

Flavors of India

By Susheela R. Uhl, Contributing Editor

Indian cuisine is fast becoming a flavorful alternative for many North American consumers. Its diverse ingredients, spices and preparation techniques offer something for everyone. Those with a taste for adventurous eating find authentic flavors from Kerala, Bengal, Punjab and Madras appealing. Fusion dishes combining Indian cuisine with the foods of France, Mexico or North America tantalize mainstream consumers seeking new twists for favorite foods. Indian vegetarian and Ayurvedic cooking appeals not only to vegetarians, but also attracts health-conscious diners.

Indian cooking combines six basic tastes: sweet, sour, salty, spicy/pungent, bitter and astringent. The proper, well-balanced Indian meal contains all six elements, yielding complex spice combinations and depth of flavor.

Rice or flat breads accompanied by seasoned meats, fish, vegetables and condiments form the centerpiece of an Indian meal. Fruits, vegetables and lentils are used in abundance. Lamb, mutton, legumes, pork, beef and chicken serve as protein sources, while ingredients such as almonds, melon seeds, peanuts, onions and white poppy seeds provide substance to sauces. Coconut oil, ghee, sesame oil and mustard oil are the most common cooking oils, although olive oil is also used in the Portuguese-influenced Goa region.

Many dishes that are thought of as "Indian" actually originate from Pakistan and Bangladesh, making this already broad category even more expansive. We'll take a look at the various forces shaping Indian cuisine, investigate specific ingredient categories, and explore some of the many opportunities Indian cuisine offers food developers.

Reflection of diversity

India is a vast country with varying terrains, coastal waters and climates. It stretches from the northern mountains of Kashmir to the Kerala coast, then across the Deccan plateau and the mountains of Tamil Nadu to the Bengal lowlands. India has 31 states and territories with 15 languages and 250 dialects - and its complex cuisine reflects this diversity.

Indian foods are the product of an ancient culture that has been influenced by the trade routes, conquests and religions of Arabs, Greeks, Egyptians, Turks, Persians, Portuguese, Dutch, English, French and Chinese. Religion also plays a significant role in Indian cuisine, often dictating what people may or may not eat. Regional foods are modified to suit these restrictions.

The majority of Indians are Hindus, for whom beef is prohibited. Muslims, on the other hand, eat beef, but certain foods such as pork and alcohol are haram, or forbidden. Christians, who reside mainly in Goa, Tamil Nadu, Bombay and Kerala, tend to have no food restrictions. Vegetarians, including Hindu Brahmins, Buddhists and Jains, naturally rely heavily on legumes and vegetables. Jains, however, do not eat garlic, onion and root crops, and Buddhists do not use onions or garlic to flavor their foods.

No one flavor or spice blend characterizes Indian foods. In the country's northern Punjab and Kashmir regions, nigella, fenugreek, dill, mint, bay leaf, pomegranate, almonds, lemon juice, fennel, saffron, rose petals and garam masala lend flavor to parathas, lamb kebabs, pilafs, tandooris and kormas. In the southern Kerala and Tamil Nadu regions, choice flavorings include kari leaf, tamarind, kodampoli, turmeric, hot chiles, coconut, black-pepper and mustard-seed flavor fish curries, urad dal and sour dosas. In the southwest Goa region,

Portuguese-influenced hot, vinegary vindaloos and tomato-based flavors are popular. In the Bengal region, mustard oils and seeds, nigella, chiles, raisins and panchphoron -flavor chutneys, kedgerree and crab dishes. In the northwest, around Gujerat and Bombay, dried apricots, green chile, coriander leaf, black cumin, tamarind, asafetida and heavy cream flavor sweet-and-sour sauces, spicy sour curries, bhel poori, channa dal and aromatic biryanis.

Grains and legumes

Grains and legumes such as rice, wheat, millet, beans and lentils form the basis of all Indian meals. Rice predominates in the south and wheat in the north, while both wheat and rice are used frequently in the east and west.

Rice cultivation in India dates back 4,000 years; currently, several hundred varieties are grown. Basmati, a fragrant, long-grain rice grown in the Himalayan foothills; rosematta, a parboiled red rice from Kerala; gobindavog, a medium-grain rice; and Bhutanese red rice represent a few of the most favored varieties. Rice is served with accompaniments such as curries, sauces, fried fish, dal, vegetables, breads and condiments. One-pot rice dishes such as pulao, biryani and kichiri are eaten for festive or ceremonial occasions, particularly in Muslim or vegetarian homes. Biryani and pulaos, of Mogul and Persian origin, contain whole spices, nuts, raisins, rose essence, vegetables or meats.

Rice forms the basis of desserts containing ghee, coconut, yogurt or jaggery. In Bombay and Bengal, rice is puffed and eaten as a savory snack called bhel puri or is made into a spicy porridge. In Kerala and Tamil Nadu, rice is mashed into flat flakes and ground with lentils for cakes or flatbreads; steamed for pancakes; or mixed with grated coconut and sugar for breakfast puttu. In Goa, rice is made into risotto and congee.

