

Availability of Materials and Finishes Used in Kitchen Gadgets in Rural and Urban Markets of Ludhiana

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ABSTRACT Due to the dual responsibility of the homemakers, there is a great pressure for productivity enhancement and quality work. It was felt important to know the kitchen gadgets of different materials and finishes that are available in the market. A study was planned to find the different materials and finishes that are used for the kitchen gadgets, are available in the market. It was observed that rural and urban shops had good stock of aluminium, hindalium and stainless steel gadgets. Only 3 rural shopkeepers kept glass, food-grade plastics and chinaware items that too especially made available during festival season. In urban area thirteen shopkeepers were selling non-food grade plastic and chinaware items throughout the year. It was further found that kitchen gadgets of fourteen finishes were sold in the rural and urban markets. None of the rural shops was found having high and satin polish or porcelain enamel finished products.

INTRODUCTION

With the improvement in the surroundings of human beings and with their entering into a more civilized era, and with the passage of time, their changed eating habits, way of cooking and way of living had taken a new turn for the betterment. Initially, pots of stone and clay were used for cooking. But with gradual development of civilization and discovery of metals, the utility of metal in the kitchen was quickly realized and gradually metallic utensils found an important place in the life of human beings. Man, by nature is never satisfied with anything and is always in search of better and more prosperous living. Though, the basic shapes of kitchen wares have not changed through the ages, yet the use of metals in different forms and alloys has made the selection complex for the homemakers. A sound knowledge of base materials and finishes is the consumer's best ally when shopping for household gadgets (Oberoi and Dhablania 1994). To a great extent, the choice of material and finish not only determines the effectiveness and potential lifespan of appliances, tools and utensils but also dictates its necessary care and maintenance. However, there is no perfect material or finish that suits all needs.

With the sound knowledge of base materials and finishes homemakers as a consumer can make the selection of household gadgets more

wisely (Seth 1997). To a great extent, the choice of material and finish not only determines the effectiveness and potential lifespan of appliances, tools and utensils but also dictates its necessary care and maintenance. However, there is no perfect material or finish that suits all needs. The homemaker is always interested in the properties of the materials from which her kitchen appliances and utensils are made. The knowledge enables her to select with confidence the best material for a given task and to care for it successfully.

Most of the homemakers are not aware of kitchen gadgets of different metals/materials, available in the market. They may be lured by the attractive appearance or price of utensils available in the market. It was felt important to improve the general awareness of the end users regarding the different materials and finishes used for cooking vessels used in any Indian kitchens. Hence, the choice of suitable utensils of right metal and appropriate size and finish has become complex subject for the homemakers. Therefore, the study was conducted with the objective to explore the availability of various materials and finishes used in kitchen gadgets in the rural and urban markets of Ludhiana district so as to improve the productivity and profitability and to decrease the problems faced by the homemakers while performing various activities in the kitchen.

METHODOLOGY

For conducting the survey, two markets of Ludhiana district were purposely selected as good number of shops, selling kitchen gadgets, were found in these markets. From these selected markets a list of all the shops selling kitchen gadgets of different materials and finishes was prepared. From urban area 15 shops were randomly selected for the study and from rural area 5 shops were randomly selected as number of shops was less in rural areas due to the small population. An interview schedule was structured that included general information of shop owners, information regarding availability, frequency of sale, different materials and finishes of kitchen gadgets they possessed in their shops. The interview schedule was pretested in a non sampled area on 5 shopkeepers. The relevant changes and suggestions were incorporated accordingly. The data were collected through personal interview method using a structured schedule. The respondents were explained about the importance of the study and its objectives. After ensuring them of the confidentiality of the information given by them, they agreed to provide reliable information. It was done to minimize the biasness and to get maximum accuracy in data collection from the shop-owners.

RESULTS

Availability of Gadgets of Different Base Materials

Information regarding the availability of kitchen gadgets of different base material was

gathered from the shopkeepers who were selling kitchen gadgets. Information was taken from shops of rural area as well as shops located in the urban areas. Table 1 displays that in rural areas all the shops had aluminum, hindalium, stainless steel kitchen gadgets well stocked in their shops. Very little number of rural area 3 shopkeepers reported that glass, food grade plastics and chinaware items were especially made available during festival season because during this time demand was always high. Customers buy these items for their personal use as well as for giving gifts to their friends and relatives. Table 1 also shows that there were 4 rural shops that sell only those items which were in regular demand. Bhutani et al. (2007) also reported that homemakers preferred to buy aluminium followed by hindalium cookwares for routine cooking because cooking in these metals helps in saving fuel and overall performance is also better as compared to other metals.

