retorts.

2. They had not realized the greater speed and efficiency of canning with cannery methods.

Some examples of quantities of food handled in a short time were cited.

3. They considered their gasoline rations inadequate for trips to the canning center.

On investigation, it was found that the Ration Board would honor slips bearing the cannery manager's signature with an allowance of gas for the trip. They suggested that neighbors make the trip together with vegetables in season.

4. A false rumor that food canned at the cannery could be confiscated by the government was denied.

5. They had not been able to estimate the family food needs for the year.

The means of using the national food standard (Appendix II d), adapted to the family in question, was explained.

6. They had not known the health values of vegetables which could be canned.

Bar graphs, indicating these values, were shown (Figure 2).

7. They had not produced sufficient food for canning.

Classes in vegetable production were arranged.

8. They had not realized that canned food in the stores would be so restricted because of war conditions.

The War Production Administration was quoted as saying that canned goods for civilian use would be reduced by forty per cent in 1944.

The effectiveness of these means of encouraging cannery use cannot be measured. The number who used the cannery in 1943 was 400. They processed 69,000 cans of food.

Instruction in Food Conservation Following Interviews
on the Subject

Of the 100 families interviewed, 71 expressed interest in having a follow-up course of classes in food production and conservation. In the list of 17 subjects suggested (Appendix I a), the ones most frequently checked at the time of the interview were:

Principles of nutrition
Budgeting food needs
Balancing meals
Planning a garden
Controlling insects
Controlling diseases

Only one class was given to the Negro group and to the Blacksburg non-faculty group, since the number attending each did not justify the offering of a full course.

The units listed above were used as the basis of a course of ten classes in Prices Fork.

Attendance of Prices Fork Evening School

Number of families visited in Prices Fork	-- 32
Number expressing interest in instruction	-- 29
Number attending regularly	- - - - - 12
Number attending occasionally	- - - - - 10

The families of those who attended regularly were smaller than of those not attending (Table 3).

Those attending had, during the previous year, consumed more potatoes and dried beans than were recommended.

Those not attending had been found to lack an average of 300 pounds of fruit and vegetables per family per year.

Since the Prices Fork class could not be followed up enough to secure definite results, it cannot be used as a source of data.

The experience is used as background for suggestions made in Appendix II a. "A Food Conservation Program Suited to a Typical Community". Lesson plans and suitable mimeographs illustrating the instruction are included in Appendices II b, c, and d.

SUMMARY AND CONCLUSIONS

The food standard of the National Nutrition Council was met much more nearly by users of the community canning center than by non-users.

Nearly all meat canned by the one hundred families interviewed was canned at the community canning center.

The Food Production War Training courses were, in 1943, their first year, composed largely of people who had not gardened or processed foods before. They averaged more quarts canned than did experienced gardeners not attending classes. The families of those not attending these classes averaged a greater annual consumption of potatoes and dried beans than was recommended for a healthful diet.

Evening School classes, which followed the interviews in 1943, were composed of members of families whose diet had shown an over-supply of potatoes and dried beans and a shortage of tomatoes. They made plans for 1944 gardens in which food in recommended proportions was to be produced. They planned to use improved methods of production. Row space and seeds ordered were "tailored to fit" the particular families concerned. They used improved practices recommended and increased their use of the canning center.

Families of the V. P. I. faculty provided the most adequate supply of vegetables in 1943. The negro group came second in this.

All groups needed an addition of tomatoes.

By using the canning center, the High Top and faculty groups led in the number of quarts of vegetables, apples, and meat canned.

Professional and farmer groups provided the most vegetables but the latter canned them very little.

Enumeration data show that lack of proper foods was more common among those not attending classes than among those attending.

Interest in diet, food production and conservation shown during the interviews seemed genuine. Lack of sufficient information on these subjects was prevalent. However, classes in 1943 and in 1944 were lightly attended.

As teaching aids, graphic means were most effective. Many such films, charts, and pictures are available.

No means of getting adequate whole grains into the diet has been established in the community studied.

The annual family food budget is of great value in covering the needs adequately and efficiently.

Information and facilities for a competent food conservation program are not lacking in the community of Blacksburg, yet a large proportion of its families have not yet become aware of their needs or of the means of providing for such needs.

Where interest is aroused, the group studying together find much information that is "news" to them and proceed, with improved practices, to gratifying results.

A valuable development of democracy is found in such groups where mutual interest and shared work bring people of many classes, occupations, and backgrounds together in the neighborhood and in the community.

Basic food needs are common to all people and interest in them is seldom lacking.

The integration of community life has a great opportunity in the food conservation program. Individual health and national coordination lie in such a program in the community.

