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**Assessing The Direction of Fresh Mushrooms in  
Chain Restaurants**

***EXECUTIVE SUMMARY***

**CONCLUSIONS**

- Few foods and even fewer produce items have the level of chain and menu penetration of fresh mushrooms. This is particularly true in casual dining chains that have been growing at twice the rate of all other chain restaurants and are the most innovative.
- Other high penetration and high volume produce items such as onions, tomatoes, lettuce and potatoes are popular and provide various recipe and merchandising benefits to operators and consumer alike, but none have the versatility and value perception of fresh mushrooms.
- Mushroom usage is high across all meal parts and the use of mushrooms with popular menu items such as pizza, pasta, steaks, burgers and sandwiches ensure that mushrooms will continue to grow in volume.
- White button mushrooms account for the majority of usage. However, the increased menuing of exotic varieties including portabella's and shiitake's indicates operator and consumer interest in expanding the mushroom eating experience.
- Operator benefits from menuing fresh mushrooms include flavor, flavor enhancement, texture, a recognizable fresh ingredient, nutritional value, economic value and customer satisfaction.
- Consumer benefits from eating fresh mushrooms include flavor, fresh ingredients, visually appealing, more filling/satisfying, and a better value.

- Consumers expect to pay more for meals with fresh mushrooms. The consumer research conducted in this study indicates a potential to increase menu prices from 23-27.6% with only a slight increase in overall food cost due to adding fresh mushrooms.

As important, if total portion size is decreased, particularly expensive protein such as beef, and fresh mushrooms added or substituted, consumer satisfaction and value perception potentially remains unchanged at a lower food cost. This creates the possibility for even greater operator profit improvement.

- The 2002 mushroom profitability study is consistent with the results of this consumer study. Appetizers and higher food cost entrees such as steaks and seafood can deliver improved operator margins from adding fresh mushrooms due to higher operator prices and consumer price acceptance.
- Fresh pre-sliced mushrooms have all but eliminated canned mushrooms from most chain operator's menus. This coincides with chains marketing fresh food ingredients and improved flavor and texture to consumers as competitive advantages.
- There is some operator confusion about washing and storing fresh mushrooms and food safety. Mushroom handling procedures vary between chains and implementation of these procedures at the unit level is suspect and inconsistent at best. As most mushrooms are cooked the potential for the consumption of pathogens is minimal but even one outbreak of foodborne illness is dangerous.
- While not a major concern, operators acknowledge that the cost of mushrooms after factoring trimming (if done on premise) and moisture loss in cooking raises the final cost per serving. This is even more of an issue with exotic mushrooms such as portabella's with an even higher raw weight cost and few opportunities to raise menu prices to compensate.

### **Fresh Mushroom Foodservice Market Size**

In 1995, J. M. Degen & Company, Inc conducted research for the Mushroom Council and estimated that about one-third of fresh mushroom production was to the foodservice industry. This estimate was based on interviews with multiple fresh mushroom grower-shippers across the country. In addition, specialty mushrooms accounted for 7.1% of total foodservice market consumption.

Using USDA total fresh mushroom production data and estimating growth based on Technomic, Inc. equivalent sales data for the period 1994-2002 for the top 100 chain restaurants and for full service chains within the top 100 chains results in the following estimation of 268.2 million pounds. Using this 2004 estimate, the foodservice channel accounts for 37.1% of fresh mushroom domestic production.

<b>FOODSERVICE INDUSTRY FRESH MUSHROOMS MARKET SIZE 1994-2002</b>					
<b>Variety</b>	<b>1994 Volume (MM Lbs.)</b>	<b>1994 Share %</b>	<b>2002 Volume (MM Lbs.)</b>	<b>2002 Share %</b>	<b>1994- 2002 % CAGR<sup>1</sup></b>
White	160.8	92.9	238.4	88.9	5.1
Specialty	12.2	7.1	29.8	11.1	11.8
<b>TOTAL</b>	<b>173.0</b>	<b>100.0</b>	<b>268.2</b>	<b>100.0</b>	<b>5.7</b>
<b>% Domestic Production</b>	<b>32.9%</b>		<b>37.8%</b>		
<b>% Total Supply<sup>2</sup></b>	<b>32.7%</b>		<b>35.6%</b>		

1 CAGR= Compound annual growth rate  
2 Includes fresh mushroom imports  
Source: USDA/ERS 2/04, Technomic, Inc. Forecast & Outlook 2003,  
J. M. Degen & Company, Inc. 1995, 2004

## RECOMMENDATIONS

Over the past decade, the foodservice market for fresh mushrooms has changed considerably due to several important factors:

- Overall growth of the foodservice market, particularly chain restaurants, and more specifically the top 100 chains.
- Consumer demand for fresh prepared foods that has reduced the acceptability of canned mushrooms in most chain restaurants.
- Chain restaurant marketing of "fresh ingredients" as a differentiated marketing proposition.

- The availability of sliced mushrooms along with other pre-cut produce that has eliminated much of the preparation labor and made fresh mushrooms as convenient as canned.
- Frequent, almost daily delivery of fresh mushrooms from broadline and produce distributors that service chain restaurant accounts.
- Deep chain restaurant menu and kitchen penetration of fresh mushroom that encourages further addition of fresh mushrooms into multiple menu items.
- A sophisticated consumer palate and consumer demand for specialty mushrooms, particularly portabella's, that has been satisfied by many full service chain restaurants.
- A discerning consumer that seeks value both in pricing but also in meal satisfaction and thus, value for the money spent.
- Growth of certain foods that are frequently paired with mushrooms, e.g., pizza, Italian foods, pasta, chicken, steak, etc.