Table 1 further highlights that all the selected urban shops keep the aluminum, hindalium, stainless steel kitchenware in their shops. Non-food grade plastic and chinaware items were the next all time available items as reported by 13 shopkeepers. It also demonstrates that few shopkeepers of urban area had never kept iron (7), brass (9), surgical steel (6), bronze (8), zinc (9), non-food grade plastic (2) and earthen ware (12) kitchen gadgets in their shops out of 15 selected shopkeepers. Main reason given by respondents was that these materials were in less demand and they don't want to block their money. There were 3 urban shopkeepers who preferred to keep glass items during festival time because of the increased demand of such items.

Table 1: Availability of gadgets of different base materials

<i>Base materials</i>	<i>Regularly available</i>		<i>During festival</i>		<i>Not available</i>	
	<i>Rural (5)</i>	<i>Urban(10)</i>	<i>Rural (5)</i>	<i>Urban(10)</i>	<i>Rural (5)</i>	<i>Urban(10)</i>
Iron	4	8	-	-	-	7
Brass	4	6	-	-	-	9
Aluminium	5	15	-	-	-	-
Hindalium	5	15	-	-	-	-
Stainless steel	5	15	-	-	-	-
Surgical steel	1	9	-	-	7	6
Bronze	3	7	-	-	2	8
Zinc	2	6	-	-	3	9
Glass	3	12	2	3	-	-
Food grade plastic	3	15	1	-	1	-
Non-food grade plastic	1	13	-	-	4	2
Earthen	4	3	-	-	1	12
Chinaware	3	13	1	2	1	-

Availability of Gadgets of Different Finishes

As per the information given in the Table 2, there were fourteen finishes of which kitchen gadgets were sold in the rural and urban markets. The finishes were hammered, high and satin polish, copper and aluminum bottom gadgets, porcelain and synthetic enamel items etc. None of the rural shops was found of having high and satin polish or porcelain enamel finished products. Copper and aluminum bottom utensils were available in all the shops followed by 4 shops where non-stick finish gadgets were also found. Shopkeepers also reported that during celebration and festival time, due to the demand of fancy items for gifting purpose silver and gold finished items, or very catchy items of non-stick finish and high polish finish were made available for sale. Similar responses were given by

the urban shopkeepers, who reported that they were keeping copper and aluminum bottom gadgets along with the non-stick finishes. Gold plated and silver plated items were made available in the festival season only due to the demand by the customers.

These findings are in line with the results reported by Kaushik and Bala (2010).

Selling Frequency of Kitchen Gadgets of Different Base Materials

Data was also collected from the rural and urban shopkeepers about the selling frequency of cooking, storing and serving item of different materials. Table 3 highlights that kitchen gadgets of aluminum, hindalium, stainless steel were the most saleable materials in the rural market. Similarly all urban respondents also revealed that

Table 2: Availability of gadgets of different finishes

Finishing materials	Regularly available		During festival		Not available	
	Rural (5)	Urban(10)	Rural (5)	Urban(10)	Rural (5)	Urban(10)
Hammered	2	8	1	-	3	7
High polish	-	9	-	-	4	6
Satin polish	-	11	-	-	5	4
Copper bottom	5	15	-	-	-	-
Aluminium bottom	5	15	-	-	-	-
Chrome plated	1	12	-	-	4	3
Tin plated	3	11	-	-	2	4
Silver plated	3	13	2	2	-	9
Gold plated	1	11	2	2	2	2
Porcelain enamel	-	5	-	-	5	10
Synthetic enamel	1	8	-	-	3	7
Non-stick	4	15	1	-	-	-
Painted	3	13	-	2	2	-
Polished	2	9	-	2	3	4

