

*An Institutional Survey of*  
**The Use of Turkey Products in Missouri**



L. A. Voss  
W. D. Russell

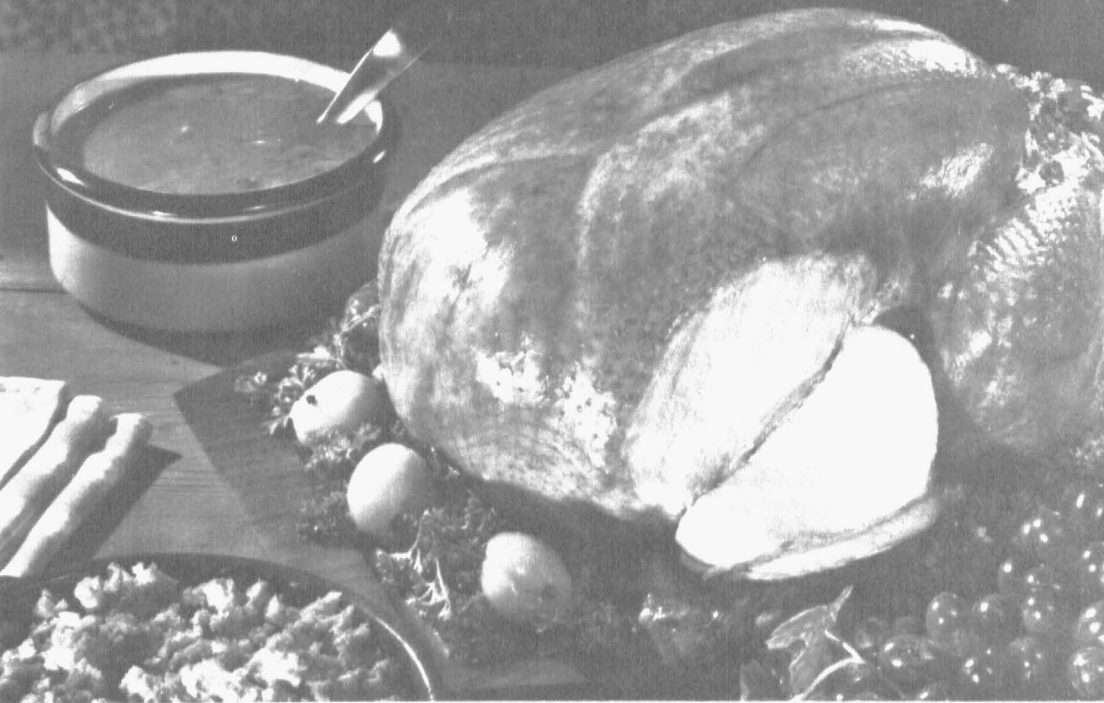
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## **Acknowledgement**

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It is our hope that the knowledge gained through this study will aid the turkey industry in finding new and better ways of serving the market. Your comments and suggestions for future studies will be greatly appreciated.



## *An Institutional Survey of* **The Use of Turkey Products in Missouri**

**L. A. Voss and W. D. Russell\***

### **Introduction**

We have known for many years that mass feeding institutions with captive feeding audiences such as colleges, hospitals, and nursing homes represent a major market for turkey meat.\*\* But, the specifics of this market have not been clearly described. This is particularly true in reference to the use of the newer turkey products, frequency of serving, availability of products, attitude toward turkey products, and future needs.

It was felt that much could be gained by interviewing the key individuals in these institutions who have the responsibility of planning the menu and making the decisions on whether or not turkey is served and how often. Their evaluation of problems in securing and serving turkey products could be helpful to the turkey industry.

With these objectives in mind, the authors began a survey with the help of Area Extension Specialists in the state.

\*W.D. Russell, State Poultry Extension Specialist  
L. A. Voss, Extension Economist, Poultry Marketing

\*\*Captive feeding audiences have little or no choices at meals. The same menu is used for all at the institution.