RECOMMENDATIONS

It is recommended that communities, similar to the one studied, investigate the extent to which their families are meeting their food needs.

As a yardstick to measure the adequacy of family food provision, the standard set up by the National Nutrition Council will prove helpful.

The form used in interviewing, Appendix I, was found to be a satisfactory means of finding the general annual provision of foods by families in the community.

Since the forming of classes does not always reach those who most need instruction, it is well to enter homes of the community with the dual purpose of inquiring and educating about foods. When the desire for a balanced diet is awakened by such a study, it should immediately be interpreted in terms of home production.

Some form of community center for food processing should be established. The canning center offers an efficient means of assistance and a pleasant intercourse of common interests.

Teachers trained for such work should be able to discuss food values and production methods intelligently in clear non-technical terms. Visits to well-arranged fruit cellars and storage rooms prove stimulating.

Since most people are found to enjoy gardening and handling foods, it is recommended that the element of pleasure be emphasized in planning production classes and canning centers where people work together.

There is much to be done in creating desire for foods which will maintain health through correct eating habits. Schools, periodicals, and government agencies are working to that end and community groups can be greatly benefited by such assistance.

The purpose of increased self-sufficiency within the family can be strengthened by the realization that other families in the world need assistance. Our experience and success in staying well will make us more able to contribute to the good of the whole.

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FOOD PRODUCTION AND CONSERVATION
IN THE
BLACKSBURG COMMUNITY

Reported by: _____

Date: _____

Name _____ Address _____ Location _____

Distance from Blacksburg _____ Mi. Nearest neighbor _____

Size of family _____

Adults: _____

Boys: _____ No. under 12 _____

Girls: _____ No. who help in garden _____

Occupation of wage earners _____

Ownership status _____ Live in town _____, Country _____, Size of farm _____ 4

I. Information. Check below the items on which you would like to receive further information or instruction:

- 1. Planning a garden _____
- 2. Procuring vegetable seed _____
- 3. Fertilizing garden _____
- 4. Plowing and fitting _____
- 5. Planting _____
- 6. Cultivating _____
- 7. Controlling insects _____
- 8. Controlling diseases _____
- 9. Storing vegetables _____
- 10. Storing fruits _____
- 11. Principles of nutrition _____
- 12. Budgeting food needs _____
- 13. Canning _____
- 14. Drying _____
- 15. Dehydrating _____
- 16. Buying foods at stores _____
- 17. Balancing meals _____

II. General

- 1. Would you be interested in meeting with some of your neighbors to discuss your food problems? _____. If so, what time would suit you best? _____
_____. Where? _____
- 2. Would you like to have bulletins or pamphlets on items checked in Sec. I? _____
- 3. Check practices carried out.
 - a. Attended production classes _____. No. times _____.
 - b. Made changes in planting plans _____.
 - c. Increased planting to provide for canning _____.
 - d. Found planting plans for canning in center and for home use different _____
 - e. Selected special varieties for canning _____.

Date	Name		Address					R.W.P.		
	Foods	Produced	Left from last year	Canned at Home	Canned at Center	Dried or Dehydrated	Stored	Bought	Total	To be added 1944
	Group I:									
	Asparagus									
	Beans, green									
	Greens									
	Peppers									
	S. Potatoes									
	Squash									
	Carrots									
	Cabbage									
	Soup mixture									
	Group II;									
	Tomatoes									
	raw cabbage									
	lettuce									
	Group III:									
	Butter beans									
	Onions									
	Beets									
	Potatoes									
	Turnips									
	Corn									
	Berries									
	Apples									
	Group IV:									
	Milk									
	Cheese									
	Group V:									
	Fish									
	Nuts									
	Beef									
	Pork									
	Poultry									
	Eggs									
	Dried beans									
	Group VI:									
	Whole grains									
	Group VII									
	Butter									

Appendix Ib. Interview Form:

