CHAPTER-6

CONCLUSION AND SUGGESTIONS

6.1 CONCLUSION:

The purpose of this research study is to find out “Packaging strategies of food processing industry in India”. In other words, what are the latest packaging trends and packaging strategies currently being in use and what is the future planning of food processing industry. Up to what extent packaging is planning role in food processing industry. If packaging positively affects purchase behavior then up to what extent it affects. Can packaging be the only cause of buying product? If it is not so then what are the reasons and if it is then what for it are the reasons, and with this also to find out the response of middlemen to know the impact of packaging in food processing industry. The finding of this research study is the answer of all these questions.

For achieving the destination named as finding or result following strategy is adopted. All the available information is tabulated. Most of these tables have been analyzed on the basis of percentages. Whenever, a comparison is made between two or more variables.

After conducting this research study some important conclusions have been drawn and these are summarized as follows:

6.1.1) Response of customers:

For the purpose of this study, researcher has developed few statements to know the response of customers and the result is as follows:

1) Packaging goes a long way in influencing the marketability of the consumer products. Therefore packaging is considered to be a strong marketing tool to enhance the brand image of a product as opined by 37.3 percentage respondents.
2) Type and design of packaging influences the buying behavior of 87.1 percentage consumers to a great extent but in some particular cases they would switch over to some other brand based on the attractive packaging of the product. Besides packaging, size of packaging also play a vital role in effecting one's buying behavior.

3) In case of processed food, majority of the respondents i.e. 83.6 percentage prefer to use plastic as a packaging material. They don’t have any other options if at fewer prices products are available. Most of the respondents are ready to shift to other brands, if any other packaging is to be used at the same cost.

4) Respondents have presence for such types of packaging, which ensure the full safety of the contents against any type of spoilage, fungus, decay or contamination etc.

5) Best change ever in last ten years is size of the package. All most all the respondents 99.4 percentage are happy with the sizes of the processed food available in the market. With this, convenience in carrying, handling, using, storing the product is also improved during the last ten years. Respondents are still looking and want to give preference for the packaging which can be used for some other purpose later on i.e. its reusability aspects.

6) All most all of the respondents are happy about the protection of the product from packaging, also helpful in identification and differentiation of product. All most all of the respondents are agreed that packaging helps in less contamination. Few customers are agreed that packaging helps in promotion of the product. With this many of the respondents don’t think that still today customers don’t require a sale manager.

7) Most of the respondents i.e. 88.1 percentage are ready to pay 0-2 percentage extra money for packaging, which results in less spoliation, less contamination and especially to make more environmental friendly.

8) The study foresee a bright future for packaging credit goes to the factors like: good level of awareness amongst the respondents regarding the benefits of packaging, their positive attitude towards packaging, their willingness to pay
a little extra for good packaging, the rational behavior of consumers and their enthusiasm. The respondents opined that packaging will be considered important factor while purchasing products and marketers will use packaging as a weapon.

9) Majority of respondents suggested that packaging adversely affects respondent’s purchase behavior as it increases the pollution and cost of the product to a large extent. It only means proper packaging for reasonable prices. No one can deny its importance because these days it is considered as 5th P. If there is an increase in cost of product (up to a large extent), then it is likely to affect the purchase behavior of the people falling in higher income group. It is also cause of pollution and leads to resource scarcity. But some arguments are given by some respondents that cost increased due to packaging. Pollution is not due to packaging but it is the result when people spread waste packages here and there. Health hazard is due to improper packaging and here we are talking about packaging having certain features.

10) Majority of respondents have suggested that packaging most positively affects consumer’s purchase behavior when it helps the consumer in making a quick decision by making product identification while purchasing a product. One doctor has given argument, “we use packaged products because it saves us from so many diseases”. Well-packaged product needs five seconds in commercial market.

11) Respondents told about its positive and negative impacts on society. Positive impact on society is- packaging provides employment to the developing nation. Negative impact on society is- pollution is increasing day by day through packaging.

12) With increasing in literacy rate, educational impact of packaging is working well. It reduces the seller’s job and chances of switching from one brand to another. In fast changing times when so many new products are entering in the market, people even don’t know how to use these products. To solve this problem packaging helps in communicating the required information to their customers.
13) In country like India, where there are so many numbers of regulations introduced and implemented, with this packaging law and regulation is also there. But still researcher needs to know whether government should make any amendments in packaging legislation or not? Although very few respondents were aware about aspects already covered in packaging legislation but all respondents replied that packaging legislation should be introduced by the government.

