

Iowa Dairy Farm Survey Spring 2012

In 2012, Survey & Behavioral Research Services (SBRS) at Iowa State University was contracted to conduct a mail survey with dairy farmers in Iowa to learn about their current operations, current needs, and expectations for the future. This survey was part of a research effort coordinated by Dr. Leo Timms, Extension Dairy Specialist and Professor of Animal Science, and Jennifer Bentley, Extension Dairy Field Specialist, who served as Principal Investigators on this project. Bentley and Kristen Schulte, Farm Management Field Specialist, analyzed and compiled survey results for Iowa State University and collaborators. Results provide insight on the current state of the dairy industry in Iowa and will be summarized and provided through reports for educators, industry collaborators, and the public. This information will help educators and industry collaborators determine educational programming areas in the short and long term. Additionally results will help all audiences better understand the demographic of dairy farms, management practices used, and the future of the industry.

Design & Procedures

The survey was developed cooperatively by SBRS and the Principal Investigators. The survey was twelve pages in length and included questions relating to farm characteristics, dairy farm management, crop management, manure management, employees and family labor, information sources, issues in the dairy industry, and personal demographics. Printed copies of the survey were prepared by SBRS and mailed to 1000 dairy farmers on March 13, 2012, with a cover letter and postage-paid return envelope enclosed. A reminder was sent to non-respondents on March 23, and a second copy of the survey was mailed to non-respondents on April 6.

Results

The sample for this study consisted of 1000 producers drawn from a list of all dairy operations in the state of Iowa and provided to SBRS by Dr. Timms. Grade A and B dairy farms were included; goat and sheep dairies were excluded.

Of the 1000 dairy farmers in the sample, 13 were classified as ineligible because they had only goats or no longer milked cows. Completed surveys were received from 371 dairy farmers, for an overall response rate of 37.6%. Areas of high dairy concentration returned the highest percentage of surveys. As shown in Table 1, the counties returning the most surveys included Clayton, Dubuque, Delaware, and Allamakee.

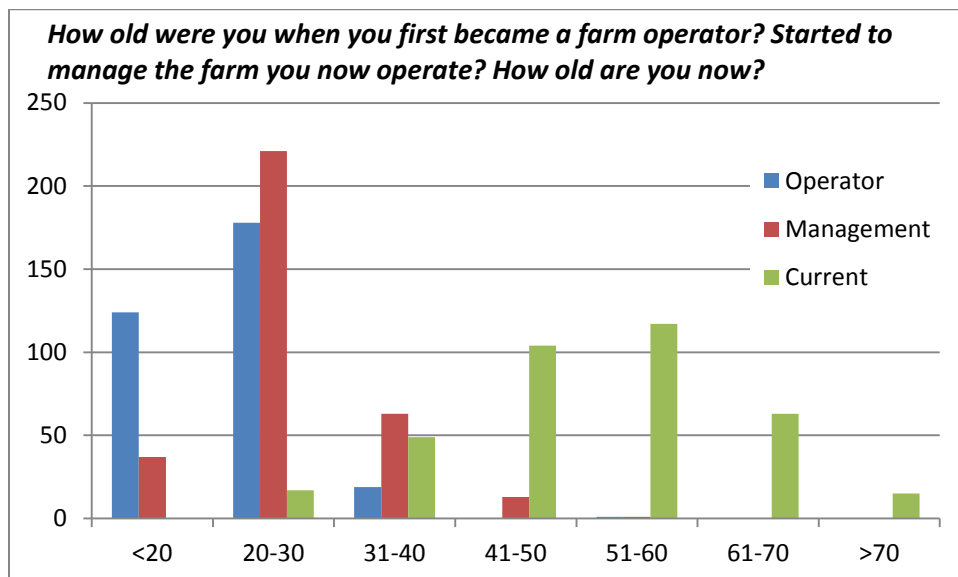
Table 1 Survey Response by County

<i>What county is your dairy operation located in?</i>	
Response by County, over 10 respondents	
County	Count
Clayton	33
Dubuque	32
Delaware	28
Allamakee	27
Fayette	20
Johnson	19
Sioux	17
Winneshiek	17
Davis	13
Mitchell	13
Bremer	11
Other	141
Total	371

