Final Report Value Added Program - April 2001

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Food Manufacturing Survey - **Introduction**

The Center for Enhancing Foods to Protect Health (www.efph.purdue.edu) was established in order to pursue research on food consumed for a targeted health benefit, commonly called “functional foods”. One of the aims of the Center is to work closely with the food manufacturing industry in the development of new functional foods and identifying uses for functional food ingredients through research and related activities of creating delivery systems for health protectants. As a first step, to obtain baseline information about Indiana food manufacturers, a survey was conducted to ascertain the extent that Indiana food manufacturers are aware of and involved in functional food manufacture and marketing.

The survey was sent to potential respondents via facsimile, following a phone call to each contact. A list of Indiana food manufacturing establishments was developed from the 1999 Directory of Indiana Food Processing and Related Industries, published by the Department of Food Science at Purdue University, and from the contact list used by the TAP program (Technical Assistance Program). Firms with less than 10 employees were excluded in the survey. In Indiana 179 establishments were contacted to participate in the survey. Of these, 161 agreed to examine the survey, and 89 completed and returned useable questionnaires. The survey was designed to obtain information about the size and scope of food manufacturing firms and their participation in functional food production in Indiana.

Results

Of the firms surveyed, 45% are single manufacturing establishment firms, with 25% operating a total of 2 to 5 plants (Table 1). Seventy-six percent of the firms have only one plant in Indiana, although they may operate plants in other states. Half (51%) of the firms operate only within Indiana (Table 2). Thirty-nine percent of the firms operate plants both in- and out-of-state. Over half (52%) of the firms are single plant firms, with 37% operating as a branch of a larger firm, and 11% are the headquarters location for the firm (Table 3). Eleven percent of firms have conducted operations in their current location less than 10 years, while 63% have operated at the current site for 25 years or more (Table 4).

Twenty-nine percent of the firms manufacture meat products (Table 5), 21% manufacture dairy products, and 18% produce bakery products. Eleven percent of the firms indicated that they manufacture products in more than one of the categories listed in the table 5.

Respondents identified their customers by type. Fifty-eight percent indicated that they sell their products to retailers, and 42% sell to wholesalers (Table 6). Thirty-four percent produce intermediate ingredients for other food manufacturers. The smallest share of firms, that is 15%, sell products directly to the end user or consumers. The majority of respondents (65%) sell product to only one type of customer (Table 6), but 18% sell product to two types of customers.

Seventy-six percent of firms employ less that 250 people, with 15% employing less than 20, 37% employing 20 to 99 personnel, and 24% employing 100 to 249 people (Table 7). Only 44% of the respondents provided information on the level of sales for their plant (Table 7).

Sixty-six percent of the firms conduct their own product development research, and 54% conduct market development research (Table 8). Forty-two percent of firms indicated that they work cooperatively with state agencies or public or private research organizations on product development research.

More than half (58%) of respondents are aware of existing or emerging markets for functional foods (Table 9). Thirty-seven percent of the respondents' firms currently manufacture products considered to be functional foods. Twenty-six percent are conducting product development research on functional foods, while 19% are conducting market development research for functional food products.

Conclusions

This survey showed that Indiana food manufacturing firms are interested in and currently involved in developing functional foods. A majority of these firms recognize the existing and emerging markets for functional foods and a significant number (37%) have directed efforts to compete in this high value market of directing food manufacturing for consumer issues related to health. The next step in this process to help Indiana food manufacturing firms is to help them identify functional food ingredients and markets for new functional foods. This is one way that the Center for Enhancing Foods to Protect Health can help the industry by creating delivery systems for help protectants to improve the economy and advance technologies in Indiana that benefit society nationally.

Data - Responses

Table 1. Number of Plants

Total plants operated by the firm		
Only one plant	40	45%
2 to 5 plants	22	25%
6 to 10 plants	8	9%
more than 10 plants	12	13%
No response	7	8%
	89	100%
Plants operated in Indiana		
Only one plant	68	76%
2 to 5 plants	18	20%
6 to 10 plants	1	1%
more than 10 plants	0	0%
No response	2	2%
	89	100%

Table 2. Plant Location

	Number of Firms	Percent of Firms
Operating only in Indiana	45	51%
Operating outside Indiana	35	39%
Insufficient data	9	10%

Table 3. Site Function

	Number of Firms	Percent of Firms
Single plant firm	46	52%
Branch of larger firm	33	37%
Headquarters fro firm	10	11%

Table 4. Tenure on Site

	Number of Firms	Percent of Firms
less than 10 years	10	11%
10 to 24 years	18	20%
25 to 49 years	27	30%
50 to 74 years	19	21%
75 or more years	11	12%
No response	4	4%

Table 5. Products Produced

	Number of Firms	Percent of Firms
Product group		
Meat Products	26	29%
Dairy Products	19	21%
Canned, Frozen, & Preserved Fruits, Vegetables, & Food Specialties	7	8%
Grain Mill Products	5	6%
Bakery Products	16	18%
Sugar & Confectionary Products	3	3%
Fats & Oils	4	4%
Beverages	7	8%
Miscellaneous Food Preparations & Kindred Prodcuts	10	11%
Makes products from more than one group	10	11%

Table 6. Primary Customers

	Number of Firms	Percent of Firms
Primary Customer		
Other Food Manufacturers	30	34%
Wholesalers	37	42%
Retailers	52	58%
Final Consumers	13	15%
No response	1	1%
Only 1 customer	58	65%
Only 2 customers	16	18%
Only 3 customers	10	11%
Only 4 customers	3	3%

Table 7. Employment and Sales

	Number of Firms	Percent of Firms
Number employed by the firm		
Less than 20	13	15%
20 to 99	33	37%
100 to 249	21	24%
250 to 499	12	13%
500 to 999	2	2%
1000 or more	6	7%
No response	2	2%
Level of sales for the plant		
Less than $1M	4	4%
$1M to $9.9M	14	16%
$10M to $24.9M	8	9%
$25M to $49.9M	3	3%
$50M to $99.9M	6	7%
$100M or more	4	4%
No response	50	56%

Table 8. Product and Market Research

	Number of Firms	Percent of Firms
Firms that conduct their own product development research		
Yes	59	66%
No	27	30%
No response	3	3%
Firms that conduct their own market development research		
Yes	48	54%
No	38	43%
No response	3	3%
Firms that cooperate with state agencies or public or private research organizations in product development research		
Yes	37	42%
No	50	56%
No response	2	2%
Firms that conduct both product and market development research	45	51%

Table 9. Awareness of and Involvement in Functional Food Markets

	Number of Firms	Percent of Firms
Aware of existing or emerging markets for functional foods	52	58%
Produces product(s) considered to be functional foods	33	37%
Developing product(s) considered to be functional foods	23	26%
Developing markets for products considered to be functional foods	17	19%