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# Verifying Assumptions: A Case Study of an Annual Event in Pennsylvania

Richard Gitelson
*Pennsylvania State University*

# VERIFYING ASSUMPTIONS: A CASE STUDY OF AN ANNUAL EVENT IN PENNSYLVANIA

BY

DR. RICHARD GITELSON, DIRECTOR

PENN STATE CENTER FOR TRAVEL AND TOURISM RESEARCH
THE PENNSYLVANIA STATE UNIVERSITY
203 HENDERSON BUILDING SOUTH
UNIVERSITY PARK, PENNSYLVANIA 16802

## ABSTRACT

The purposes of this study were to determine the economic impact of a state farm show on the surrounding region and to provide the show management with information that would be useful in planning the next year's event. Approximately 1400 individuals took part in the study. The results indicated that the overall economic impact on a seven-county region was in excess of $3.8 million. Based on the economic, and profile information, management justified a large capital expenditure, made changes in the configuration of the show, and revised the concessionaire contract.

## INTRODUCTION

The Pennsylvania Farm Show is a six-day annual event held in the early part of January. The event, which takes place at the Farm Show Complex in Harrisburg (14 acre enclosed facility), was initiated in 1917 to highlight various aspects of Pennsylvania's agricultural industry.

It has long been argued that the Farm Show impacts greatly on the local and state economy. However, there has been little, if any systematic research conducted over the years to quantify the financial effects that the Show has on the economy. As such, the primary objective of this study was to determine the direct and indirect economic impact of the Show on the local and state economy.

It has also been argued that the Show is of significant educational and entertainment value to the agricultural community and the general public. Over the years, it has been generally accepted that the Show 1) provides an opportunity for farmers to exchange ideas and see new equipment; 2) provides a forum for competition which, in turn, fosters better agricultural practices; 3) serves to educate the public about agriculture; 4) provides an opportunity for agriculturally related firms to sell their products and develop new markets; 5) encourages young people to enter careers in agriculture; and 6) has entertainment value. However, there was also no data to confirm these assumptions.

A secondary objective of the study was to develop a profile of those attending and participating in the Show, which would not only include socio-demographic kinds of information, but would include behavioral profiles as well. The purpose of this study, therefore, was to provide a sound base of information that would be useful in the policy making process.

There was one major methodological problem that had to be addressed. No actual attendance figures were available. Although the Show was held indoors, no admission charge was made and no devices existed to count individuals entering through the multiple access points. In addition, livestock exhibitors and commercial exhibitors tended to arrive early and leave late at night.

The purpose of this paper is to describe the methodology used to collect information, present an overview of the results, and to discuss how the information has been used by the Farm Show staff.

## METHODOLOGY

In consultation with the Farm Show staff, three major participant groups were recognized. It was felt that each group needed to be dealt with separately due to their unique participation patterns.

1) the general public estimates of this group were between 150,000 and 250,000 individuals. It was assumed that the majority of this group were not involved in agriculture and were attending the event for recreational reasons. Nearly all of these individuals entered through two major entrance points. Major assumptions concerning this group were that most originated from within 40 miles of the facility and would visit the show on one day.

2) the competitive exhibitors this group included nearly 2500 livestock and commodities competitors. The livestock group entered primarily through a separate entrance point from the general public, and included individuals that ranged from 6 years old to 60. The commodities exhibitors tended to enter through the main entrance points.

3) the commercial exhibitors - before this event, the size of this group had not been estimated, although the number of commerical booths was known. This was due to the length of the show and the fact that many booths would bring in several different individuals throughout the week for various lengths of time. However, it was assumed that this group would have a disproportionately large economic impact due to their staying multiple days.

Due to financial constraints, a number of decisions, i.e., compromises, had to be made during the data collection process. All were made in consultation with the Farm Show staff, since there would be obvious implications from each decision. For example, approximately 375 groups arrived by charter bus during the week. Since it was assumed that the economic impact of these groups would not be significant and that the behavior of charter bus individuals within the complex would be similar to individuals arriving by private transportation, the decision was made not to sample this group. It will remain for future studies to determine the validity of these and other assumptions.

## GENERAL PUBLIC SAMPLE

A random sample of individuals (N=1411) was selected at the two major entrances to the Farm Show Complex. The first sampling point was located at the north end of the large arena area and was selected since it is the primary access point for individuals using the complex's main parking lot. The second sampling point was located just outside of the main exhibition hall in the main lobby.

Graduate students had been trained to conduct a short on-site interview. Of those individuals approached by the study interviewers, nearly 95 percent agreed to complete the on-site survey, which was designed to be completed in approximately two minutes. Lack of time was noted as the most common reason for not doing the study.

Each individual was asked several background questions during the on-site interview and whether they would complete a more extensive survey to be sent to them the following week. Approximately 95 percent of those completing the on-site survey agreed to take part in the follow-up study.

A questionnaire was sent to survey participants on the Monday following the Farm Show. A post-card reminder was sent to all individuals one week later, thanking those who had already completed the follow-up portion of the study, and encouraging those who had not yet responded to do so. A second copy of the survey was sent two weeks after the post card reminder to those who had not yet responded, and a final mailing was made to nonrespondents three weeks later. The response rate for the general public mail survey was 72 percent (Table 1).