Demographics and Farm Characteristics

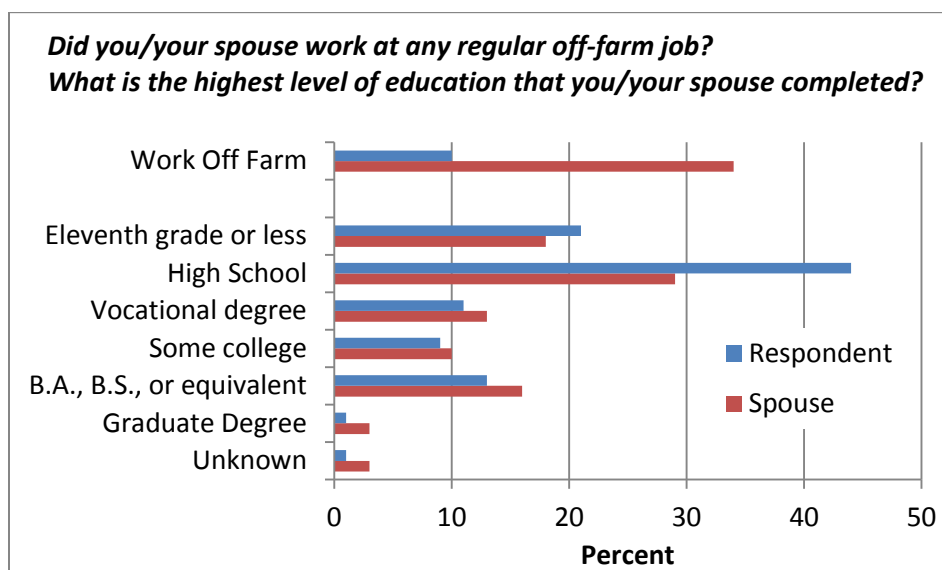
Of the respondents, the majority was male, 94 percent, and the average age was 51 years. Figure 1 displays the age when the respondent first became an operator, started to manage their current operation, and current age by 10-year increments. Thirty-two percent of operators are between the ages of 51 and 60, 28 percent are between 41 and 50 years, and 21 percent are over the age of 60. Today's farm managers first became a part of the operation at 21 years of age and started to manage five years later at 26 years of age. (Figure 1)

Figure 1 Age of Operator



Over one third of respondent's spouses work off the farm and are more likely to have a higher degree of education (Figure 2). Forty-four percent of respondents indicate a high school degree as their highest level of education; only 34 percent have education levels from a vocational to graduate degree. This is compared to their spouse where 42 percent have a higher level of education above high school. Just under half of the respondents have children less than 18 years of age; however, 57 percent of operators indicated their children have interest in continuing the farm.

Figure 2 Education and Off Farm Work by Respondent and Spouse



Operators were asked about their quality of life, 74 percent responded that they were satisfied or very satisfied with their current quality of life. When compared with five years ago, 44 percent indicated their quality of life is the same, while 28 percent indicated it has improved. Primarily, operators or their family do not actively participate in farm organizations; the highest level of participation was with the Iowa Farm Bureau (Table 2). As shown in the table below, other organizations respondents or their family participate in are 4-H or FFA, breed associations, or Iowa State Dairy Association.

Table 2 Farm Organization Participation

<i>Do you or members of your family actively participate in any of the following farm organizations?</i>	
Organization	Yes, percent
Iowa Farm Bureau	44
4H/FFA	36
Dairy Breed Associations	30
Iowa State Dairy Association	27
Commodity/Promotion Groups, such as Corn Growers or Cattlemen (dairy promotion groups, cattlemen's groups, corn growers, and soybean growers)	15
Northeast Iowa Community Based Dairy Foundation	13
Other farm organizations (DHIA, dairy promoters, coop board, PFI, etc.)	8
Western Iowa Dairy Alliance	6
Grazer's network or other grazing organization	4
National Farmers Organization	2
Iowa Farmers Union	1

Fifty-nine percent of dairy farmers got started in the dairy industry by farming with parents or in-laws who owned the farm under a sole proprietorship structure; only 14 percent of respondents purchased a dairy farm. Today, 69 percent of dairy operations are organized under sole proprietorship structure with the operators being a single individual or family; only 27 percent of operations are organized under a legal partnership or corporation.

