

**SPA Ve Online 2007**

***“Mosquito Repellants”: A Case Study***

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## Mosquito Repellant Case Study

*“It is one of the contenders to become the Hindustan Lever Ltd. (HLL) of the next century.”*

### **MAKING WAVES**

Karamchand Appliances Private Limited (KAPL) is perhaps not a familiar name for the average Indian consumer. However, KAPL's brand 'All Out' is very well-known. In fact, the name All Out is almost a generic name for Liquid Vaporizers (vaporizers), a segment of the Rs 4 billion[1] (in 1999) mosquito repellant industry in India. KAPL was almost solely responsible for creating this segment. Within a decade of its launch, All Out had converted a large number of customers into vaporizer users, and had also established itself as the market leader in the segment, with a 69 percent market share in 1999.

The success of KAPL is particularly noteworthy, considering the fact that it was a small family-owned company that managed to wrest market share from corporate giants such as Godrej Sara Lee Ltd. (GSSL) and Hindustan Lever Ltd. (HLL) with strong, established brands such as GoodKnight, Jet, Tortoise, Baygon and Mortein, amidst stiff competition.

With over 255 species of mosquitoes - believed to be responsible for spreading diseases such as malaria and dengue fever - (see Exhibit I) India has a large and growing market for mosquito repellants. Many methods are used in households for dealing with the mosquito menace. Table I lists some of the more common ones.

**TABLE I - COMMONLY USED METHODS FOR PROTECTION FROM MOSQUITOES**

Traditional methods	Burning of incense sticks, fumigation using Neem leaves, use of mosquito nets
Mosquito repellants	

Creams	Applied directly on the body, the creams contain chemicals, which repel the mosquitoes – not very popular, as the creams are rather sticky and inconvenient to use.
Coils	Made by mixing chemicals with substances like coconut shell powder, sawdust, color, perfumes and synthetic or natural gums; the coils burn slowly, releasing the chemicals.
Mats	Have a composition similar to coils; the mats are placed in a small heater, which is plugged into an electrical socket. When the mat is heated, the chemicals are released.
Sprays	Chemicals in liquid form, sprayed in the area infested with mosquitoes – not very popular because of the strong smell of the chemicals.
Vaporizers	Use small containers of a chemical solution, which is heated gently in an electricity-operated apparatus, maintaining a constant temperature.

Source: ICMR

In spite of the pervasiveness of the mosquito problem, the use of repellants in India is fairly low. It is estimated that only 16.4% of the households in all urban areas and 22.6% in the metros use mosquito repellants. The figure for the rural areas is even lower, at only 6.9%. In terms of value, the mat segment was the largest (51%), followed by coils (21%) and vaporizers (7%).

Coils were the first mosquito repellants to be introduced in the Indian market. The first brand of coils was Tortoise, launched by Bombay Chemicals Ltd. (BCL) in the 1970s. Until 1994, Tortoise remained the market leader in its segment, with a 67% market share.

Other significant players emerged over the years, offering products in many segments: Bayer with the brands Baygon Spray, Baygon Power Mats and Baygon Knockout; Balsara Hygiene with a repellant cream, Odomos; and Tainwala Chemicals with the Casper brand of mats and coils. Besides these large players, a number of local brands were also available across the country.

In the latter half of the 1990s, the market became much more competitive, with the entry of GSLL[2] , Reckitt & Coleman (R&C, now Reckitt Benckiser) and HLL. GSLL launched an array of brands (all coils) one after the other - Jet Fighter (1997),

GoodKnight Jumbo (1999) and GoodKnight Instant, GoodKnight Smokeless and Jet Jumbo (2000). The company's other brands included Banish (mats), Hit (aerosols), Hit Lines (chalks), Mosfree (lotion) and Hexit (spray). The Jet brand was extended to coils and sprays. R&C also launched its range of mats and coils - Mortein, Mortein King and Mortein Red - while HLL launched Raid and Attack.

These new entrants resorted to heavy advertising and aggressive sales promotion tactics. GSLL soon emerged as the market leader in the mats segment with a 68% share in May 2000. R&C quickly became the second largest player in the coils segment, next only to Tortoise. (Refer Tables II & III).