The response rate for the mail survey was based on the total sample, including those who did not give an address during the on-site survey. There is always a potential for nonresponse bias if the response rate is less than 100 percent. Although the study procedures resulted in a rate greater than the minimum rate specified by the Department of Agriculture, comparisons were made between mail survey respondents and nonrespondents on the basis of information collected from all individuals on-site. There were no statistically significant differences between the two groups on 1) whether they had stayed in overnight lodging, 2) whether they lived within the Harrisburg region, 3) whether they came from Pennsylvania or lived outside the state, 4) the number of individuals in the group, or 5) the number of days the party visited the Farm Show.

One statistically significant difference was found concerning whether or not the individual was engaged in some kind of agricultural-related activity. This was not unexpected since research studies note that the importance of the topic to an individual is an important consideration which influences who is most likely to respond to mail surveys. Thus, given the nature of this event, one would expect the agriculture group to be more responsive. However, even in this case the response rates for both groups was above 67 percent.

A further test was done to determine whether non-response from non-agriculture affiliates would have an impact on spending totals. While agriculture-related individuals were more likely to spend more while attending the show, the differences between the two groups was not statistically significant.

## COMPETITIVE EXHIBITOR SAMPLE

A systematic random sample of 312 livestock exhibitors and 118 commodity exhibitors was selected from mailing lists provided by Farm Show staff. The same protocol used for the general public mail survey was followed with these groups. The response rate was 66 percent for the livestock exhibitors and 67 percent for the commodities exhibitors. The questionnaire section concerning satisfaction levels with various Show attributes was modified to reflect the different needs of these two groups.

## COMMERCIAL EXHIBITORS

A total of 104 Commercial Exhibitors were interviewed at 90 different booths which were selected randomly during the last two days of the Farm Show. Approximately one-third of the 255 booths participating in the 1990 Farm Show were included in the sample. All individuals who were asked to participate in the study complied. These individuals were asked to estimate their total expenses for the week. The person in charge at each booth was asked for the number of individuals that had helped with the booth during the Farm Show. Individuals surveyed indicated that their behavior was typical of others who worked at their booths.

## QUESTIONNAIRE AND STUDY DESIGN

Draft on-site and mail questionnaires were designed based on previous economic impact studies conducted by the principal investigator and the Penn State Center for Travel and Tourism. The draft questionnaires were reviewed by the Farm Show staff and revisions were made. Due to the study time frame and the nature of the event, it was not possible to pre-test the survey instruments.

## ESTIMATED ATTENDANCE

As mentioned earlier, a major problem that was faced in this study was the estimation of the number of individuals who attended the event. The total daily attendance at the 1990 Farm Show was estimated at 217,400

(Table 2). Based on the number of individuals in the sample that spent more than one day at the Show, it was determined that approximately 195,000 different individuals attended the Show.

These estimates were derived in the following way. First, the number of cars in the North Complex Parking Lot and the Harrisburg Community Parking Lot were multiplied by 3.5, which was the average party size in the sample. The shuttle bus ridership, which served a parking lot used for overflow traffic was available. Half of the recorded amount was the best estimate for this area, since it was assumed individuals returned to their cars via the shuttle bus. The charter bus estimates were based on information provided by the Farm Show staff. The West Entrance counts were compiled by estimating hourly traffic flows and summing these estimates.

Specific parking lot, bus and shuttle totals were provided by the Farm Show staff. Two minute counts were taken by interviewers on the hour at both the West and North entrances. These counts were multiplied by 30 to yield an hourly total and summed to provide daily estimates. It is estimated that 136,840 individuals entered through the North gate. This total was utilized to confirm the parking lot estimates; totals were within four percent of each other.

According to the Farm Show records, $866,000 was spent on food within the complex. The estimated amount spent by commercial exhibitors was $23,400. In order to validate the general attendance estimate, the difference in the amount spent on food in the complex ($842,600) was divided by the computed average expenditure on food in the complex per person per day ($3.91). The resulting total was 216,051, which represents a difference of less than one percent (.006) from the original daily attendance estimate.

## INTRODUCTION

For years, the Pennsylvania Department of Agriculture has been asked questions concerning the annual State Farm Show. These questions have come from a number of constituencies, many of which have a major impact on the Farm Show. For example, a large commercial exhibitor decided not to participate in the 1990 Farm Show, since they felt it was not beneficial to them to do so. The Farm Show had no data to counteract the assumptions being made by this exhibitor. Although there is a waiting list for space at the Show, losing a major exhibitor was a concern that the staff wanted to address. Commercial exhibitors in general wanted to know who was attending and what their potential market was, but again the Show staff had no information as to who was attending the event and how likely the spectators were to be in the market for particular items. This was especially important considering the changing character of the Show audience, which most observers felt had become less and less farm oriented during the last decade.

A second concern of the Farm Show staff was the local political entities that felt the Show was not having the economic impact on the local region that it once had. Again the staff could no substantiate impact. This was becoming even more important as the staff continued to approach these political entities for more support for this show and other events held at the Farm Show complex.