Table 3: Selling frequency of kitchen gadgets of different base materials

Base materials	Saleable in routine		Saleable during festival		Less saleable	
	Rural (5)	Urban(10)	Rural (5)	Urban(10)	Rural (5)	Urban(10)
Iron	-	2	-	-	4	6
Brass	-	1	-	-	3	5
Aluminium	5	15	-	4	-	-
Hindalium	5	15	-	6	-	-
Stainless steel	5	15	-	9	-	-
Surgical steel	-	-	1	5	-	4
Bronze	-	-	-	-	3	7
Zinc	-	-	-	-	2	6
Glass	2	11	3	4	-	-
Food grade plastic	3	15	2	3	-	-
Non-food grade plastic	1	13	-	-	-	-
Earthen	-	-	1	-	3	3
Chinaware	-	9	3	5	-	-

other than above mentioned materials even gadgets of food grade plastic was equally saleable material by the shopkeepers.

Thirteen shopkeepers considered that non food grade plastic was also saleable material even in common days and it was followed by 11 shopkeepers who replied that glass was the most preferred and saleable material in urban area. Urban shopkeepers also reported that iron, brass, surgical steel, bronze, zinc and earthenware were the least saleable materials in the urban market. It can be concluded that customers preferred to buy the latest kitchenware which is in fashion, attractive and is useful to the worker. Customers also preferred the material for their gadgets that is easy to maintain.

Selling Frequency of Kitchen Gadgets of Different Finishes

Table 4 shows that copper and aluminum bottom as well as non-stick finished items were regularly in demand in rural and urban shops. Shopkeepers from rural area recorded that some of the finishes were less saleable such as hammered, high and satin finish, chrome plated or of porcelain enameled gadgets. On the contrary high polish and porcelain were in less demand so their sale was also less as reported by 5 and 10 shopkeepers of rural and urban markets respectively.

The reasons given by the shopkeepers for the fewer sales of items of these finishes were that all these finishes demand extra care and maintenance for the proper upkeep. Most of the homemakers are working women and they had less time to take care of all these items and they were supposed to complete all the household

chores in time so they prefer those kitchen gadgets which were easy to maintain and use, and with good durability. Seth (1997) also reported that the urban consumers looked durability, appearance of kitchen appliances and utensils before buying from the market along with its standard mark, brand and quality.

Reasons for Stocking Cooking Utensils of Different Base Materials

Different reasons given by the shopkeepers for stocking utensils of different base materials were: easy procurement, availability of guarantee, reasonable prices, easy to use and maintain, trendy material, attractive and popular. Table 5 shows that all shopkeepers were keeping the utensils of that particular material which attracted their customers, and was demanded by majority of the customers. Less number of pieces was found kept in the shops of the cooking utensils of materials which were not in much demand. Mostly utensils of aluminum, hindalium, stainless steel, glass and food grade plastic utensils were made available in the shops. Cooking utensils of bronze, zinc, and earthenware were kept by less number of shopkeepers; reason being that guarantee was not available and use and maintenance of these materials was not easy as compared to other materials.

Reason for Having Cooking Utensils of Different Finishes

Cooking utensils of variety of finishes were available in the market as reflected in the Table 6. These finishes were hammered, satin finish,

Table 4: Selling frequency of kitchen gadgets of different finishes

Finishing materials	Saleable in routine		Saleable during festival		Less saleable	
	Rural (5)	Urban(10)	Rural (5)	Urban(10)	Rural (5)	Urban(10)
Hammered	-	2	-	-	2	15
High polish	-	1	-	9	4	6
Satin polish	-	15	-	4	5	-
Copper bottom	5	15	-	6	-	-
Aluminium bottom	5	15	-	9	-	-
Chrome plated	-	-	-	5	5	4
Tin plated	-	-	-	-	3	-
Silver plated	-	-	3	-	2	6
Gold plated	-	11	2	4	3	-
Porcelain enamel	-	-	-	5	5	10
Synthetic enamel	-	-	1	-	4	7
Non-stick	4	15	1	8	-	-
Painted	-	11	2	6	3	-
Polished	-	4	2	7	3	-