While the other companies concentrated on the coils and mats markets, KAPL promoted the use of vaporizers. By the mid 1990s, vaporizers had attained a market share of 5 percent (Refer Table IV). This segment was almost completely dominated by KAPL, whose sales reached Rs 253 million in 1996-97. GSLL could no longer ignore this growing segment and launched its own vaporizer under the GoodKnight brand in 1996-97.

GoodKnight soon acquired a 40% market share of the vaporizer market. However, this did not affect the sales of KAPL, as the launch of GoodKnight had led to a growth in the overall size of the vaporizer market. Instead of eating into All Out's sales, GSLL ended up expanding the market. However, GoodKnight could not sustain its success, and by 1999, the brand's market share had gone down to 21% - a major portion of the 19% loss being taken up by All Out. (Refer Table V)

**TABLE II  
MATS - MARKET SHARES (VOLUMES)**

Company	Brand	1998	1999	July 2000
GSLL	GoodKnight	45	43	51
GSLL	Jet	13	18	14
GSLL	Banish	4	3	2
R&C	Mortein	9	12	15
HLL	Raid	4	7	4
-	Others	25	17	14
	Total	100	100	100

**TABLE III  
COILS - MARKET SHARES (VOLUMES)**

Company	Brand	1998	1999	July 2000
GSLL	GoodKnight	0	0	12
GSLL	Jet	18	20	17

R&C	Mortein	30	33	33
BCL	Tortoise	37	28	20
-	Others	15	19	18
	Total	100	100	100

**TABLE IV  
MOSQUITO REPELLANT MARKET**

Category	Market Share (in %)	
	1996	1999
Mats	63	38
Coils	27	46
Creams	5	3
Vaporizers	5	13
Total	100	100

Source: A&M, April 15, 2000.

Although the initial success of All Out was largely due to technological innovation and first-mover advantages, it was widely believed that what had kept the brand going was strong marketing. This was corroborated when KAPL's promoters Anil, Bimal and Naveen Arya were given the 'Marketing Persons of the Year' award at the 2000 A&M awards[1] . A&M described KAPL as a 'sterling example of enterprise' and a 'tale for budding entrepreneurs and marketers of the new millennium.'

### **THE GROWTH OF ALL OUT**

The Arya brothers belonged to a Maharashtra-based family that was involved in the business of importing books. Reluctant to join the family business, the brothers shifted to Rajkot, Gujarat and joined a relative in making diesel engines for agricultural purposes. Before long, they became interested in the fast moving consumer goods business. Impressed by the success of a small mosquito repellent company in Rajkot, the brothers decided to venture into the business and set up KAPL.

KAPL decided to get the technology they needed to enter the market from Japanese manufacturers. Their decision was prompted by the fact that most of the modern mosquito repellents were developed in Japan. Having decided to launch mats, the brothers short-listed five Japanese companies and eventually zeroed in on Earth Chemical Co. Ltd. (Earth). Established in 1892, Earth was part of the \$ 8 billion Otsuka Group of Japan. Earth manufactured and sold industrial chemicals, pharmaceuticals, consumer products, agricultural chemicals and health foods. After agreeing to a technical collaboration for mats, the Arya brothers happened to see a vaporizer being sold by Earth.

The product consisted of a heating unit and a small container of chemicals, which had to be periodically replaced. It was reportedly doing extremely well in the Japanese market, as it was much more effective than mats. (The strength of mats reportedly weakened considerably after a few hours - vaporizers on the other hand could function consistently throughout the night). However, Earth refused to transfer the technology for the manufacture of the vaporizer. After much lobbying and negotiations, a revenue sharing deal was finally signed, wherein KAPL agreed to invest in manufacturing the components of the product.