## THE GENERAL PUBLIC SAMPLE

### GENERAL PUBLIC PROFILE

The vast majority of attendees were from Pennsylvania (Table 3) with at least one individual from each of the 67 counties in Pennsylvania. As would be expected, approximately 45 percent of all attendees were from the surrounding seven counties. Seven percent of those in attendance, or about 13,000 individuals, were from out of state.

Less than five percent of those sampled were attending the Farm Show by themselves. The majority of groups (84 percent) were comprised of two to five individuals. Nearly half of the groups (45 percent) had a child 6 years old or younger.

The groups attending the Farm Show had relatively high household incomes. Over one-third (35.4 percent) reported incomes of $40,000 or more.

Five percent of the groups stayed overnight in the area due to the Farm Show. Based on the estimated attendance, this represents well over 10,000 individuals.

Most attendees (90 percent) spent only one day at the Farm Show. On average, those not engaged in agriculture spent about 5 hours at the Farm Show and those individuals engaged in some form of agriculture spent approximately 5.7 hours.

### PROFILE OF ATTENDEES ENGAGED IN AGRICULTURAL ACTIVITIES

Approximately 36 percent of the attendees indicated that someone in their party was engaged in an agriculture-related activity. Additional questions were asked of those individuals whose families were involved in agriculture (Table 4). Approximately four-fifths of those involved in agriculture live on a farm. The average size of these farms was 160 acres. Slightly more than one-third of these individuals consider themselves full-time farmers, while an equal number consider themselves part-time farmers. The remainder (28 percent) said that they were engaged in some other type of agricultural activity.

### EXPENDITURES ON FARM-RELATED PURCHASES

All individuals in the General Public Sample were asked the amount of money that the family had spent in four broad categories of farm-related items (Table 5). Approximately one-fourth of the general public had purchased some form of equipment in the last two years. The same is true for agricultural services and supplies. Approximately seven percent had purchased some form of farm-related building.

Farm Show attendees spent an estimated $400 million on agriculture-related items in the last two years. These attendees planned to spend an additional $267 million on these types of items in 1990.

## ATTENDANCE OF GENERAL PUBLIC AT FARM SHOWS

Eighty-five percent of all individuals who had attended this year's Farm Show had attended a Pennsylvania Farm Show in the past (Table 6). In fact, 48 percent of the sample indicated they had attended at least six Farm Shows prior to 1990, and two-thirds of the respondents planned on attending the 1991 Farm Show. Approximately 22 percent of the general public indicated that they also attended Ag Progress Days. There are significant differences between individuals engaged in agriculture-related pursuits and those individuals who are not. For example 41 percent of those individuals engaged in agriculture-related activities plan on attending the 1990 Penn State Ag Progress Days, while only 12 percent of individuals not engaged in some type of agricultural-related activity plan to attend the event.

## REASONS FOR VISITING COMMERCIAL EXHIBITS

Individuals were asked which of four types of commercial exhibits they visited, and if they had visited a particular type of booth, for what reasons, i.e., to buy something, to see what was available, or for both of these reasons. The results in Table 7 indicate that the equipment booths were the most popular during the 1990 Farm Show, with 76 percent of the General Public visiting this type of booth. Approximately 15 percent of the general public who visited the equipment booths considered buying something during the Farm Show (the sum of the first and third columns). An estimated 48 percent of the general public visited the supply booths, 44 percent visited the agricultural services booths, and 43 percent visited the building booths.

Over 90 percent of the general public indicated that they had visited at least one type of booth during their visit to the Farm Show.

## REASONS FOR VISITING THE 1990 FARM SHOW

Respondents were asked to indicate the importance of 16 reasons for attending the 1990 Farm Show (Table 8). The results are not surprising, considering that the majority of groups attending the Farm Show were families with children. The primary reasons noted for attending the Farm Show were 1) to see the animals, 2) to do something with the family, 3) to have fun, 4) to see the farm equipment, and 5) to learn about the latest farm technology.

## EVALUATION OF THE 1990 FARM SHOW

Individuals in the General Public Sample were asked to rate various aspects of the Farm Show. The results in Table 9 indicate that the attendees at this year's Farm Show were relatively pleased with nearly all aspects of the Farm Show. Areas that seemed to cause the most concern were parking, rest rooms and information. However, in even these cases, over 58 percent indicated a rating of good or better.

About 87 percent of the attendees indicated that their overall impression of the Show was good or better. Approximately one-fifth felt that this year's Farm Show was better than last year's, while eight percent indicated it was not as good.

## DIRECT ECONOMIC IMPACT OF THE 1990 FARM SHOW

Respondents in each of the samples were asked to indicate the amount that their parties had spent due to their attendance at the 1990 Farm Show. Only the general public direct and indirect expenditures will be presented in detail to give an indication of what was done.

## GENERAL PUBLIC EXPENDITURES

Table 10 shows the daily average amount spent on each type of expenditure for the General Public Sample. For example, it is estimated that attendees spent an average of $2.89 in restaurants within a 40 mile radius of the Farm Show Complex. This area includes Adams, Cumberland, Dauphin, Lancaster, Lebanon, Perry, and York Counties. Respondents were also asked to indicate how much they spent in other parts of Pennsylvania, outside of this seven-county region. For example, it is estimated that each individual spent an average of $.68 in restaurants on a daily basis in this area.