This research has identified several opportunities for the mushroom industry to consider that could increase chain operator and consumer demand for fresh mushrooms. Some of these opportunities are product related while others are more service related. It should be remembered that while most of the focus of this research has been on the top 100-200 chain restaurants, many others with fewer numbers of units also exist that should be sales targets for every mushroom handler.

### ***Fresh Mushroom Opportunities***

While no single dominant opportunity surfaced during these interviews, several ideas were noted that could be pursued by the fresh mushroom industry.

#### *Product Related*

- Operators want to know what is next after portabella's. While shiitake's might be a growing variety, what should operators look and plan for in the future and will these varieties be available in sufficient quantities to satisfy demand. Publishing supermarket sales movement research data and other consumer research supporting the growth in the consumption of exotic mushrooms could help demonstrate consumer interest and demand for the next exotic variety.
- Adding flavor to fresh mushrooms through seasonings and marinades could be opportunities if the flavor profile meets the unique specifications of the chain. Additional moisture, however, could negatively impact on mushroom texture.

A more interesting opportunity is smoking, fire roasting and grilling fresh mushrooms that eliminates added moisture while imparting a more universal while still unique flavor. Some of these products are currently available in a frozen form.

- Some chain operators are unaware of pre-sliced mushrooms (particularly exotic varieties) and cleaned fresh mushrooms. Providing this information to the chains via e-mail, the Mushroom Council's website and through the mushroom handlers at trade shows, the PMA foodservice tradeshow, etc. could quickly move operators to these more value-added products.
- Consistency in mushroom sizing remains an issue. Chains must maintain portion control across hundreds to thousands of units. Consistent mushroom portion size and cost cannot be assured if the incoming materials are not uniform.
- Bi-products from mushroom slicing such as stems and ends, including those from multiple varieties could be mixed and sold as a fresh mushroom base for sauces, gravies and stuffing.
- Several of the chains interviewed combine fresh mushrooms and onions and/or bell peppers. These are sliced seasoned/marinated and grilled or reduced to become a sandwich topping or side dish. As these produce combinations are sliced on premise, offering combinations of pre-sliced fresh mushrooms and other produce that meet the operator's specifications could eliminate preparation labor and add value.
- Custom packaging including smaller packages, multi-packs of different varieties and varying mushroom sizes could benefit smaller volume users as well as to introduce new exotic varieties at less risk.

#### *Service Related*

- Training information (particularly bi-lingual) on evaluating in-coming mushroom inventory, storage, cooler location, inventory rotation, washing, slicing, etc. appears to be a significant and necessary opportunity. Provide identification of keys to evaluating fresh mushroom quality.
- Product development is encouraged. The low-carbohydrate trend has prompted many chains to add low carb items. As fresh mushrooms are already in the kitchens of many of these chains, simple low-carb dishes

should be developed. Product development services could also include custom menu ideas that would be unique for specific chains.

In addition, target food processors that prepare partially and fully cooked foods for chains that could include fresh mushrooms as an ingredient. Such efforts might require some further processing including slicing, blending of varieties and adding flavor through smoking, fire roasting, etc. Using fresh mushrooms could still allow the chain to maintain a "fresh ingredient" marketing claim.

Blending white button mushrooms and exotics does not appear to be prevalent. However, this is most often attributed to an unsophisticated consumer or the inability to recover the added cost of the exotics. Developing recipe ideas that indicate the proper ratio of white button mushrooms to each exotic (portabella's, shiitake's, etc.), resulting flavor profiles and estimated cost/profit potential could encourage more mushroom blending.

- Some chains that are slicing mushrooms on premise discard the stems. Usage ideas for this flavorful part of the mushroom could help operators identify further menu uses for mushrooms as well as improve the profitability of menu items containing mushrooms.
- Develop alternative propositions to improve operator economics by substituting fresh mushrooms for higher cost protein (beef, seafood, etc.) to reduce the protein portion of the menu item while retaining customer satisfaction and increasing operator profits.
- Develop industry-wide fresh mushroom labeling indicating proper handling, cleaning and storage information. The industry should conduct research on the impact of washing fresh mushrooms and related shelf life. This is particularly relevant if chain operators are using produce-washing systems, e.g., EcoSure.

Publishing the industry position on washing, storage, shelf life, and overall mushroom safety is encouraged. Working with EcoSure and other produce washing companies would expand operator awareness of mushroom safety.

- Make greater use of the produce distributor's driver as a communications resource to disseminate information on handling, cleaning, etc., along with new recipe ideas and sampling exotic mushroom varieties. While much of this information typically flows

from corporate R&D/operations to the individual units, simple reminders on a daily delivery basis would be a positive reinforcement.

- Mushroom handler sales personnel should consider increasing their involvement with chain restaurant R&D/menu development/quality assurance staff. This is true of national as well as regional and local chains. A greater understanding of the business operations of these important customers will serve to open a dialogue to achieve greater use of mushrooms already in the pantry as well as other fresh mushroom varieties.
- The ability of fresh mushrooms to drive up operator profitability is generally understood by chain restaurants. Fresh mushrooms add value for which consumers are willing to pay more. Substituting fresh mushrooms for part of more costly protein provides the chain with the opportunity to achieve comparable if not greater customer satisfaction with improved profitability.