KAPL began developing certain key components for the product at its factory at Baddi in Himachal Pradesh in 1989. Some items such as moulds were imported from Japan. KAPL then hired a research agency to come up with a brand name for their product. The agency recommended the name 'Freedom.' 'Choo Mantar' (a Hindi phrase indicating the 'magical vanishing' of mosquitoes) was another possibility. However, KAPL rejected the agency's recommendations, and eventually settled on All Out, a name suggested by the youngest Arya brother, Naveen. Choo Mantar was dropped as it would not have made sense to non-Hindi speaking people and the brothers felt that All Out was better than Freedom.

To ensure that the packaging was of high quality, KAPL commissioned a well-known packaging unit in Hyderabad, Andhra Pradesh. However, due to delays in the supply of packing material, KAPL was forced to delay the launch of All Out by about six months. The product was finally launched in April 1990 in Mumbai.

Sales were slow to pick up, as April was a lean month for the sales of mosquito repellants - mosquitoes being far more numerous during the rainy season.

KAPL hired Avenues, reportedly one of the best creative agencies in India, to handle the advertising for All Out. However, the company was not satisfied with the advertisements created by the agency, which had the baseline, 'All Out for modern mosquitoes.' Bimal said, "Six months down the line, we had holes in our pockets. They kept telling us to have patience as it takes time, but we lost patience."

The advertisement account was shifted to a bigger advertising firm, HTA, at the time of the product's launch in Delhi. HTA released a series of six advertisements, using humor to promote the product. However, the Arya brothers were not satisfied with HTA either. They felt that they were paying too much for the advertisements, without adequate results. Anil said, "Humorous and attention-grabbing they were, but the ads lost out on

what the brand wanted to say."

KAPL then decided to handle the advertising for All Out on its own, surprising many industry watchers and drawing criticism from some ad agencies. However, the company surprised everybody with the launch of a campaign featuring an animated, jumping frog (actually an All Out vaporizer) eating mosquitoes, which proved to be immensely successful. The ad was based on similar advertisements made by Earth for the Japanese market. Later on, the advertisement included a man competing with All Out in a mosquito 'eating' competition and losing out. The short, funny advertisement cost KAPL just Rs 50,000 to make. Over the next few years, KAPL continued with the same advertisement, with only minor modifications to suit the launch of new promotion schemes.

KAPL advertised on videocassettes of Hindi movies in a big way - a move criticized by many advertising agencies, as these were believed to be 'downmarket.' Explaining the rationale behind this decision, Anil said, "We went for video cassettes as they got duplicated 20 times in the grey market. And it cost a fraction of what it takes to advertise on TV."

KAPL also made use of the evening news program on FM Radio and test cricket commentary on the state-owned All India Radio (AIR) to communicate in a cost-effective manner. On television, KAPL preferred to sponsor news programs rather than costly and more conventional soaps or game shows such as the hugely popular Kaun Banega Crorepati.

The company also pioneered the concept of sponsoring song/dance and fight sequences in movies on many satellite television channels (primarily) SitiCable and Doordarshan. All Out advertisements would appear before each song/dance and fight sequence in the movie. As Hindi movies typically featured 4-5 songs/dances, the viewers watched the All Out advertisement at least 4-5 times. This resulted in the brand attaining a very high mind-share among consumers. While All Out had an overall share of voice (SOV) of 31%, the nearest competitor GoodKnight had just 5% in 2000.

KAPL priced the heating unit of the All Out vaporizer fairly high, to cover the cost of the relatively expensive components purchased from Matsushita Electronics. However, reacting to market sentiment, the company lowered its price over the years, aided in part by increased in-house manufacturing of components. While All Out was priced at Rs 225 when it was launched, the price was reduced to Rs 135 for a cord model in 1994. In 1995, KAPL launched the 'Pluggy' (a small apparatus, in which the refill could be fitted and plugged in directly) for Rs 90. In 1996, a twin pack (offering the Pluggy and a cord model) was launched for Rs 135. In 1998, KAPL came out with a Rs 99 pack consisting of the Pluggy and a refill. The deal, called the 'deadly offer' was backed by heavy advertising.

By then, it was clear that the company was treating the vaporizer as a loss leader, to promote the sale of its refill containers. The 'deadly exchange scheme' launched in 1999, gave customers the chance to exchange a mat machine of any make for a Pluggy for just Rs 27. The response to this scheme was phenomenal with the company reportedly selling over half a million pieces in September 1999 alone.