## Procedure

A complete list of colleges, hospitals, and nursing homes with mass feeding facilities was obtained from state agencies. A total of 654 institutions included 53 colleges, 192 hospitals, and 409 nursing homes. Nursing homes of under 30 beds (119 in number) were eliminated from the sample list since smaller homes usually do not operate the same way larger homes do when obtaining food and food service. The list was categorized by the number of people served and location in the state. From this a total sample of 10 colleges, 35 hospitals, and 60 nursing homes were randomly selected. Of this number (105), six institutions were eliminated because of lack of cooperation or for other reasons, leaving a total of 99 institutions from which survey schedules were obtained. The institutions visited can therefore be considered representative of all institutions of this type within the state. The visits were made from April to July, 1971.

The questionnaire used in the survey was first reviewed by the president of the Missouri Turkey Industries Association, two processors, and a professional home economist. It was then pretested in four institutions and modified before being used in the survey. The completed questionnaire contained 51 items.

In each case an effort was made to interview the one person in the institution who plans the menu and makes the serving decisions. In some instances, a person in very close touch with the operation of the food service was selected for the interview. A wide range in knowledge and training of the respondent was noted. As expected, they ranged all the way from chief cook, to owner of the institution, to the professional dietitian. Later in the report this is reflected by how their ideas varied in regard to future use of turkey.

## Study Results

### Acceptance of Turkey

One of the most interesting and encouraging notes to come out of this study was — people like turkey. They especially like the taste and flavor of whole roasted turkey. To the question, "How well is roast turkey received by your clients?," 87% of them said *good*; 13% said *fair*. Not a single person rated it *poor*.

Time and again they told us in interviews, "Turkey is one meat I can serve with confidence." It is readily accepted by people of all ages. Old or sick people can eat it without fear of stomach disorders. Weight-watchers accept it because it is recognized as being low in calories and high in protein. College students like it. A dietitian at a fashionable girls school told us, "A good measure of how well a particular food is accepted is to watch the plates as they are returned to the kitchen. Our girls clean up the turkey. We always plan to cook more turkey than the girls can eat at any one meal because they like the gravy and leftovers."

There was little relationship between size of institution and the frequency of serving (Table 1). However, this varied with the type of institution; the smaller nursing homes served turkey less frequently than the others.

## Frequency of Serving Turkey

**Table 1. Distribution of Institutions by Size and Frequency of Serving**

Number of People Served	Percent of Institutions Surveyed	Times Served Per Year
*28-49	21	37
50-99	22	57
100-199	28	25
200-299	8	61
300-399	2	27
400 +	18	43

\*The lowest number served was 28. The number served includes the employees who eat at the institution.

**Table 2. Type of Institution Surveyed, Number Served and Frequency of Serving**

Type	Institutions	Avg. Number People Served	Frequency of Serving-Times/Year	
	Number		Average	Range
Colleges	10	763	24	H.O.* - 73
Hospitals	35	206	48	H.O. - 156
Nursing Homes	54	92	17	H.O. - 52
All institutions	99	200	35	

\*H.O. = Holidays Only

The frequency of serving turkey was highly variable among all types of institutions. The range was from twice a year (holidays) to 3 times a week. Hospitals averaged highest with 48 servings per year, colleges with 24, and nursing homes with 17. One factor that tended to cause nursing homes to rate so low was that many of these institutions still cling to using only the whole bird and they view turkey as being a holiday treat. All institutions served turkey at Thanksgiving and/or Christmas (Table 2).

By taking the ounces allowed per serving times the frequency of serving, the ready-to-cook per capita consumption was computed. In 1970 the national consumption was estimated at 8.1 pounds per capita.

For the survey, people in hospitals averaged 21.1 lbs.; colleges 11.6 lbs., and nursing homes, 6.5 lbs. per capita. The highest per capita consumption was a hospital at 58.5 lbs. per person.

**Table 3. Frequency of Serving Whole Turkey Only vs Serving Whole Birds Plus Other Turkey Products**

Type of Institution	Average No. Servings/Year	
	Whole Birds Only	Whole Birds Plus Other Turkey Products
	Colleges	12
Hospitals	40	50
Nursing Homes	17	18
Avg. All Institutions	23	32

Institutions that use turkey rolls or other turkey products in addition to the whole bird tended to use turkey more often during the year (Table 3).

The amount of cooked meat reported per serving in nursing homes ranged from 1.7 to 10 ounces, while servings in hospitals ranged from 2 to 4.5 ounces; and colleges, 2.75 to 7 ounces. The size of servings most frequently reported was 3 ounces of cooked meat.