Table 5: Reasons for stocking cooking utensils of different base materials

Base Materials	Easy procurement		Availability of guarantee		Reasonable price		Easy to use and maintain		Trendy		Attractive		Good product		In great demand	
	Rural (5)	Urban (10)	Rural (5)	Urban (10)	Rural (5)	Urban (10)	Rural (5)	Urban (10)	Rural (5)	Urban (10)	Rural (5)	Urban (10)	Rural (5)	Urban (10)	Rural (5)	Urban (10)
Iron	2	8	-	-	-	3	11	-	-	-	-	-	2	10	4	11
Brass	2	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aluminum	5	15	5	15	5	4	15	5	15	-	-	-	5	15	5	15
Hindalium	5	15	5	15	5	4	15	5	15	-	-	-	5	15	5	15
Stainless steel	5	15	5	15	5	4	15	5	15	-	-	-	5	15	5	15
Surgical steel	-	9	3	15	3	15	14	2	15	-	-	-	-	-	-	-
Bronze	2	7	-	-	3	-	-	-	-	-	-	-	-	-	-	-
Zinc	1	6	-	-	3	-	-	-	-	-	-	-	-	-	-	-
Glass	2	15	-	-	2	15	3	15	5	15	4	15	-	-	5	15
Food grade plastic	4	15	3	15	2	15	4	15	5	15	3	15	5	15	5	15
Non-food grade plastic	1	13	-	-	2	15	-	-	-	-	-	-	-	-	-	-
Earthen	3	-	-	-	3	15	-	-	-	-	-	-	-	-	-	-
Chinaware	2	13	-	-	2	15	-	3	15	2	15	2	15	-	-	-

Table 6: Reasons for stocking cooking utensils of different finishing materials

Finishing Materials	Easy procurement		Availability of guarantee		Reasonable price		Easy to use and maintain		Trendy		Attractive		Good product		In great demand	
	Rural (5)	Urban (10)	Rural (5)	Urban (10)	Rural (5)	Urban (10)	Rural (5)	Urban (10)	Rural (5)	Urban (10)	Rural (5)	Urban (10)	Rural (5)	Urban (10)	Rural (5)	Urban (10)
Hammered	1	10	-	-	-	2	11	-	-	-	-	-	-	-	-	-
High polish	-	9	-	9	-	-	-	-	-	-	-	10	-	-	-	-
Satin polish	-	9	-	9	-	-	9	-	-	-	-	-	-	-	-	-
Copper bottom	4	15	5	15	5	5	15	5	15	-	-	-	5	15	5	15
Aluminum bottom	3	13	5	15	5	4	15	-	-	-	-	-	5	15	-	-
Chrome plated	1	11	1	14	-	-	-	-	-	-	-	-	-	-	-	-
Tin plated	2	11	2	14	-	3	14	-	-	-	-	10	-	-	-	-
Silver plated	2	11	3	15	-	2	15	3	15	3	15	3	15	-	-	-
Gold plated	-	10	-	11	-	-	10	-	-	-	1	10	-	-	-	-
Porcelain enamel	1	9	1	10	-	1	10	-	-	-	1	11	-	-	-	-
Synthetic enamel	2	11	1	15	-	1	14	1	11	11	15	-	-	-	-	-
Non-stick	3	15	3	15	5	15	4	15	-	-	-	-	-	-	5	15
Painted	2	15	2	15	-	2	15	-	-	-	-	-	2	15	-	-
Polished	1	9	1	9	-	1	9	-	-	-	2	2	-	-	-	-

copper and aluminum bottom, chrome, tin, silver and gold plated, porcelain and synthetic enamel, non-stick finish etc. Among these finishes, copper and aluminum bottom, and non-stick finish cooking utensils were stocked by all the selected shopkeepers and all of them revealed that easy procurement, guarantee, reasonable price, easy to use and maintain, trendy and popularity were the main factors for procurement of such finishes.

Shopkeepers also revealed that chrome, tin, silver and gold finish was in less demand so few number of shopkeepers had stock of these types of cooking utensils. Other than these, hammered, high and satin finish utensils were also in less demand. Because of this reason, very less number of shopkeepers had any stock of these types of finishes in their shops.