South Indians eat rice-based breads called dosas or idli with any meal. Steamed, baked or fried, these are eaten plain or stuffed with potatoes, peas, lamb or coconut. They're also dipped into curries, stews and condiments, used to scoop up meats or vegetables, eaten as a snack with fillings of potatoes and vegetables, or simply spread with ghee and eaten with a meal.

People in the northern regions transform wheat, sorghum, corn and millet into numerous flat breads such as chappati, naan, roti, poori and paratha. Wheat flour is made into rava dosa in the south; pao and poee in Goa; and kachori in Bengal.

Noodles - which are not generally a part of Indian cuisine except where there's a Chinese influence - are generally deep-fried for snacks or extruded and steamed as vermicelli. Made from rice, wheat, millet or lentils, noodles are especially popular in Gujerat and Tamil Nadu.

Dal is a broad term used for lentils, peas and beans. These are fried, braised, boiled, ground or pureed with spices for sauces, breads, sweets, pancakes, noodles, snacks, dips, spiced bean cakes and chutneys. Lentils are found in curries and snacks, are ground into flour for breads, and are toasted for use in the spice mixtures that characterize many sauces. Dal varieties include urad, channa, masoor, toovar/toor, kabuli channa, moong, black-eyed pea and red kidney bean.

Meat and dairy

Lamb and mutton are popular meats in the north, while fish and mutton predominate in the south. Fish, pork and beef are generally consumed in the west, chicken and fish in the east. Seafood is abundant in Kerala, Goa and Bengal; varieties include pomfret, sardines, red snapper, prawns, white salmon, mullet and crabs. Seafood

dishes are fried, steamed or sauced, and are flavored with coconut, ground mustard seeds, tamarind, chile peppers and many other spices. Portions are also wrapped in banana leaves and smoked or cooked in mustard oil. Dried and fermented shrimp and small salted fish add a pungent, intense flavor to many Goan dishes.

Dairy products such as ghee, yogurt, buttermilk and cheese are popular flavorings in Indian cuisine. Ghee, a clarified butter, acts not only as a cooking oil, but also as a flavoring for vegetarian dishes. Fresh cheeses, popular in the north, are combined with spinach and legumes in vegetable curries, or are mixed with sugar, milk, cardamom and fruits for desserts.

Yogurt and buttermilk (with added sugar or salt) are made into cooling beverages that accompany spicy foods. Yogurt provides flavor and consistency to curries, condiments, puddings and tandoori marinades. Mixing yogurt with tomatoes, cucumbers, chile peppers and onions makes a cooling salad or relish called raita, which is variously spicy, sweet or sour and counteracts fiery dishes. North Indian curried dishes such as korma, saag, kofta or chicken masala also commonly contain yogurt.

Fruits and vegetables

Coconut milk is used frequently in fish and vegetable-type curries of South India as well as in spice-based soups. Toasted coconut finds its way into chutneys, vegetables, lentils and sauces.

Bananas, mangoes, papayas, pomegranates, pineapples and bananas are eaten fresh, fried, boiled or mashed. Green mangoes, pomegranates and tamarind provide sourness to many dishes.

Popular vegetables include eggplant, okra, bitter gourd, potatoes, cauliflower, mustard greens, beets, spinach, zucchini, carrots, tomatoes, string beans and turnips. Such vegetables are stuffed or pickled, added to sauces and snacks, or mashed for condiments. Potatoes are transformed into numerous dishes with various spice combinations. Bitter gourd, eggplant and mustard greens lend bitter notes, and are eaten to cleanse and heal the body.

Chutneys and pickles enhance and balance the overall flavor of a meal. With unlimited flavor variations, they're a "must" accompaniment to breads, snacks, appetizers and soups. Whether hot, bitter, salty, sour or sweet, they add zest and texture to meals. Chutneys usually consist of coconut, mint, eggplant or tomatoes, along with toasted spices, vegetables, lentils, green fruits, grated coconut and vinegar. They may contain discrete ingredient chunks or have a puree-like texture. Pickles are paired with mango, lime, vegetables, carrots, fish, green chiles with mustard oil, onions and spices, such as turmeric, cayenne, ginger, garlic, mustard seeds, mint, tamarind, cilantro and sesame seeds.

Snacks and sweets

Snacks in India are generally deep-fried or steamed - and intensely spiced. Chickpeas, rice, wheat, peanuts, cheese or fried noodles are flavored with garam masala, ghee, yogurt, mint, coconut, green chiles, tamarind, toasted dals or coriander leaves. Samosas, pakoras, chowdars, farsan, kebabs, sev and kachori are just a few of the many snacks available.

Indians also have a sweet tooth, satisfied by numerous creamy and aromatic sweets such as kheer, payasam, halwa, shrikand, rasgulla, seviyan, kesari and batica. Whether made from rice, semolina, cheese, coconut, milk or lentils, desserts are often flavored with mango, coconut milk, yogurt, ghee, brown sugar, rose essence, saffron, cardamom, almonds, pistachios, cashews and raisins. Essences such as kewra (from the screwpine

family), neroli (orange oil) and rose oil are common in Muslim-style dishes as well as many desserts and beverages.