Enumeration Data Sheet

Appendix I c. Interview Form: Foods Recommended for Food Budget

Date	Name						
	1	2	3	4	5	6	7
Number in Family	Green & Yellow Vegetables	Oranges, Grapefruit, Tomatoes, Raw cabbage, or Salad greens	Potatoes, Other Veg., and Fruits	Milk and Milk Products	Meat, fish, Poultry, and Eggs	Whole grain cereal, Flour, Bread	Butter or Margarine
Each needs every day	2 servings at least	1 serving at least	1 of each	Pint for adults Qt. for children	2 servings	2 times at least	2 or 3 times
Needed, per year, each one	165 lbs.	3 bu. tomatoes 3 bu. raw veg.	Potatoes, 2-3 bu. 2 bu. apples 50 lbs. others	74 gals.	30 doz. eggs 125 lbs. meat 50 lbs. fat 10-20 lbs. dry beans corn or peanuts	180 lbs.	26 lbs.
For family needs, 1 yr.							
Total provided, 1943							
To be added, 1944							
For Necessary:	Vitamin A, also B & C, Minerals, Roughage	Vitamin C, other vitamins, Minerals	Vitamins, Minerals, Roughage	Calcium, Vitamin A, B Vits. Phosphorus Protein	Protein, Iron, Phosphorus, B Vits. Iodine (Fish), Eggs and Liver; A & D	B Vits. Minerals, Starch	Vitamin A, Minerals, Warmth
Value to Family:	Resistance to infections, health of skin, good teeth, good eyes, appetite, steady nerves, energy	Less colds, and other infections, good muscle tone, prevents ulcers, certain types of arthritis, less tiredness, joint pains, bleeding	Energy, good blood, prevents constipation	Good bones and teeth, normal muscles and nerves, gland functions, less colds, skin trouble, tiredness	Prevents many skin diseases and eye cataract. Necessary to growth, makes possible strong bones and teeth	Steady nerves, good appetite and digestion, energy, heart functions	Protects from colds, skin trouble, night blindness, kidney stones, low vitality

APPENDIX II aA Food Conservation Program Suited to a Typical Community

Outline of Lessons Used in Evening Classes, Prices Fork

<u>Decisions</u>	<u>Information and illustrations</u>
1. What are the daily needs of the individual?	<p>A. See Appendix II b, Lesson Plan 1.</p> <p>B. Variations according to age and occupation: illustrations in "Food and Nutrition."</p> <p>C. Variations according to income. Use illustrations in "Diets to Fit the Family Income."</p>
2. What are the sources of supply?	<p>A. See food groups of Appendix II c.</p> <p>B. Food values of familiar foods. Use as illustrations, bar graphs of "You Are What You Eat."</p>
3. How will we serve a balanced meal?	<p>A. Good things taste good. Illustrate with recipes using home grown and canned vegetables.</p> <p>B. Getting the family to eat vegetables. The class made small posters for their families (Figure 3), page 36.</p>
4. How can we best conserve the flavor, food value of garden vegetables and fruits?	<p>A. General discussion of processing methods.</p> <p>B. Illustrate with examples of successfully preserved foods.</p> <p>(1) Cold and packed food</p> <p>(2) Pressure cooker</p> <p>(3) Cannery</p> <p>(4) Dehydrated foods</p>
5. How can we budget food for family needs and plan the garden accordingly?	<p>A. Distribute form, Appendix II d. Discussion.</p> <p>B. Have each member of class find the number of adult units in his family.</p> <p>C. Multiply amounts in each food group needed by number of individual units.</p>

Appendix II a (continued)

Decisions	Information and illustrations
6. What are the best methods of selecting and procuring garden seed?	<p>A. Food budget translated into row space and seeds needed.</p> <p>B. Experience with planting in the locality, explained by teacher of Vocational Agriculture.</p> <p>C. Mimeograph of names of seeds tested and recommended, checked, with comments.</p>
7. How start and handle vegetable plants?	<p>A. Experience in handling plants demonstrated by manager of green-house.</p>
8. What are the best methods of planting and cultivating vegetables? How best control diseases and insects?	<p>A. Methods explained and discussed by teacher of Vocational Agriculture.</p>
9. How does the cannery aid in the canning of vegetables, meat and fruit?	<p>A. Demonstration at community cannery.</p>
10. What methods of harvesting and conserving food through storage are best?	<p>Illustration and discussion led by teacher of Vocational Agriculture.</p>

APPENDIX II bLESSON PLAN 1

ENTERPRISE: Food Budgeting, Producing, and Conserving.

PROBLEM: Do you know your family food needs?

EQUIPMENT NEEDED: FILM: "FOOD IS STRENGTH" published by the U. S. Department of Agriculture, Washington, D. C.
Charts, especially illustrating material of the National Nutrition Council.

REFERENCES: "You are What You Eat", Victor H. Lindlahr
Chemistry of Food and Nutrition, Sherman
Diets to Fit the Family Income, U. S. D. A. Farmers'
Bulletin No. 1737
Food and Nutrition, American Red Cross, Washington, D. C.

OBJECTIVES: 1. To show the value of the proper nutrition.
2. To get each individual to grow enough food to feed properly the entire family.
3. To know the food values derived from the food eaten.