**Table 4. Frequency of Serving and Percentage of Institutions**

Frequency of Serving	Percentage of Institutions Reporting			
	Avg. all institutions	Colleges	Hospitals	Nursing Homes
Holidays only	12	10	6	24
4-9 times/year	14	20	3	20
10-19 times/year	21	10	23	28
20-39 times/year	18	40	17	13
40 or more times/year	25	20	51	15

The variability in consumption among institutions shown in Table 4 points to one conclusion. There is still a tremendous opportunity for the industry to sell more turkey. The greatest opportunity lies in getting more processed turkey products into nursing homes and other institutions now using only the whole bird. But, in addition, there is also an opportunity of raising the over-all consumption level as illustrated by the estimated 21.1 lbs. now being consumed in hospitals. The fact that 83% of the hospitals are now using some form of processed turkey products should indicate the direction which the industry must move to meet this goal. Only 28% of the nursing homes are using processed turkey products and their per capita consumption is estimated at 6.5 lbs.

**Table 5. What Determines Frequency of Serving Turkey**

Factor	Percentage of Institutions Reporting
Provide variety to meals	32
Desires of clients	27
Economy	26
Convenience	12
Other	3

The old adage variety is the spice of life holds true for institutional meal planning (Table 5). Most of the larger institutions cycle their menus in order to provide variety and reduce cost. A number of them have computerized menus. While few institutions reported having a strict cost allowance per meat serving, it was quite evident that the cost of the product was a serious consideration.

## Products Served

Table 6. Kind of Products Served During Past Year

Kind	Percentage of Institutions Reporting			
	Average-All Institutions	Colleges	Hospitals	Nursing Homes
Whole birds	80	80	57	94
Rolls	43	50	71	24
Parts	19	60	31	4
Diced turkey meat	5	30	6	--

Although the whole bird is still used by the majority of institutions, there is evidence that its use is decreasing in relation to other turkey products, especially the larger institutions (Tables 6 and 7). Several respondents told us that since changing to rolls or breasts they now use the roasted whole bird for table decoration only during the holiday season. Turkey parts used consists primarily of turkey breasts. Only a few institutions reported experiences with thighs, wings or other parts. A number of fine comments were received on diced turkey meat. They think it is great for casseroles, salads, and other speciality dishes. This product should be more available and vigorously promoted, because once institutions begin to use it they seem to like it.

Table 7. Institutions Using Whole Birds Only

Type and size of institution	Percentage Institutions Reporting
Colleges	20
Hospitals	
50-99 beds	29
100 or more beds	14
Nursing Homes	
30-49 beds	99
50-99 beds	71
100 or more beds	61

The majority of institutions purchased whole birds weighing between 20 to 26 pounds. They felt this was the most convenient and economical size for their use. Some reported they had experimented with various sizes and had concluded that birds this weight range also gave the best meat yield.

Only a few respondents admitted buying below Grade A birds. The general expression was, "we want only the best for our clients". Less than half of the institutions, however, had tried the more expensive premium turkeys. In most cases the reaction was that they were not worth the added cost. As mentioned before, most respondents were very cost conscious.

The major problem in preparing and serving roasted whole birds was the labor required in doing it. They said it not only took a lot of time to carve a turkey, but the kind of help they were able to hire now in the kitchen was not

skilled enough for this job. Other problems mentioned were lack of oven space for roasting whole birds and difficulty in proportioning.

Only 25% of the respondents reported using a meat thermometer in determining doneness and few of them knew the exact temperature to which the turkey was cooked. A wide range of external temperatures was reported for cooking turkeys, which emphasizes the need for greater educational efforts along this line. The highest temperature reported was 450° F, the lowest 250° F. The median was 325° F.

Many good comments were received on roast turkey. They liked the taste and flavor, thought it was tender and easy to eat. Turkey dressing was good. It added variety to meals. Few complaints were received. Five respondents said it was too dry. Four reported their clients grew tired of it when served too often. Only one reported clients objecting to the flavor.

**Table 8. Where Whole Birds Were Purchased**

Source	Percentage of Institutions Reporting		
	Colleges	Hospitals	Nursing Homes
Food Wholesaler	70	71	60
Retail Stores	--	9	32
Large Processor-Distributor	30	17	2
Other*	--	3	6

\*Mainly from producers or production sources.