The estimated total amount spent in each category for the General Public sample was computed by multiplying this average expenditure by 202,192 (Table 11). This figure represents the estimated number of General Public attendees that attended the Farm Show on a daily basis. For example, the estimated total expenditures made in restaurants within a 40 mile radius of the Farm Show Complex was $584,335 (202,192 x $2.89).

An estimated 35 percent of groups in the General Public sample bought food in a restaurant in the seven-county region surrounding the Farm Show. Over half of this sample had made an auto-related purchase during their visit to the Farm Show. Approximately 90 percent of the respondents indicated their groups bought food inside the Complex and 33 percent indicated they had made a nonfood purchase within the Complex.

# TOTAL ECONOMIC IMPACT OF THE 1990 PENNSYLVANIA FARM SHOW

## METHODOLOGY FOR COMPUTING THE TOTAL ECONOMIC IMPACT

The total economic impact of the expenditures made by the three groups, i.e., the general public, the livestock exhibitors, and the commercial exhibitors, was analyzed with a computerized, input/output model of Pennsylvania's economy. The Pennsylvania model was generated from the Impact Analysis for Planning (IMPLAN) System, organized by the USDA Forest Service for the entire national economy. The Pennsylvania IMPLAN model identifies the network of trade relationships that currently exists between the business, government, and household sectors. Over 500 individual sectors are described in terms of their production levels, labor needs, and the related exchange of goods and services with other sectors.

In using the IMPLAN model, the dollars spent by the three groups were entered as direct payments to the primary sectors receiving this money. Operation of the model provided information on the subsequent cycles of secondary economic activity generated by the direct payments. This included the indirect business impact to sectors providing goods and services to the primary sectors. Additional economic activity was also identified in terms of the induced consumer demand originating from the salaries and wages supported by the overall process.

## TOTAL ECONOMIC IMPACT IN THE SEVEN-COUNTY REGION

The direct impact of the 1990 Farm Show within the seven-county region's economy was $2.1 million (Table 12-Initial Demand). This represents the combined direct expenditures made by the three groups. The total direct and indirect impact of the Farm Show was $3.8 million.

The results in Table 12 show that the primary economic sectors receiving the $2.1 million in expenditures were services (71 percent), manufacturing (17 percent) and the wholesale and retail trade (8 percent) (derived by taking the numbers in the first column and dividing by the total initial demand). The service industries were bolstered by the trade realized from food services, lodging and associated recreational services, while the manufacturing sector was boosted by the auto-related expenditures.

As a result of the $2.1 million in direct expenditures, subsequent cycles of secondary demand were generated through inter-industry trade and household consumption. Total secondary demand amounted of $1.7 million (total sales minus initial demand), largely attributed to finance, insurance and real estate (27 percent), services (25 percent), and manufacturing (18 percent). Manufacturing again played a significant role on the basis of goods used from secondary manufacturing processes. Finance, insurance, and real estate participated in the secondary economic process on the merit of real estate and durable goods sales to the household and business sectors. Secondary demand within the service sector included personal health care and recreation-related services.

Further analysis of the $3.8 million in total sales showed a value added to production of $1.8 million. Value added represented the portion of total sales directed to wages and salaries, interest payments, taxes, depreciation, and profit. Sectors with high value added statements usually had major portions of their revenue involved in the hiring of labor and were typically service-oriented industries. These included wholesale and retail trades, the finance, insurance and real estate group, and the service industries.

Two of the key social measures within an economic process are total employee income and the number of full-time jobs. Twenty-seven percent of the total sales generated by the Farm Show was directed to employee income, amounting to $1.0 million. Over 70 full-time jobs (on an annualized basis) were supported by this spending process in the seven-county region (Table 12).

## TOTAL ECONOMIC IMPACT OF THE 1990 FARM SHOW ON PENNSYLVANA

The direct impact of the 1990 Farm Show, due to spending by Farm Show participants, on Pennsylvania's economy was $3.4 million (Table 19-Initial Demand). This represents the combined direct expenditures made by the General Public, the Livestock Exhibitors and the Commercial Exhibitors. The total direct and indirect impact of the Farm Show on the entire state was $7.6 million (Table 13-Total Sales). These figures do not include an additional $660,000 spent on nonfood items within the Complex on animal auctions, souvenirs, etc. It also does not include the expenditures made outside the Complex by the estimated 15,000 individuals who arrived on charter buses.

## HOW THE INFORMATION HAS BEEN USED

Although the final report was completed recently, the draft information has already been used in a number of ways by the Farm Show Director. He used the survey instrument as the basis for a comparison study of commercial exhibitors (since the on-site survey for this group only looked at economic impact). Based on the results from both studies, a number of decisions have been made for future shows.

The food section, which features several types of farm products grown and raised in Pennsylvania, has traditionally been located in one of the arenas where the commercial exhibitors are located. The results of the study have supported the moving of the food court to a separate building.

The information from the study has helped the staff negotiate the concession contract. For the first time, the staff could tell the bidders who was coming to the Show. The study information, which indicated most of the general public parties had young children, was also a primary reason for requesting the concessionaire provide stuffed animals. The souvenir stands will also be required to focus on items that are somehow related to agriculture. In the past, the souvenir stands were likely to sell Grateful Dead t-shirts as t-shirts featuring the Farm Show logo.