Meanwhile, GSSL, which had launched its own vaporizer in 1996 under the GoodKnight brand, was struggling to maintain its market share in the segment after its initial success. GSSL launched a 60-night refill pack priced at Rs 63, against All Out's 45-night pack at Rs 54. However, the move did not prove to be very successful and GSSL had to support the launch by introducing promotion schemes. After KAPL's 'deadly exchange scheme,' GoodKnight's share decreased by 9.3% in volume terms between September 1999 and February 2000. GSSL then reduced the price of its vaporizer, but this too had little effect on sales.

KAPL's distribution network consisted of around 120 distributors across the country. Of the 900,000 outlets across the country, that sold repellants, KAPL was available in only 18%. As this was significantly lower than the 55% figure for R&C and 54% for GSSL, KAPL was working towards increasing its presence.

## **WHAT LIES AHEAD**

According to industry reports, the Indian mosquito repellant market was expected to grow rapidly in the early 21st century. Analysts said that with improvement in literacy and health consciousness in rural areas, the use of mosquito repellants was expected to increase substantially in these areas. As the per capita usage of repellants was very low in the country, there was considerable scope for the market to expand.

However, increasing concern over the harmful effects of the chemicals in mosquito repellants on the health of human beings was expected to be hamper growth. Allethrin, the chemical used in most of the repellants, was reported to be very dangerous, being potentially harmful to the eyes, skin, the respiratory tract and the nervous system.

A study done on rats by the Industrial Toxicology Research Center [1] showed that the rats suffered brain, liver and kidney damage after prolonged exposure to liquid mosquito repellants. Research in Sweden and the USA had also shown that long-term and persistent use of products containing Allethrin could cause brain cancer, blood cancer and deformity of fetuses.

There were also doubts about the efficacy of mosquito repellants. In 1998, studies conducted by the Malaria Research Center (MRC [2]) found that none of the leading brands provided 100% protection against mosquitoes. Also, in the 653 households surveyed in eight cities, 193 people complained of various health problems linked to

mosquito repellants. They suffered from breathing problems, headaches, eye irritation, skin rashes, suffocation, itching, bronchitis, cold and cough, asthma, nausea, throat and ear pain. Of the 286 doctors questioned, 50% reported cases of acute toxicity following the use of these repellants.

Though these problems concerned the industry as a whole, specific complaints against All Out had also begun to surface. All Out's advertisement in 2001, claiming that the brand had 'Extra MMR' had been severely criticized. The Director of the Central Insecticide Laboratory (CIL [3] , Dr V Ragnathan said, "The advertisement was designed to sound as though MMR was a wonder substance that would eliminate the mosquito menace. In reality, the term is just an abbreviation for 'mosquito mortality rate'. If you look at the product and packaging, there is no mention of what exactly it contains. It contains a variant of a toxic compound called d-Allethrin, and 'Extra MMR' would only mean more toxic components."

All Out also faced criticism for some other aspects of its advertising strategy. Reports indicated that television viewers were unhappy about the brand's advertisements before every song, dance and fight sequence in all the films being telecast. Experts said that now that the brand was firmly established, repetitive advertising was not advisable, and could even prove counterproductive.

KAPL's biggest competitors were large multi-product companies, with the financial muscle to introduce and sustain long and costly advertising and promotional campaigns. In spite of its success, KAPL remained essentially a single product company. With the product and the brand facing various problems, it was difficult to predict how long All Out would remain the leader in the vaporizer segment of mosquito repellants.

## **QUESTIONS FOR DISCUSSION**

- 1. Analyze the reasons behind the success of All Out, commenting separately on the attention paid by KAPL to each element of the marketing mix. Why do you think players like GSSL were not being able to compete with All Out?**
- 2. In the light of intensifying competition and the allegations of 'toxic hazards' in the mosquito repellent industry, do you think All Out would be able to maintain its success in the future? What steps can the company take to ensure that its market share does not suffer? Give reasons to support your answer?**

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