Only smaller institutions purchased turkey at the retail store. Most other institutions reported turkey and turkey products as being readily available in the volume and quality needed.

The source of turkeys and turkey products is related to the size of institutions being served. Representatives of large processing firms tend to serve only the large institutions. The smaller institutions, especially those in small towns, tend to secure their whole birds through local retail stores. The remainder of the institutions were supplied by wholesale food service companies who sell and deliver a wide variety of food items.

### **Use of Turkey Rolls**

**Table 9. Institutions Using Turkey Rolls Only**

Type and size of institution	Percentage of Institutions Reporting
Colleges	10
Hospitals	
50-99 beds	29
100 or more beds	22
Nursing Homes	
30-49 beds	--
50-99 beds	18
100 or more beds	6



Turkey rolls did not receive the same general acceptance rating as whole roasted birds. Part of this was due to the fact that some institutions had tried rolls in the past and apparently had poor experiences with them. But, this was not the whole problem. Even those continuing to use rolls had disparaging remarks to say about them. The latter group apparently felt that their advantages tended to outweigh their disadvantages.

When asked, "How well are turkey rolls received by your clients?", 66% said *good*; 25% said *fair* and 9% said *poor*. The major complaints were that rolls did not have the flavor and attractiveness of the whole bird. Some considered the roll as an entirely different type of product as a result of the difference in flavor and moisture. Other complaints included too much gelatin, meat separates, dries out easily. Only two people complained about the price being too high.

The outstanding advantage listed for the roll was convenience in preparing and serving. Next, in order, was better portion control and less waste. Four respondents thought the roll was more attractive on the plate than the roast turkey when served.

Surprisingly, most of the rolls were purchased already precooked. The reason seemed to be that this was the most readily available and often the only type of roll available. But, we got the feeling that many people would prefer raw rolls if they were available. They tended to believe the method of cooking by the further processor destroyed much of the turkey flavor. They thought they might be able to retain the roasted whole bird flavor if cooked in the institutional kitchen.

Rolls containing 60% white and 40% dark meat were most popular. When asked how the cost per serving of rolls compared to the whole bird, 47% said *same*; 38% said *lower* and 15% said *higher*. In making this judgment they usually qualified the statement by saying they were figuring all costs including differences in labor, waste, and other costs.

We got the impression that the quality of turkey rolls had improved in recent years, but there still remained much to be done to overcome some of the objections expressed. The job of selling some institutions to try rolls again will be difficult due to their previous bad experiences.

We also concluded, from the comments made by respondents, that the move from serving whole birds to turkey rolls was an administrative decision rather than a result of demand by their clients. The decision to use rolls was made primarily because of their convenience and better portion control. Administrators recognize that turkey rolls do not have the same taste or flavor as the roasted whole bird. Possibly this should not be considered a criticism. Turkey rolls are a different product from the whole bird and should be expected to have a different taste.

The higher sodium content of turkey rolls was cited as a problem by some hospital respondents. To handle this problem, hospitals use whole turkey or substitute other meat for those on special diets.

## **Use of Turkey Parts**

Except for turkey breasts, institutions have made little or no use of turkey parts. Whether it is an availability problem, lack of recipes or other problems it was difficult to determine; probably the former. There were only 19 institutions of the 99 surveyed who used turkey parts and of these 18 used only turkey breast which can also be classified as a white meat turkey roll.

Those who had used the turkey breasts were pleased with them, although most of them thought the cost was higher than other forms of turkey meat.

When asked how their clients rated turkey breasts, 95% said good; and 5% said fair. The usual advantages and disadvantages expressed about the turkey roll was repeated on the turkey breast. More people, however, spoke favorably about the flavor of the turkey breast. Again, it would appear that the raw breast might be more acceptable than the cooked breast.

## Turkey Products in the Future

We asked this question, "What turkey products do you feel you will be using most five years from now?" The first reaction to the question seemed to come out - "About the same as now." However, as the conversation progressed, there was a tendency for the respondents to consider the influence of labor costs and other factors until there was somewhat of a shift in opinion. Professionally trained people (dietitians) tended to have different opinions than other respondents, probably because of the type of professional literature available to them.

For example, 42% of the people interviewed said they would still be using the whole bird. Only 26% of the professional people believed this. Some 39% of those interviewed thought they would be using more further processed products. This compares to 48% for the professional people.