14) As customers are well aware about pollution created by packaging so all most all respondents are in support that government should introduced a law regarding the recycled packaging material or if possible should make packaging material biodegradable.

6.1.2) Response of middlemen:

For the purpose of this study researcher has developed few statements to know the response of middlemen and the result is as follows:

1) Packaging goes a long way in influencing the marketability of the customer products. Therefore packaging is considered to be a strong marketing tool to facilitate the product identification as opined by 45.6 percentage respondents.

2) Packaging affects a product in many ways. Most of the respondents agreed that packaging affects the sales generated by a particular packaged product.

3) Out of the available features of a product, most important feature of a product is packaging and for packaging customer is ready to pay some extra money.

4) All most all the respondents are fully aware of environmental pollution but they don’t have any other purchase option. All the respondents buy take away products in a plastic packaging.

5) Now-a-days customer is more health conscious so, before they go for any product they minutely observe the instruction given on a package. Most of the respondents are happy enough for the information given on a package.
6) A package can have many numbers of qualities/features, but they get attracted very easily towards a new improved attractive packaging. Most of the respondents agreed that a package should be of eye catching look.

7) Many of the respondents are also fully aware of the environmental pollution. So, to improve the situation, most important feature that the manufacturers should to keep in mind is packaging should be made of completely recyclable material to make more environmental friendly as told by 225 respondents.

8) Most of the respondents i.e. 74.8 percentage are ready to pay 0-2 percentage extra money for packaging, which results in less spoliation, less contamination and especially to make more environmental friendly.

9) Majority of the respondents suggested that packaging adversely affects respondents purchase behavior as it increases the cost, causes pollution and leads to resource scarcity. But some arguments are given by some respondents that the cost increased due to packaging is less than the cost of spoilage in the absence of packaging. It only means proper packaging for reasonable prices.

10) Majority of respondents have suggested that packaging most positively affects consumer’s purchase behavior when it helps the consumer in making a quick decision by making product identification while purchasing a product.

11) Although very few respondents were aware about aspects already covered in packaging legislation but all respondents agreed that the packaging legislation should be introduced by the government separately.

12) Best change ever in last ten years is size of the package. Many respondents are happy with the packaging material, sizes of the package and cost of processed food available in the market. With this convenience in carrying, handling, using, storing the product is also improved during the last ten years.
6.1.3) **Response of company's executive:**

For the purpose of this study researcher has developed few statements to know the response of company's executive and the result is as follows:

1) Out of the available features of a product, most important feature of a product is promotion according to all the respondents and with this preservation is also another important feature of a product.

2) 93.4 percentage of respondents agreed that packaging should be made of completely recyclable material to make more environmental friendly. Many manufacturers are working on this project also.

3) 90 percentage of the respondents accepted they have introduced packaging innovation during last three years.

4) During last three years 84 percentage of respondents said they had introduced packaging innovation but only 0-1 times not more than that.

5) The method that companies should adopt is significantly adopting, improving or modifying existing technology/system. Due to financial problem companies never tried a completely new technology in their concern.

6) Packaging innovation plays a greater role in affecting the sales of a product. 70 percentage of respondents disclosed that 20-49 percentage of annual sales came from packaging innovation.

7) All the respondents agreed that some more packaging legislation should be introduced by the government.

8) As respondents are well aware that packaging creates pollution, so, all most all respondents agreed that government should introduced a law regarding the biodegradability of packaging material or if possible should make reusable packaging. So better if any technology is to be create to make packaging material more biodegradable and at the same cost.

9) Main motive of all most all the respondent is to create superior product differentiation and branding. As more and more number of retail outlets are being opened and competition is going stiff and stiff daily. For this purpose
every brand wants to create and establish its own identity into the market by creating a superior product differentiation. With this, companies are also able in maintaining the market share.

10) There are certain factors which results in negative impact on innovation of packaging. Lack of internally generated cash flow is the major problem for introducing a packaging innovation: by 46.6 percentage of respondents.

11) Main objective of restructuring its business relationship(s) during last three years is to focus on new market or channels and to improve product differentiation and branding by most of the respondents.
6.2 SUGGESTIONS:

Packaging performs many essential functions. Without packaging, the distribution, storage and display of many goods will not be possible. Consumers prefer convenient, hygienic and protective packaging. The packaging could be reduced without affecting the performance.