The profile of the general public which indicated the large number of parties arriving with young kids will also cause the introduction of diaper changing facilities at the Complex for the first time. Time patterns of spectators at the Show will be used to modify existing parking policies and the behavioral profile of individuals attending the Show will be made available to commercial exhibitors.

Based on the economic impact of the Farm Show, the Pennsylvania legislature was convinced to allocate money for the expansion of the Farm Show Complex during a time when the state faces a revenue shortfall. Before, there was only conjecture that this Show and other events held in the Complex were important economically to the region and to the state. It also helped politically to demonstrate that individuals came from every county in Pennsylvania and that over 90 percent of the attendees were from the state.

The information will be used by the Farm Show staff as baseline data for future studies to determine how well they were doing. The director has indicated that he wants to duplicate the study in the next two years. Finally, the information will be used in the brochure used next year to mark the 75th anniversary of the Farm Show.

**Table 1**
**Response Rates for the Various Sampling Groups**

| Group | Number in Sample | Number Completing Expenditure Data | Response Rate | Estimated Total Population |
|---|---|---|---|---|
| General Public | 1411 | 1021 | 72% | 217,192 * |
| Livestock Exhibitors | 312 | 205 | 66% | 1409 |
| Commodities Exhibitors | 118 | 79 | 67% | 1492 |
| Commercial Exhibitors** | 104 | 104 | 100% | 2538 |

* Includes an estimated 15,000 charter bus attendees.
** This does not represent a true sample since commercial exhibitors who were not present on these two days could not be chosen. However, it appears that the group selected was representative of commercial exhibitors.

**Table 2**
**Estimated Attendance Counts**
**For the General Public at Selected Locations**

| Location | Count | Average Ridership | Total |
|---|---|---|---|
| Harrisburg Community College Lot | 8,476 | 3.5 | 29,666 |
| North Complex Parking Lot | 39,442 | 3.5 | 138,047 |
| Shuttle Bus | 10,242 | | 10,242 |
| Charter Bus | 375 | 40 | 15,000 |
| West Entrance Counts | | | 24,445 |
| | | TOTAL | 217,400 |

**Table 3**
**Profile of General Public Attending**
**The 1990 Pennsylvania Farm Show**

**Was Individual From Pennsylvania?**

| | N | Percent |
|---|---|---|
| Yes | 1228 | 93.0 |
| No | 92 | 7.0 |
| | 1320 | 100.0 |

**Origin of Attendees (At Least 2%)**

| County or State | N | Percent |
|---|---|---|
| Dauphin | 194 | 14.8 |
| Lancaster | 145 | 11.1 |
| Cumberland | 143 | 10.9 |
| York | 99 | 7.6 |
| Lebanon | 49 | 3.7 |
| Perry | 39 | 3.0 |
| Berks | 35 | 2.7 |
| Schuylkill | 32 | 2.4 |
| Chester | 30 | 2.3 |
| Franklin | 29 | 2.2 |
| Adams | 27 | 2.1 |
| All other counties | 396 | 30.2 |
| Maryland | 32 | 2.4 |
| All other states | 60 | 4.6 |
| | 1310 | 100.0 |

The local area was comprised of Adams, Cumberland, Dauphin, Lancaster, Lebanon Perry, and York counties. Approximately 53.2 percent of the general public came from this area.

**Number of Individuals in Party.**
(average of 3.5 per party)

| Number | N | Percent |
|---|---|---|
| 1 | 58 | 4.5 |
| 2 | 418 | 32.4 |
| 3 | 255 | 19.8 |
| 4 | 295 | 22.9 |
| 5 | 145 | 11.2 |
| 6 | 76 | 5.9 |
| 8 | 19 | 1.5 |
| 9 or more | 24 | 1.9 |
| | 1290 | 100.0 |

**Number of Days Attending The Farm Show.**

| Days | N | Percent |
|---|---|---|
| 1 | 802 | 89.6 |
| 2 | 69 | 7.7 |
| 3 | 11 | 1.2 |
| 4 or more | 13 | 1.5 |
| | 895 | 100.0 |

**Average Number of Hours Spent at Farm Show Each Day**

| Day | # of Hours |
|---|---|
| Sunday | 4.4 |
| Monday | 5.5 |
| Tuesday | 5.4 |
| Wednesday | 6.4 |
| Thursday | 5.1 |
| Friday | 4.9 |

Average per group (nonagriculture) = 5 hours
Average per group (agriculture) = 5.7 hours

**Table 3 (continued)**
**Profile of General Public Attending**
**The 1990 Pennsylvania Farm Show**

**Did Party Stay Overnight Due to Farm Show?**

| | N | Percent |
|---|---|---|
| Yes | 65 | 5.0 |
| No | 1231 | 95.0 |
| | 1296 | 100.0 |

**Number of Miles Traveled to Attend Farm Show.**

| Miles | N | Percent | Cumulative % |
|---|---|---|---|
| 1-10 | 223 | 17.0 | 17.0 |
| 11-40 | 407 | 31.0 | 48.0 |
| 41-100 | 488 | 37.2 | 85.2 |
| Over 100 | 194 | 14.8 | 100.0 |
| | 1312 | 100.0 | |