DISCUSSION

In rural areas all the shops had aluminum, hindalium, stainless steel kitchen gadgets well stacked in their shops. Only 3 shopkeepers kept glass, food grade plastics and chinaware items in the stock that too especially made available during festival season. In urban area all 15 shops kept the aluminium, hindalium, stainless steel kitchenware in their shops. Thirteen shopkeepers were selling non-food grade plastic and chinaware items throughout the year. The findings of Mehrotra and Sharma (1987) as well as Kollipara and Brittin (1996) substantiate the findings of the study that stainless steel and porcelain-coated pots were the first choice for the rural and urban consumers due to the easy maintenance of stainless steel kitchen gadgets. Minakshi et al. (1991) reported that aluminum utensils are preferred by the homemakers as the heat conductivity of aluminum pans is highest and fuel consumption was found to be minimum. Whereas Parvathi (1991) was of the opinion that hindalium was the most favoured material by high income group families.

Kitchen gadgets of different finishes were sold in the rural and urban markets. These finishes were hammered, high and satin polish, copper and aluminium bottom gadgets, porcelain and synthetic enamel items etc. Datta (1998) was also in the view that hammered skillets were commonly preferred by rural consumers and non-stick as well as satin polish utensils were the most liked skillets by urban costumers. None of the rural shops was found of having high and

satin polish or porcelain enamel finished products. Copper and aluminium bottom utensils were available in all the selected shops. Urban shopkeepers were selling copper and aluminium bottom gadgets along with the non-stick finishes. Bakhshi et al. (2004) were of the view that stainless steel with copper bottom utensils were the most preferred and liked utensils followed by non-stick finish. Penner (2002) was of the view that though Teflon coated utensils permits cooking without fat but overheated non-stick finish emit toxic fumes. so utensils of such damaged finishes should not be used for cooking and storage. Gold plated and silver plated items were made available in the festival season only due to the demand by the customers.

CONCLUSION

As per the result of the study, it can be concluded that aluminium, hindalium, stainless steel kitchen gadgets were quiet commonly sold by rural and urban shopkeepers. In urban area majority of the shopkeepers were selling non-food grade plastics and chinaware throughout the year. Kitchen gadgets of fourteen finishes were sold in the rural and urban markets. Copper and aluminium bottom utensils were available in all the selected shops. Though urban shopkeepers are selling non-stick finishes throughout the year, yet during festival and wedding season the sale usually increased drastically. Various reasons given by the shopkeepers for stocking utensils of different base materials were: easy procurement, availability of guarantee, reasonable prices, easy to use and maintain, trendy and attractive material.

REFERENCES

- Bakhshi R, Sidhu M, Sohila, Sandhu P 2004. Evaluation of selected skillets for household cooking. *J Dairyng Foods and Home Sci*, 23(2): 147-50.
- Bhutani A, Sidhu M, Gill J 2007. Study on the possession and use of skillets by Ludhiana homemakers. *Inter J Fly and H Sci*, 3(1,2): 11-21.
- Datta S 1998. *Functional Design and Cooking Efficiency of Different Skillets (Karahis) Used For Household Cooking*. MSc Thesis. Ludhiana: Punjab Agricultural University.
- Kaushik V, Bala R 2010. Efficacy of stainless steel as cooking utensil material for solar cooking. *J Hum Ecol*, 33(3): 197-199.
- Kollipara UK, Brittin HC 1996. Increased iron contents of some Indian foods due to cookware. *J American Diet Assoc*, 96(5): 508-510.

- Mehrotra N, Sharma S 1987. Caring for kitchenware. *Home Sci*, 25(1): 9-15.
- Minakshi, Oberoi K, Sharma S 1991. Cooking efficiency of selected frying pans. *J Res Punjab Agric Univ*, 28(3): 427-432.
- Oberoi K, Dhablania P 1994. Opinion of homemakers towards time and energy conservation devices. *J Res Punjab Agric Univ* 31(3): 498-503.
- Parvathi S 1991. Cook with less fuel. *Home Science*, 29(1-6): 21-23.
- Penner KP 2002. Food safety news: Is Teflon toxic? *Food Sci Institute Animal Sciences and Industry*, 5(1): 6.
- Seth S 1997. *Consumer Behaviour of Urban Buyers for Processed Foods and Electrical Goods*. MSc Thesis. Ludhiana: Punjab Agricultural University.