The Packaging is critical to maintain a product in optimum condition and can facilitate overall product life extension and prevent damage. New improved hermetic sealing technology provides opportunities to maximize the life of the product. This new technology helps in consuming the entire product resulting in less going to landfill by this way it benefits both the supply chain and the consumer. So, all these attempts to reduce packaging through its life cycle result in a reduction of waste.

Key players in the environmental arena

The packaging industry faces a rapidly changing and uncertain business climate. Multiple constituencies are creating pressure for environmentally responsible products and packaging. Seven key groups are providing the driving forces behind the move towards "Environment Friendly" products & packaging. They are environmental activists, the media, the general public and consumer, educators, government, retailers and finally the packaging industry itself.

Each of these groups brings its own unique history, its own concerns, and its own agenda on the table. Each one is working, in its own concerns, and standards for environmentally sound packaging. Understanding their diverse perspectives will be prerequisite to achieve a working partnership for the future.

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1. Consumers

Today, public believes itself to be environmentally conscious and most consumers are willing to change their purchase behavior to help in improving the environment. The consumer is equally or more likely to be concerned product packaging and product convenience with the price and safety of a product. Today consumers do not believe take-out food containers are enough of an environmental problem to give up the convenience of leak-proof, heat-retaining packages and recycling efforts falter when convenience becomes an issue.

Part of the problem is that the public does not always link the municipal solid waste problem with their purchasing decisions. According for 30.3 percentage of
the municipal solid waste stream, packaging is the largest and fastest-growing contributor to the garbage crisis\(^1\).

In spite of good intentions, there is a great deal of public confusion over what is environmentally sound. For example, degradability has been perceived as an attractive solution. The environmentally conscious supermarket shopper, when given the choice of paper or plastic grocery bags, will often choose paper, confident in the belief that paper will biodegradable in landfills. Relatively few consumers know that virtually nothing degrades in today's airtight, watertight landfills. Both types of bags are, in fact, recyclable, and supermarkets may try to promote recycling by providing collection bins for returned bags of either type, but it is difficult to shake the consumer's long-cherished beliefs in degradability.

Because of the complexity of environmental issues and the competing and sometimes misleading claims of “green” marketers, consumers are likely to become confused and seized upon single issues and simple concepts. Ideas such as “degradability is good” or “plastics are bad” become firmly entrenched. Consumers do not have the time or the resources to look at the full life cycle of a product and to study all of its environmental implications. In the absence of easy-to-follow guidelines based on sound environmental thinking, the best-intention consumers are likely to make the wrong choices. For example, the food marketing Institute found that consumers continue to prefer conventional tea to waste-minimizing concentrates and refills in reusable packaging. It is to be hoped that such consumer packaging preferences will change as the environmental consequences of purchase decisions are better understood.

2. Educators

There is a tremendous amount of environmental education activity at the elementary school level, especially in grade 3-5. Children are a receptive audience to environmental message on the television, in the class-room and are enthusiastic participants in recycling programs. At the high school level, science teachers often

\(^1\) http://www.indiastat.com/india/ShowData.asp?secid=261&ptid=11&level=2
deliver environmental themes both in course material and through increasingly popular extracurricular environmental clubs.

Nearly every college and university offers courses relating to the environment, and some institutions are running courses for degree in environmental science. The traditional degree programs with in the liberal arts have taken on new disciplines. For example: there are programs in environmental economics, environmental statistics, and environmental law. Packaging design programs now incorporate environmental considerations into course offerings.

3. The Media

Consumer behavior is highly influenced by the print and electronic media, particularly television. The "fourth estate" has a clear and vital role to play in creating a society that is informed and responsible on environmental issues. But how well-equipped are the media to assume this powerful role? Like the consumer, the typical reporter is barraged with information from multiple sources.

The television journalist faces the additional pressure of competing for ratings, and what "sells" is not always the most significant story. Which story has the greater impact on the earth's environment? As long as the business of TV journalism is drama, the highly visual human-interest story will win out over the complex, conceptual story.

The media derive their environmental information both from activist group and from industry sources, but the activists have been particularly effective in this role. The packaging industry to date has had an uneven record in communicating important issues to the press. The paper industry has one of the most positive environmental stories to tell in its reforestation work. The result is the unsettling public perception that industry is the enemy of forest conservation. By failing to play an effectively proactive role with the press, industry is forced into assuming a defensive posture.