**Household Income of Parties Attending The Farm Show**

| Income Level | N | Percent |
|---|---|---|
| Under $15,000 | 78 | 9.3 |
| $15,000 to $24,999 | 167 | 19.9 |
| $25,000 to $39,999 | 297 | 35.4 |
| $40,000 to $59,999 | 177 | 21.1 |
| Over $59,999 | 120 | 14.3 |
| | 839 | 100.0 |

**Is Someone in Party Engaged in Agriculture-Related Activity?**

| | N | Percent |
|---|---|---|
| Yes | 467 | 35.5 |
| No | 849 | 64.5 |
| | 1316 | 100.0 |

(54% of those engaged in agriculture are farmers.)

**Percentage of Parties that Had At Least One Member in Each of the Following Age Groups.**

| Age Group | Percent |
|---|---|
| Under 6 | 45 |
| 6 to 12 | 26 |
| 13 to 18 | 15 |
| 19 to 24 | 10 |
| 25 to 39 | 39 |
| 40 to 54 | 26 |
| 55 to 64 | 17 |
| 65 and over | 12 |

**Table 4**
**Profile of General Public Attendees That Are Engaged in Agriculture**

**Do you currently live on or own a farm?**

| | N | Percent |
|---|---|---|
| No | 60 | 20.1 |
| Yes | 238 | 79.9 |
| | 298 | 100.0 |

**Average Size of Farm** = 160 acres (N=213)

**Do you consider yourself:**

| | N | Percent |
|---|---|---|
| Full-time farmer | 105 | 35.6 |
| Part-time farmer | 109 | 36.9 |
| Other type of agricultural activity | 81 | 27.5 |
| | 295 | 100.0 |

**Table 5**
**Amount Spent By General Public Attendees On Farm Related Purchases**

| | 1988 and 1989 Combined | | | | |
|---|---|---|---|---|---|
| | Did Not Spend Anything | Less Than $1000 | $1,000 to $4,999 | $5,000 to $9,999 | Over $9,999 |
| **Equipment**--farm, industrial, outdoor, power (N=859) (estimated total expenditures were $145 million) | 74.7% | 6.9% | 7.7% | 3.7% | 7.0% |
| **Agricultural services**--magazines, insurance, medical, veterinary (N=862) (estimated total expenditures were $25 million) | 76.0 | 15.1 | 6 | 1.7 | 1.2 |
| **Supplies**--feed, seed, chemicals (N=860) (estimated total expenditures were $172 million) | 70.7 | 15.6 | 5.4 | 1.8 | 6.5 |
| **Buildings**--silos, barns, etc. (N=861) (estimated total expenditures were $57 million) | 92.8 | 2.2 | 2.4 | 0.6 | 2.0 |

| | Estimated for 1990 | | | | |
|---|---|---|---|---|---|
| | Did Not Spend Anything | Less Than $1000 | $1,000 to $4,999 | $5,000 to $9,999 | Over $9,999 |
| **Equipment**--farm, industrial, outdoor power (N=846) (estimated total expenditures are $90 million) | 80.6% | 6.3% | 5.5% | 3.3% | 4.3% |
| **Agricultural services**--magazines, insurance, medical, veterinary (N=851) (estimated total expenditures are $17 million) | 79.7 | 12.9 | 5.3 | 1.4 | 0.7 |
| **Supplies**--feed, seed, chemicals (N=851) (estimated total expenditures are $103 million) | 74.5 | 13.4 | 5.5 | 1.4 | 5.2 |
| **Buildings**--silos, barns, etc. (N=853) (estimated total expenditures are $57 million) | 91.1 | 1.3 | 3.6 | 1.2 | 2.8 |

**Table 6**
**Participation of General Public at Farm Shows**

| | No | Yes | |
|---|---|---|---|
| Did individual attend previous Farm Show? | 15% | 85% | (N=937) |

Number of Previous Pennsylvania Farm Shows Attended

| Number of shows | N | Percent |
|---|---|---|
| 0 | 125 | 15.1 |
| 1 | 69 | 8.3 |
| 2-5 | 237 | 28.6 |
| 6-10 | 132 | 15.9 |
| 11-20 | 126 | 15.2 |
| Over 20 | 140 | 16.9 |
| | 829 | 100.0 |

| | No | Yes | Not Sure | |
|---|---|---|---|---|
| Did individual attend 1989 Farm Show? | 49% | 51% | | (N=878) |
| Does individual plan to attend 1991 Farm Show? | 6% | 64% | 30% | (N=929) |

If Answered NO, Reasons Included

1. Too crowded
2. Don't go regularly
3. Not in the area
4. Tired of same old thing

| | No | Yes | |
|---|---|---|---|
| Have you attended Ag Progress Days sponsored by Penn State? | 78% | 22% | (N=933) |

Number of farm shows plan to attend other than Pennsylvania Farm Show in 1990

| | N | Percent |
|---|---|---|
| 0 | 742 | 83.9 |
| 1 | 64 | 7.2 |
| 2 | 51 | 5.8 |
| 3 | 17 | 1.9 |
| 4 or more | 10 | 1.1 |
| | 884 | 99.9* |