Spices and more spices

Indian cuisine's distinctive aromas and in-depth taste profiles are derived from a complex combination of spices and preparation techniques. Many common spices used worldwide are indigenous to India, such as peppercorns, turmeric, ginger, onions, garlic, saffron, basil, ajowan and kari leaf.

Cinnamon was introduced to India from Sri Lanka, while other spices such as fenugreek, fennel seed, cumin, coriander, nutmeg, clove, bay leaf and star anise were imported from China, southeast Asia and the Middle East. The Portuguese brought chile pepper, which has become an essential ingredient in India's cooking.

Some spices, such as turmeric, onions, garlic, mustard seed, cumin and coriander, are preferred all over India, but other spices characterize a region's flavor. For example, kari leaf predominates in southern cooking, bay leaf in the north, mustard seed in the west, and coriander leaf in north central India.

The tolerance for high levels of spices in India far exceeds that of mainstream Americans. Turmeric, coriander, ginger and cinnamon are found in western cooking, but in Indian cuisine these same spices, because of their abundant use, give end products a more in-depth flavor profile. Other spices, however, such as black cumin, kalonji, kari leaf, asafetida and ajowan, which are more authentic to Indian cuisine, are becoming familiar to western palates via fusion cooking.

Curries, or spiced sauces, are a must in Indian meals. The term curry is not in fact an Indian word, but is derived from the English term for spiced sauce. There are as many curries as there are regions - vindaloo from Goa, sambar from Tamil Nadu, meen molee from Kerala and matar keema from Kashmir.

Despite the many versions, curry is basically a mixture of spices with vegetables, chicken, fish, lamb or beef. All curries contain spices blended for specific applications and regional preferences. They range from mild to fiery, with varying consistencies and colors. Generally, the northern curries are mild, sweet, creamy and nutty, while the southern types are fiery, pungent and coconutty.

Curry blends are available in powder or paste forms, with flavors ranging from mild to hot. They come with added meat, fish, legumes, vegetables, vinegar, coconut milk, yogurt, raisins and nuts, depending on regional preferences, applications and cultural influences. There's no such thing as one curry powder for all applications. A basic curry powder consists of cumin, coriander, black pepper or red cayenne powder and turmeric. Other spices, such as mustard seed, kari leaf, nigella, ajowan, celery seed, fenugreek, coriander leaf and allspice lend varying taste sensations.

Garam masala - literally meaning heat-creating masala, or spice blend - traditionally includes the more aromatic and hotter spices such as clove, brown cardamom, mace and nutmeg, but not turmeric. Today, some versions also include the cooler spices such as fennel seeds, cinnamon, bay leaf, cinnamon leaf and green cardamom.

Curry blends define the flavor, texture and color of Indian sauces and many other dishes. Spice blends such as tandoori from Punjab, sambar podi from Madras, korma from Bombay, panchporon from Bengal and xacuti blend from Goa add unique flavor to dishes.

Spice and spice blend preparation techniques also make significant contributions to authentic Indian cuisine.

Frying whole or ground spices in oil or dry-roasting them before use allows development of enhanced, intense flavors. Coriander, mustard seeds, cinnamon stick, cumin seed, kari leaf, ground chile pepper, bay leaf and turmeric are all dry roasted or "popped" in hot oil to provide fragrant aromas, intense flavors and crunchiness to applications.

Indian influence

Indian flavors have greatly influenced mainstream vegetarian cooking, making it more flavorful, exciting and varied, says Hershah Parekh, creator of a line of ready-to-eat lowfat and shelf-stable meals from Tamarind Tree, Wakefield, MA. "In Indian cooking," he says, "vegetables, grains, legumes, fruits and nuts are well balanced to provide nutrition, well-being and longevity, whether as kichidi (rice with lentils), idli (rice with lentils), sambar (lentil with string beans) or biryani (rice and vegetables with fruits and nuts)."

Many ingredients in Indian cuisine are familiar to consumers in the United States, says Dwaraka Rao, development manager for Kerry Ingredients, Beloit, WI. These same ingredients can take traditional North American foods to new heights that consumers still find comfortable. For example, chutney flavor applied to glazed chicken gives it a hot sweet-and-sour profile, or samosa serves as an empenada filling.

Authentic Indian ingredients can excite the adventurous palate. For example, add fresh coriander leaves, sesame seeds, almonds, curry powder and green chiles to olive oil, sweet basil and Parmesan cheese for a pesto sauce, or transform a tomato soup with black-mustard seeds, cumin, coriander and kari leaf.

According to the Washington, D.C.-based National Restaurant Association's 1999 Ethnic Cuisine II publication, nearly three quarters of all consumers are aware of Indian foods, and one-third have tried it. These consumers represent a valuable target market for food product designers. Moreover, their number is likely to increase steadily.

With the growing popularity of Indian cuisine, curries, lentils, samosas, naans and tandooris will soon become mainstream items, while dosas, kari leaf, asafetida, black cumin and chutneys will be introduced into fusion-style cooking. Food product designers can capture this market by studying, understanding and enjoying the great diversity of Indian cuisine.

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