Ideally, consumers will respond to what they learn from the popular media. As more attention paid to the problem of municipal solid waste by an informed media,
more consumers are better equipped to make informed choices about the environmental implications of products and packaging.

Environmentalism is garnering and on increasing coverage by all the media. The environmental reporter is a new and welcome phenomenon and environmental publications in India is on increasing number. As this media specially matures and as the packaging industry becomes more sophisticated in communicating with the press, the consumer can only benefit.

4. Environmental Groups

An environmental activist group has changed considerably over the years. Municipal solid waste was not a major public issue until the affluent post-World War II period, when the rise of consumerism created a new phenomenon in the history of civilization¹.

Some well-known environmental groups with an interest in the municipal solid waste issues, along with their stated charters, include²:

- **Environmental Action Foundation (EAF)**-Focusing on municipal solid waste, recycling, toxic substances and other environmental issues, EAF is a national political lobbying association with 20,000 members.

- **Environmental Defense Fund (EDF)**-With a staff of 22, EDF is a public interest organisation of lawyers, scientists, and economists dedicated to protecting environmental quality and public health through public policy, legal action, legislation, and public education.

- **Greenpeace**-With a staff of 150, Greenpeace initiatives active but nonviolent measures to aid endangered species and monitors conditions of environmental concern, including the greenhouse effect.


Originally a wildlife conservation group, Audubon is a 500,000 member association, and toxic wastes, as well as the protection of endangered species.

5. Legislator

Most of the key players in the waste management arena seek to influence legislation. The federal role in municipal solid waste management has evolved from a non-regulatory one prior to 1980 to a more regulatory one since 1980\(^1\).

The packaging industry is no stranger to federal regulation. For example\(^2\), the Department of Agriculture has regulated the packaging and labeling of meat and poultry in a series of acts beginning with the Meat Inspection Act of 1906. The Department of Health and Human Services, including the food and Drug Administration, enforces regulations concerning packaging and labeling in foods, cosmetics and pharmaceuticals. The interstate Commerce Commission regulates containers transporting dangerous articles. And the Federal Trade Commission enforces regulations concerning deceptive packaging and labeling.

Prior to the 1969 National Environmental Protection Act, which established the federal Environmental Protection Agency (EPA), most environmental regulations were piecemeal and uncoordinated among several federal agencies. It was left to state and local authorities to make sense of them and continuity. The target of these early regulations was pollution in its most visible forms: soot and smoke in the air, dyes and sewage in water, and litter on our roadsides. State and local authorities would eventually take the lead in environmental legislation, as in mandatory deposit laws, and federal legislators would take their cue from the states. A strategy supporting a waste management hierarchy has been in effect since 1976, when the EPA issued a position statement entitled "effective hazardous waste management"\(^3\). Under this hierarchy, source reduction first and

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recycling second is the preferred options for managing municipal waste. The EPA saw that the states were not implementing the law’s waste disposal guidelines consistently; therefore, the EPA imposed minimum performance standards for municipal solid waste disposal facilities.

6. Retailers

A study by the food marketing institute found that half of shoppers surveyed were willing to switch to a supermarket that promoted environmentally friendly products and packaging. Recognizing that some consumers will make the switch and some retailers have already put into place some policies to capitalize on this trend. “Green retailing” should start at the local or regional level if not in the national chain. Health food stores are an obvious home for green products. In addition to provide pamphlets about the energy saving and waste reduction benefits of the package, the store can provide collection bins for used boxes. It is helpful to show a powerful example of what one retailer can do to influence the consumer’s environmental choice.

Retailers in states especially supermarkets, have found themselves involved in the recycling business with mandatory deposit laws. Stores that sell beverages are often required by law to collect the containers and refund the deposits. By expanding their role as community recyclers, some stores have uncovered a marketing opportunity which was initially seen as an inconvenience. Many offer to take back grocery sacks for recycling. Other help the consumer identify products on their shelves that have environmental benefits.

Retailers have also discovered that recycling their own waste is good business practice. Major supermarkets have been compact their own used corrugated boxes to sell the material for recycling. This not only eliminates the disposal costs for brown boxes; it also creates a new source of revenue. Manufactures are likely to see increasing pressure from the retail outlet for products that satisfy the consumer’s growing interest in environmental responsibility.
7. Packaging industry

The typical corporate posture of yesterday was characterized by an unwillingness to take environmentalism seriously. If corporations did adopt “green” business practices, they were reactive in nature and pandered to the consumer’s most superficial perceptions. Environmentalists and their value systems were seen in negative terms: anti-growth, anti-technology, and generally regressive.