Most professional people thought they would be using more frozen prepared products, but they were quick to point out that they did not necessarily mean "thaw and serve" type dinners. Almost all respondents felt there would always be a need for a kitchen in institutions and for people who could cook. They did not see any significant shift to prepared frozen meals or portion control dishes.

Also, there was little to no indication that meat substitutes would be of any significance in the near future. Turkey flavor and texture, they felt, would be difficult to duplicate.

As to how often turkey would be served in the future, 65% said *same*, 33% said *more often*, and only 2% said *less often*. We asked them why they felt this way. Some 38% reported the frequency of serving depended upon the price of turkey, 28% said people tire of it if served too often, 25% said we need variety in our meals so there will always be a place on the menu cycle for turkey.

In closing the interviews we presented the respondents with a copy of a turkey recipe booklet prepared by the National Turkey Federation. They were very happy to receive this type of material and in most cases they were also interested in receiving a copy of this study. In our interviews we discovered that there are apparently very few people in the field actively promoting the use of turkey in institutions.

There is definitely a need for frequent contacts with these people to keep them informed on turkey products available and to supply them with new and improved recipes adapted to institutional use. If this is done, we are confident this important segment of the turkey market will be demanding more turkey in the future.



## Summary

### Including Market Implications for the Turkey Industry

1. Turkey rates high as an acceptable food in mass feeding institutions such as colleges, hospitals, and nursing homes. It is considered by dietitians to be an excellent meat for the sick or elderly patient. To the turkey industry, this means you have a product with good demand—a product that will sell.
2. The wide range in frequency of serving turkey in the institutions surveyed indicates there is an opportunity for further increases in consumption. In terms of per capita consumption the level could possibly be double or even triple the present national rate of 8.1 pounds before reaching the point where clients tend to tire of it. The greatest opportunity for increased sales appears to be among the smaller nursing homes and other institutions where only the whole bird is presently being served. Such institutions tend to view turkey as a holiday treat.
3. Few institutions reported using a meat thermometer in determining doneness. A wide range in temperatures was used in cooking turkey; emphasizing the need for greater educational efforts along this line. If turkey is cooked properly, such complaints as dryness, crumbliness, etc. would probably be overcome.
4. Institutions that use turkey rolls or other turkey products in addition to whole birds tend to use turkey more often during the year. The turkey industry should promote greater use of these convenience products.
5. Although turkey rolls did not receive the same general acceptance rating as the whole roasted bird, this should not be considered a deterrent to their continued use. Cooked turkey rolls have a different taste and flavor and should be promoted as such. Their outstanding attributes for institutional use are convenience and better portion control.

6. Institutions would use more raw turkey rolls if they were available. Cooking the raw roll is no problem in institutional kitchens and many feel they could improve the flavor over the commercially cooked roll if they cook them themselves.
7. Except for turkey breasts, institutions have not made the most use of turkey parts. If they were made available, it would appear that more parts would be used without any reduction in the use of the whole turkey. Turkey breast meat is well liked and frequently used, although it does cost more per serving than other turkey products.
8. Diced turkey meat is a very acceptable product for casseroles, salads, and other speciality dishes. It would be more widely used if promoted and made available to all institutions through food outlets.
9. Because of the difficulty in obtaining quality labor and costs of services, institutions in the future will continue to use fewer whole turkey and more further processed turkey products. Any product, in order to be acceptable, must meet the following criteria: (a) nutritionally wholesome and liked by the clients, (b) economical in price per serving and (c) convenient to serve, with little waste and easy to proportion.

At this time there does not appear to be any significant shift to prepared frozen meals or turkey meat substitutes for institutional uses.
10. There is a definite need for more turkey industry contacts with institutions to keep them informed on turkey products available and to supply them with new and improved recipes.