* Does not equal to 100 due to rounding

**Table 7**
**Reasons For Visiting Commercial Exhibits***

| | I am considering buying something in this category | I wanted to see what they had this year | Considered buying and wanted to See | Did not visit |
|---|---|---|---|---|
| **Equipment**--farm, industrial, outdoor, power | 11% | 61% | 4% | 24% |
| **Agricultural services**--magazines, insurance, medical, veterinary | 5 | 37 | 1 | 56 |
| **Supplies**--feed, seed, chemicals | 9 | 37 | 2 | 52 |
| **Buildings**--silos, barns, etc. | 6 | 35 | 1 | 57 |

* Individuals were asked to indicate each type of booth visited and their reason for the visit. Ninety-two percent of the sample indicated that they had visited at least one type of booth.

## Table 8
### Importance of Various Reasons For Attending Farm Show for General Public Attendees (Expressed as Percents)*

| Reason for attending | Not important | Somewhat important | Important | Very important | Percent at least important |
|---|---|---|---|---|---|
| 1. To have fun | 8% | 20% | 45% | 28% | 73% |
| 2. To learn about the latest in farm related technology | 22 | 35 | 30 | 14 | 44 |
| 3. To see old friends | 65 | 20 | 12 | 4 | 16 |
| 4. To see the competitive livestock exhibits | 11 | 29 | 40 | 20 | 60 |
| 5. To see the competitive commodities exhibits | 24 | 37 | 32 | 7 | 39 |
| 6. To visit the commercial exhibits | 18 | 35 | 37 | 10 | 47 |
| 7. To see the entertainment | 27 | 26 | 34 | 13 | 47 |
| 8. To eat the food | 30 | 27 | 25 | 19 | 44 |
| 9. To compete in an event | 95 | 2 | 1 | 2 | 3 |
| 10. To see the animals | 3 | 17 | 37 | 43 | 80 |
| 11. To see the farm equipment | 12 | 31 | 37 | 21 | 58 |
| 12. To do something different | 19 | 27 | 34 | 20 | 54 |
| 13. To attend a meeting | 95 | 2 | 2 | 2 | 4 |
| 14. To work at the Farm Show | 95 | 1 | 2 | 2 | 4 |
| 15. To be a part of the entertainment | 97 | 2 | 1 | 1 | 2 |
| 16. To do something with the family | 13 | 12 | 33 | 42 | 75 |

Most Important Aspects**
(N=728)

| | |
|---|---|
| 1. To see the animals. | 43% |
| 2. To do something with the family | 37% |
| 3. To have fun | 26% |
| 4. To see the farm equipment | 16% |
| 5. To learn about the latest farm technology | 16% |
| 6. To eat the food | 8% |
| 7. To see the entertainment | 6% |

* Rows may not add to 100% due to rounding.
** Each individual was asked to designate the two most important reasons.

**Table 9**
**General Public Ratings of Various Aspects of Farm Show**
**(Expressed as Percent)***

| | Terrible | Poor | Fair | Average | Good | Very Good | Excellent | Percent at Least Good |
|---|---|---|---|---|---|---|---|---|
| 1. Parking | 5% | 7% | 12% | 18% | 31% | 19% | 8% | 58% |
| 2. Security | 1 | 1 | 5 | 20 | 41 | 24 | 9 | 74 |
| 3. Cleanliness of Show | 1 | 2 | 8 | 22 | 39 | 23 | 5 | 67 |
| 4. Rest rooms | 1 | 3 | 12 | 25 | 36 | 18 | 4 | 58 |
| 5. Quality of Entertainment | 0 | 1 | 5 | 17 | 43 | 26 | 8 | 77 |
| 6. Quality of Food | <1 | 2 | 6 | 12 | 30 | 30 | 20 | 80 |
| 7. Quality of commercial exhibits | <1 | <1 | 3 | 15 | 43 | 32 | 8 | 83 |
| 8. Quality of educational exhibits | <1 | 1 | 3 | 14 | 38 | 35 | 10 | 83 |
| 9. Livestock exhibits | <1 | <1 | 1 | 8 | 31 | 40 | 19 | 90 |
| 10. Directional information | 2 | 6 | 11 | 21 | 33 | 21 | 7 | 61 |
| 11. Information on events | 1 | 4 | 11 | 23 | 34 | 22 | 6 | 62 |
| 12. Educational value of this year's Farm Show | 0 | 1 | 3 | 16 | 36 | 33 | 11 | 80 |
| 13. Cooperation of Show management | <1 | 1 | 4 | 16 | 42 | 29 | 9 | 80 |
| 14. Cost to participate in Show | <1 | 1 | 5 | 20 | 27 | 27 | 20 | 74 |
| 15. Overall impression of Show | <1 | 1 | 3 | 9 | 31 | 39 | 17 | 87 |

**How Farm Show compares with last year's Farm Show (N=773)**

| | |
|---|---|
| Not as good | 8% |
| About the same | 70% |
| Better | 21% |

* Rows may not total 100% due to rounding.