We are not in a transitional period. Proactively “green” corporations are already identifiable, and they compete with each other for environmental leadership. At the same time, reactive companies have found themselves increasingly vulnerable to public rebuke. The rapid expansion of global ecosystem and the evolution of infrastructure technology have paved the way for a meaningful corporate environmentalism.

The corporate environmental leaders of tomorrows will be those who work within a philosophy of “industrial ecology”. Their challenge is to develop new management tools and to make significant changes in products and packaging so as to have the gentlest effect on the natural environment. Indeed, environmentalism must eventually be fully integrated into the corporate culture. Consumers are generally influenced by a company’s reputation on environmental issues. However, industry will be well advised not to rely too heavily on consumer attitude surveys, which are often better measures of consumer intentions than of consumer practices.

By working more closely with the media and environmental groups, industry can exert a more positive influence on the consumer. However, historical antagonism may persist between environmentalists and corporations. Many companies lack the necessary skills to educate the media and many executives feel that they have been ill-treated by the media. The greatest opportunity for industry leadership lies in adopting life-cycle thinking in its environmental policy.
The impact of environmental decisions

Any environmental decision has to be attuned to a myriad of performance, promotional and regulatory considerations. The issues that industry is facing are immensely complex and the environmental solutions are also complex. A solution may appear simple from the consumer's perspective but when it is applied to a whole system, the problems envisioned may be nearly irresolvable. For this reason, the packaging industry itself is perhaps best positioned to take a leadership role in resolving environmental issues.

The packaging industry has traditionally been concerned with the fate of its end product, at every step of the supply chain. At the base material level, innovative companies develop concepts and materials that will improve retail performance or satisfy a consumer need. They use "pull through" to persuade packers to use them. The aluminum industry is a good example: its innovation in can fabrication technology, the recycling infrastructure it established and its promotional efforts are combined to sell the aluminum can to the consumer. However, innovation has some limits and is controlled by regulators who take into consideration how the product performs with the consumer. No package can sell unless it achieves a desirable level of safety and delivers its claims.

The consumer level is where the package performs its intended function and where the environmental impact of the package is ultimately determined. A package is designed for recycling cannot fulfill its mission unless an accessible waste management infrastructure exists, where the consumer separates and returns the package to the system through this infrastructure. While the packaging industry can design its products to influence and instruct the consumers, the decision making remains in the consumer's hand.

At the same time, there is a gap between the consumer's environmental concern and actual buying practice. Consumers overwhelmingly indicate their endorsement
of environmentally responsible products but in actual practice, consumer behavior has been slow to change.

Recycling of factory scrap, light weighting of plastic bottles, reuse of wooden pallets, bulk shipment of commodity goods and numerous other industry practices are efficient uses of resources that also reduce costs. No change can be imposed on the product or package without affecting an enormous number of decisions throughout the system.

Another one is source reduction. Source reduction is traditionally thought of as “light weighting”, reducing the packaging material to its minimum functional limits. An alternative mode of thinking is to extend the lifetime of the package; while this would increase the initial material inputs, it would promote multiple use and reduce the total packaging required for the volume of product shipped.

Reusable packaging is a concept that is now being discussed and promoted as an environmental solution. It has worked successfully for decades. However, in the face of this complex industry structure, reusable and returnable packaging concepts must be through in a systematic manner within the infrastructure and the consumer is the most critical component of the system.

Procter & Gamble is an example of a company that has effected meaningful change throughout the packaging industry structure, from package design to materials acquisition for creating a waste management infrastructure.

Priority will be given to the management of packaging through source reduction -

Customers are becoming more aware of the environment and waste. They are more and more conscious of the amount of packaging used. One needs to look at ways of tackling this packaging and reducing the amount of material manufacturers using. As shown in table-4.30, 78.3 percentage of respondents agreed that packaging increases the cost.