# Appendix

Exhibit 1. Size of Whole Birds Purchased

Size	Percentage of Institutions Reporting
Hens 8-16 lbs.	7
Toms 14-20 lbs.	18
20-22 "	22
22-24 "	28
24-26 "	19
26 and over	6

Exhibit 2. Reason for Buying Size of Bird

Reason	Institutions Reporting	
	Number	Percentage
Most convenient size	32	38
Most economical	22	26
Better meat yield	20	25
More tender	7	8
Provides leftovers	1	1
Other	2	2

Exhibit 3. Reasons for Buying Grade of Whole Turkey

Reason	Percentage of Institutions Reporting
Want best for client	57
Most economical	15
A purchase requirement	15
Most often available	10
Other	3

Exhibit 4. Major Problems in Preparing & Serving Roasted Whole Birds

Problem	Institutions Reporting	
	Number	Percentage
Labor required for carving and roasting	27	57
Lack of oven space	10	21
Difficult to proportion	5	11
Other	5	11

Exhibit 5. What Clients Like About Roast Turkey

Likes	Institutions Reporting	
	Number	Percentage
Turkey flavor or taste	24	45
Variety it provides	11	21
Tender - easy to eat	9	17
Turkey dressing	8	15
Other	1	2

Exhibit 6. What Clients Dislike About Roast Turkey

Dislikes	Institutions Reporting	
	Number	Percentage
Too dry	5	50
Tire of it if served too often	4	40
Turkey flavor or taste	1	10

Exhibit 7. How Rolls are Purchased

Type of Rolls	Percentage Institutions Reporting
Precooked	86
Raw	14

Exhibit 8. Kind of Meat in Rolls

Kind	Percentage of Institutions Reporting
Both white and dark meat	85
Breast or white meat only	13
Dark meat only	2

Exhibit 9. Major Problems in Preparing & Serving Turkey Rolls

Problems	Institutions Reporting	
	Number	Percentage
Dries out easily	4	31
Meat separates	4	31
Other	5	38

Exhibit 10. Advantages of Rolls Over Whole Birds

Advantages	Percentage of Institutions Reporting
More convenient to prepare and serve	51
Better portion control	19
Less waste	15
More attractive	7
Saves oven space	7
Other	1

Exhibit 11. Disadvantages of Rolls Over Whole Bird

Disadvantages	Percentage of Institutions Reporting
Lacks flavor	39
Lacks attractiveness	14
Poor consumer acceptance	11
Price too high	7
Other	29

Exhibit 12. Rating of Turkey Meat by Clients

Kind	Percentage of Institutions Reporting		
	Good	Fair	Poor
Whole birds	87	13	--
Rolls	66	25	9
Parts	95	5	--

Exhibit 13. What Clients Like About Turkey Rolls and Parts\*

Likes	Percentage of Institutions Reporting	
	Rolls	Parts
Flavor	40	80
Variety	10	--
Other	50	20

\*Turkey parts consisted primarily of turkey breasts

Exhibit 14. What Clients Dislike About Turkey Rolls and Parts

Dislikes	Percentage of Institutions Reporting	
	Rolls	Parts
Lack Flavor	47	--
Not similar to roast turkey	33	--
Too much gelatin	20	--

Exhibit 15. How Cost of Serving Compares to Whole Bird

Item	Percentage of Institutions Reporting	
	Rolls	Parts*
Same	47	39
Higher	15	39
Lower	39	22

\*Turkey parts consisted primarily of turkey breast meat

Exhibit 16. Major Problems Reported in Serving Turkey Parts\*

Problems	Institutions Reporting	
	Number	Percentage
Crumbles when carved	3	60
Tends to overcook	1	20
Tends to be dry	1	20

\*Turkey parts consisted primarily of turkey breasts

Exhibit 17. Advantages of Using Turkey Parts Over Whole Birds

Advantages	Percentage of Institutions Reporting	
	Number	Percentage
Easier to prepare and serve	44	
Less labor required	22	
People like white meat	14	
More turkey flavor	6	
Other	14	



Exhibit 18. What Products Will the Institutions Be Using 5 Years  
From Now

Products	Percentage of Institutions Reporting	
	All Respondents	Professional Respondents
Whole birds	42	26
More processed products	39	48
More frozen prepared dishes	18	23
More meat substitutes	1	3

Exhibit 19. How Frequent Will Turkey Be Served In the Future

Item	Percentage of Institutions Reporting
More often	33
Less often	2
Same	65

Exhibit 20. Reasons for Reply to Exhibit 19

Reasons	Percentage of Institutions Reporting
Depends upon price of product	34
People tire of it if served too often	28
Add variety to meals	22
Place for turkey on menu cycle	3
Other	13