**Table 10**
**Average Expenditure by General Public by Type of Expenditure**
**(N = 905)**

| Type of Expenditure | | Within 40 Miles of Farm Show Complex | In Other Parts of Pennsylvania |
|---|---|---|---|
| **Outside Farm Show Complex** | | | |
| Restaurants | | | |
| (fast food and sit down) | | $2.89 | $ .68 |
| Food and beverages in retail stores | | | |
| (grocery stores, liquor stores, etc.) | | .29 | .09 |
| Auto expenses | | | |
| gas and oil | | 1.93 | .78 |
| parking | | .44 | .02 |
| tolls | | .10 | .03 |
| other | | .09 | .03 |
| Retail purchases | | | |
| (souvenirs, personal items, clothing) | | .73 | .07 |
| Fees for entertainment/attractions | | .29 | 0.00 |
| Lodging expenses | | | |
| Hotel/motel | | 2.10 | .11 |
| Camping | | 0.00 | .05 |
| Bed/breakfast | | .03 | .12 |
| other | | .05 | .08 |
| Other expenses | | .12 | .02 |
| | **TOTAL** | $9.06 | $2.08 |
| **Inside Farm Show Complex** | | | |
| Food/beverages | | 3.95 | |
| Other items | | 3.22 | |
| | **TOTAL** | $7.17 | |

**Table 11**
**Total Direct Spending by General Public by Type of Expenditure ***

| Type of Expenditure | Within 40 Miles of Farm Show Complex | In Other Parts of Pennsylvania |
|---|---|---|
| **Outside Farm Show Complex** | | |
| Restaurants (fast food and sit down) | $584,335 | $137,491 |
| Food and beverages in retail stores (grocery stores, liquor stores, etc.) | 58,636 | 18,197 |
| Auto expenses | | |
| gas and oil | 390,231 | 157,710 |
| parking | 88,964 | 4,044 |
| tolls | 20,219 | 6,066 |
| other | 18,197 | 6,066 |
| Retail purchases (souvenirs, personal items, clothing) | 147,600 | 14,153 |
| Fees for entertainment/attractions | 58,636 | 0 |
| Lodging expenses | | |
| Hotel/Motel | 424,603 | 22,241 |
| Camping | 0 | 10,110 |
| Bed/Breakfast | 6,066 | 24,263 |
| other | 10,110 | 16,175 |
| Other expenses | 24,263 | 4,044 |
| TOTAL | $1,831,860 | $420,560 |
| **Inside Farm Show Complex** | | |
| Food/beverages | 798,658 | |
| Other items | 651,058 | |
| TOTAL | $1,449,716 | |

* Estimated number of daily visits was 202,197. The figures do not include an estimated 15,000 attendees who arrived by charter bus.

**Table 12**
**Aggregate Economic Impact of the**
**1990 Pennsylvania Farm Show on the Seven-County Region**
**(Expressed in thousands, except for jobs)**

| Sector | Initial Demand | Total Sales | Value Added | Employee Income | Employment |
|---|---|---|---|---|---|
| Agriculture, Forestry, and Fisheries | $2 | $104 | $25 | $9 | 1 |
| Mining | 0 | 2 | 2 | <1 | 0 |
| Construction | 0 | 83 | 39 | 36 | 1 |
| Manufacturing | 361 | 671 | 188 | 124 | 6 |
| Transportation, Communications and Utilities | 17 | 159 | 70 | 39 | 1 |
| Wholesale and Retail Trade | 164 | 306 | 220 | 140 | 11 |
| Finance, Insurance, and Real Estate | 0 | 459 | 326 | 64 | 3 |
| Services | 1,503 | 1,940 | 898 | 597 | 46 |
| Government Enterprises | 67 | 109 | 47 | 32 | 1 |
| Special Industries | 0 | 2 | 2 | 2 | 0 |
| Total** | $2,114 | $3,835 | $1,817 | $1,042 | 70 |

* Direct economic impact does not include expenditures made within the Farm Show Complex.
** Totals may not equal due to rounding of numbers.

**Table 13**
**Aggregate Economic Impact of the**
**1990 Pennsylvania Farm Show on the State of Pennsylvania**
**(Expressed in thousands, except for jobs)**

| Sector | Initial Demand | Total Sales | Value Added | Employee Income | Employment |
|---|---|---|---|---|---|
| Agriculture, Forestry, and Fisheries | $4 | $157 | $41 | $14 | 1 |
| Mining | 0 | 6 | 4 | 1 | 0 |
| Construction | 0 | 151 | 71 | 64 | 2 |
| Manufacturing | 485 | 1,519 | 400 | 250 | 8 |
| Transportation, Communications and Utilities | 24 | 389 | 156 | 90 | 2 |
| Wholesale and Retail Trade | 208 | 489 | 351 | 224 | 14 |
| Finance, Insurance, and Real Estate | 0 | 1,069 | 763 | 165 | 5 |
| Services | 2,609 | 3,625 | 1,682 | 1,152 | 57 |
| Government Enterprises | 90 | 162 | 72 | 52 | 2 |
| Special Industries | 0 | 4 | 4 | 4 | 0 |
| Total** | $3,420 | $7,572 | $3,543 | $2,015 | 126 |

* Totals do not include expenditures made within the Farm Show Complex on nonfood items.
** Totals may not equal due to rounding of numbers.