1 http://www.envis.neeri.res.in/management.php
According to table-4.27, 83.6 percentage of respondent’s preference is plastic as a packaging, which pollutes our environment. For the same, recently (9-10th Feb'09) NDTV has conducted 24 hrs. live program which is called GREENATHON. Addition to it recently (2nd Feb'09) there is ban on plastic bags which are being used by the retailers and super shoppers, but still it has not been implemented properly, for this, government should take prompt action. As shown in table-4.30, 98.9 percentage of respondents accepted that Pollution is the most adverse affect of packaging. With this table-4.29 shows that 17.3 percentage of respondents agreed that package law will be introduced. Table-4.34a shows that 100 percentage respondents agreed for implementation of packaging law.

As shown in Table-1.1 of the 30 million tonnes of household waste produced per year, around 64percentage of it still goes to landfill. Around 50percentage of household waste originates from the retail sector: 30percentage is packaging waste and around 9percentage is post-consumer food waste. Food production, distribution, storage, preparation and disposal accounts for 20percentage of greenhouse gas emissions. So, the emphasis is on ensuring that the optimum amount of packaging is being used and that product integrity is maintained or even improved in order to reduce overall waste.

As more people work outside the home and disposable incomes rise, less time is spent preparing and cooking meals at home. This leads to increase in demand for ready-made foods. This demand for convenience is resulting in greater amounts of packaging being used. Household size is decreasing; more people now live alone and so are buying proportionately more goods. This has implications for packaging use and household food waste, as consumers demand a wider selection of pack sizes – especially more individual and convenience packs for smaller households. Increasing consumer concern about the origin and integrity of food is also driving changes in packaging. Labeling, tamper-evidence and traceability all have implications for packaging design. By making sure packaging conforms to the best possible practice, products can enjoy a positive image and competitive advantage.
All packaging shall have minimal effects on the environment-

The environmental impact of packaging extends beyond the effect of its disposal: quantity of waste is not the only issue. Resources and energy are consumed to produce and transport packaging. Consideration of broader environmental consequences should be included in an assessment of the impact of packaging. This will be achieved through the preparation of environmental profiles for each type of package to be followed by product re-design that minimizes adverse environmental impacts. The policy will stimulate research and the development of new packaging products that have minimal effects on the environment.

The federal government, in consultation with industry and the multi-stakeholder group, will establish a "Code of preferred packaging practices" to guide industry in the design of products and the selection and design of packaging. In the development of the code, consideration shall be given to the following hierarchy:

1) No packaging
2) Minimal packaging
3) Reusable packaging
4) Recyclable packaging

• The federal government in consultation with a multi-stakeholder group will undertake the development of methodologies and guidelines to be used in conducting environmental profiles of packaging. Allowing users to compare packaging choices. As shown in table-4.29, 21.8 percentage of respondents accepted marketers will use packaging as a weapon. 10.5 percentage of respondents agreed that health hazardous package will be removed from market. As shown in table-4.30, 78.3 percentage of respondents accepted that packaging increases the cost of product. 1.7 percentage of respondents agreed that packaging misguides consumers and 1.2 percentage of respondents consider packaging as an unwanted purchase.
Industry will undertake environmental profiles of their packaging in accordance with the above federal government guidelines to identify the environmental impacts generated through the manufacture use and post-use management of their packaging. As shown in table-4.35, 98.5 percentage of respondents considered that packaging should be made from recycled material and 90.2 percentage of respondents agreed biodegradability of packaging should be covered. In table-4.3, 85.6 percentage of respondents the changes made in re-usability aspect have slightly improved during last 10 years. As per the table-4.36, 232 respondents and table-4.37 shows that, 12 company's executives agreed that packaging should make from recycled material. As per the table-4.36, 207 respondents & table-4.37, 25 company's executives agreed that biodegradability of packaging should be covered.

Government will work with industry to identify and demonstrate new packaging technologies. As shown in table-4.7, 90 percentage of company's executives accepted that they had introduced packaging innovation during last three years and as per the table-4.8, 83.4 percentage of company's executives accepted that only 0-1 time and 16.6percentage accepted only 1-3 times packaging innovation had introduced. Table-4.12 shows that 73.3percentage of company's executive pointed out that long gestation period is low to introduce packaging innovations and 86.6 percentage of company's executives pointed that there is low corporate/management resistance to packaging innovations.

All government policies and practices affecting packaging will be consistent with these national policies.