PREPARATION:

1. A. Motivation.
 1. Food prices and scarcity make home production more valuable than ever. Note Army and Lend Lease users.
 2. Safeguarding the family's health is of great importance. "Uncle Sam Wants Us Strong"
2. General Situation.
 - a. More than 175,000 Virginia families depend on the farm for a living.
 - b. The average Virginia farm family spends at least \$150 a year for groceries. Could your family reduce the amount you spend, and still be as healthy or healthier?

(Film: "Food is Strength" accompanies this)

- c. Health defects may be keeping some of your family out of war work. Before we finish studying what we need from foods, you may find ways to prevent or improve these health defects with the meals you serve.

Appendix II b (continued)

- d. It has been estimated that more than a third of our people are suffering from malnutrition.
- e. Considering the world needs, the farm home might play an important part by supplying more than own needs.

B. Statement of Problem

How can I keep my family properly nourished with home-grown foods?

C. Job Analysis:

- 1. Needs of an individual (National Nutrition Council) See Appendix II c.

D. Group Experience:

- 1. General discussion of practices in producing for home needs.

II. Presentation:

- 1. Development of new material
 - a. Put on board decisions to be made and information re: food needs.
- 2. Discussion of food values and supplies.
(Appendix II c)

III. Application

Introduce the method of finding family food budget to be used in a later lesson.

APPENDIX II c"FOOD IS STRENGTH"

<u>Decisions</u>	<u>Information</u>
1. What are the daily needs of an individual?	<p>According to the National Nutrition Council, an individual needs:</p> <ol style="list-style-type: none"> 1. Green or yellow vegetables <ol style="list-style-type: none"> a - 2 servings a day b - for vitamins A, B, C, minerals, roughage c - value: (1) increased resistance to disease (2) increased health of skin, teeth, eyes (3) increased appetite, steady nerves, energy 2. Oranges, grapefruit, tomatoes, raw cabbage, or salad greens <ol style="list-style-type: none"> a - 1 serving each day b - for vitamin C, or other vitamins, minerals c - value: (1) fewer colds, other infections (2) good muscle tone (3) prevents ulcers, certain types of arthritis, tiredness, joint pains, bleeding. 3. Potatoes, other vegetables, fruits <ol style="list-style-type: none"> a - 1 potato, 1 of others b - for vitamins, minerals, roughage c - value: (1) for energy (2) prevents constipation 4. Milk and milk products <ol style="list-style-type: none"> a - pint for adults - quart for children b - for calcium, vitamin A, B vitamins, phosphorus, protein c - value: (1) good teeth, bones (2) normal muscles, nerve, gland functions (3) fewer colds, skin troubles, less tiredness. 5. Meat, fish, poultry, and eggs <ol style="list-style-type: none"> a - 2 servings b - for protein, iron, phosphorus, B vitamins iodine (fish), in eggs and liver, vitamins A & B c - value (1) necessary to growth (2) makes possible strong bones and teeth (3) prevents many skin diseases and eye cataract 6. Whole grain cereal, flour, bread <ol style="list-style-type: none"> a - 2 times a day at least b - for starch, minerals, B vitamins c - value: (1) steady nerves, good appetite, digestion, energy, heart functions 7. Butter or fortified margarine <ol style="list-style-type: none"> a - 2 or 3 times a day b - for Vitamin A, minerals c - value: (1) energy, warmth (2) protection from colds, skin troubles, night-blindness, kidney stones, low vitality

FAMILY FOOD BUDGET

Date:	Name:	Address:			No. in Family
Yearly needs of individual, by groups	Individual needs, vegetables preferred	Annual family needs	No. feet of row space	Plants, seed, etc., needed 1944	Amount used in 1943 according to interview
GROUP I (green & yellow veg.)					
Beans, green	lbs.	lbs.			
Greens					
Peppers					
165 lbs. Sweet potatoes					
Squash					
Carrots					
Cabbage (cooked)					
GROUP II (esp. for Vit.C)					
3 bu. Tomatoes	bu.	bu.			
3 bu. Raw cabbage					
Lettuce					
GROUP III. Other veg. & fruit					
Butter beans	lbs.	lbs.			
Onions					
Beets					
50 lbs. Turnips					
Corn					
Berries					
2 or 3 bu. Potatoes	bu.	bu.			
2 bu. Apples					
GROUP IV					
45 gal. milk (adults)	gal.	gal.			
90 gal. milk (children)					
GROUP V					
Pork	lbs.	lbs.			
Poultry meat					
125 lbs. Beef					
Fish					
Cooking fat					
30 doz. Eggs	doz.	doz.			
10 to 20 lbs. dried beans, corn or peanuts					
GROUP VI					
120 lbs. Wholegrain cereal, flour, bread	lbs.	lbs.			
GROUP VII					
Butter, 26 lbs.	lbs.	lbs.			