In the environmental and other public policy areas, existing and new government policies will be reviewed to ensure consistency with these national packaging policies. Health, safety, technical and other factors will need to be assessed to identify conflicts or barriers to the achievement of the objectives of these policies.
• Government policies and practices that impede achievement of the objectives of these packaging policies will be identified and where possible removed or modified. Government policies and practices such as procurement will be developed and implemented to support the achievement of the objectives of these policies. It is necessary because there are few factors which have negative impact to introduce packaging innovation. Highly affecting factor is corporate/management, resistance to innovation which is 86.6 percentage. Than is Lack of retail acceptance or access to distribution channel which is 76.6 percentage. 73.3 percentage respondents voted for long gestation period of innovation. (as per the table-4.12)

➢ One Act should be there “To reduce the production of waste, the production and sale of products shall avoid excessive packaging.” The central competent authority in consultation with the central industry competent authority may announce that designated industries are subject to restrictions on the space volume ratio of packaging, number of packaging layers, and types or quantities of materials used in the packaging of specified products after a specified deadline. “The central competent authority may announce the restriction or prohibition of the use of goods, packaging, or containers as designated by the central competent authority on public and private premises.” As shown in table-4.30, 78.3 percentage of respondents accepted that packaging increases the cost. Table-4.3 shows 80.9 percentage of respondents agreed that cost of packaging has increased during last 10 years.

➢ Making packaging greener – biodegradable plastics
Biodegradable plastics made with plant-based materials have been available for many years but because of their high cost, they have never replaced traditional non-degradable plastics in the mass market. As shown in table-4.27, 83.6 percentage of respondents prefer to use plastic as a packaging.

Our whole world seems to be wrapped in plastic. Almost every product we buy most of the food we eat and the many of the liquids we drink come encased in
plastic. Plastic packaging provides excellent protection for the product, it is cheap to manufacture and seems to last forever. Lasting forever, however, is proving to be a major environmental problem. Another problem is that traditional plastics are manufactured from non-renewable resources – oil, coal and natural gas.

➢ **Use boxes/trays made with hard molded banana leaves.** These hard banana leaf heat pressed boxes/plates are easy to make, very cheap as they reuse unwanted waste leaves and banana stalks and also are 100 percentage natural. Their water-resistance is as good as the Styrofoam-thermocole boxes and has good shelf life. As shown in table-4.21, 41.6 percentage of respondents consider packaging as an important feature as compared to price. Table-4.25 shows that 40.8 percentage of respondents accepted that eye catching look of a package is the most important feature and 32 percentage consider cost should be less. Table-4.38 shows 225 respondents voted for recyclable and 211 respondents voted for biodegradable as an important factor for environment friendly packaging. Table-4.6 shows 74.8 percentage of respondents are ready to pay 0-2 percentage and 25.2 percentage of respondents are ready to pay 2-4 percentage extra money for packaging. Table-4.29 shows 99.3 percentage respondents pointed out that packaging helps in quick decision making.

➢ **Innovation in Beverage processing industry-**

- A beverage can with a dividing wall enables the packing of two drinks within the one container and keeps them separate on the inside, thus adding value for the consumer and manufacturer. The can should be have two separate compartments, with each one sized to contain contents that correspond approximately to a single consumption. Two easy-opening ring pulls on the can’s lid enable consumption of the drinks on separate occasion or together to form a mixed drink. It will provide consumers that want to mix drinks such as beer and lemonade with a cost effective alternate to the more conventional method of purchasing two beverage cans or a can and bottle.
• Initiatives should be closely aligned with the government’s strategy on food and aim should be to work in partnership with the food manufacturing sector to look at ways of how to do things differently. Glass packaging has been reduced by 11400 tonnes per year as a result of wine being bottled in lighter weight bottles, with more than 350 different wine label bottles light weighted. An innovation such as the vacuum packaging of meat is to cut out the conventional one-size-fits-all thermoformed tray pack. It not only cuts down on material but also lowers distribution costs by enabling more units per truck per journey. Product reformulation should be made such as doubling the concentration of juice to reduce bottle size or refillable packaging solutions for milk and coffee can have a huge impact.

• Beverage cans are popular with drink manufacturers and consumers alike because they are light, easy to open, quickly to cool and non-breakable. They also keep their contents fresh, with the hermetic seal by eliminating the need for a special tamper-guard. However, the one major drawback of traditional beverage cans is that they cannot be kept after initial opening as they are not resealable. One should solve this problem with a new end type, which makes it possible to reseal steel and aluminium cans after opening. This new resealable end forms a complete barrier against light and gas, preserving the product’s long shelf-life.