In addition to producing milk, over 90 percent of operations also produce corn for grain or silage and forage including hay, haylage, or pasture (Table 3). Additionally, over half of operations produce breeding stock, small grains, or dairy beef.

Producers in Iowa utilize grazing to varying degrees; only 11 percent indicated they grazed intensively while 33 percent minimally grazed. Degree of grazing in an operation was respondent defined. Thirty seven percent of operations do not include grazing in their management. Only 7.5 percent of operations are identified as an organic operation.

Table 3 Commodities Produced on Farm, 2011

<i>Which commodities were produced on your farm in 2011?</i>	
Commodity	Yes, percent
Milk	99
Corn (grain or silage)	92
Hay, haylage or pasture	91
Dairy cattle breeding stock	69
Small grains (oats, barley, etc.)	53
Dairy Beef	50
Soybeans	49
Beef	14
Other livestock	8
Other crops	8
Hogs	7
Sheep	2

Growth in dairy operation herd size in Iowa has remained stagnant since 2006 with most operations below 250 head; 23 percent of operations are less than 50 head, 36 percent from 50 to 99 head and 26 percent have 100 to 250 cows for both 2006 and 2012. There has been limited growth in larger operations.

Operations were asked questions pertaining to ownership of young stock. Fifty six percent of farms raise their heifer calves; this is equivalent to 71 percent of heifer calves represented in the survey. Only two percent of farms custom raise heifer calves, representing 24 percent of heifer calves. This is similar to yearling heifers where only four percent are custom raised, representing only one-half percent of farms, the majority are raised on-farm. Custom raised heifer calves typically leave when they are less than six months of age and return between 12 to 24 months of age or less than 40 days to calving. Sixty-one percent of farms sell bull calves, of those farms 59 percent sell within one week of age while 20 percent sell bull calves between two to three weeks. Twenty-one percent of all farms sold and raised dairy steers. When selling steers, over half of farms sold between 12 to 24 months of age while 20 percent sell both in the 1 to 6 months and 6 to 12 months age brackets. This indicates that operations that sell dairy steers still invest time into raising the steers.

Production

The Holstein breed dominated as the primary breed on dairy operations at 80 percent of all operations with Jersey and cross-bred breeds coming in next at 6 percent each. Organic operations had a higher percentage of cross-bred and Jersey breeds as their predominate breed compared to all farms. Rolling herd average is the yearly average production per cow for a herd. As shown in Table 4, over 60 percent of all herds had a rolling herd average between 18 and 26 thousand. When evaluating based on breeds, Holstein herds predominately fall in 18 to 28 thousand pound rolling herd average range. Jersey herds have a rolling herd average less than 20 thousand pounds. When herd size increases, production increases; seventy percent of herds less than 50 cows produce less than 20 thousand pounds whereas same percentage of farms between 500 to 999 head produce between 24 to 30 thousand pounds. Additionally, organic operations have lower rolling herd averages, with 93 percent below 18 thousand pounds.

Producers are paid based upon component, fat, protein, and solids non-fat, levels in milk. As shown in Table 5, average fat percent in milk produced is 3.87 with Jersey and cross-bred herds having higher average counts compared to Holsteins. Also, protein percent is 3.17 percent average for all herds. Milk component values were slightly higher than the averages for all Iowa herds on Dairy Herd Improvement (DHI) test; these herds had an average of 3.69 percent fat and 3.09 percent protein. The average Somatic Cell Count in milk for all herds is 233 thousand which is lower than the mandated level of 400 thousand implemented in May 2012 and lower than the average of 271 thousand for all Iowa herds on DHI test.

Table 4 Rolling Herd Average, Breed Type

<i>What was your 2011 Rolling Herd Average for milk? (pounds per cow per year)</i>				
	All Herds	Holstein	Jersey	Cross-bred
Answer	Response, percent			
< 16,000	10.8	5.1	56.5	30.4
16-18,000	9.2	6.4	21.7	17.4
18-20,000	16.2	14.5	17.4	8.7
20-22,000	15.4	17.2	0.0	17.4
22-24,000	17.3	19.6	0.0	13.0
24-26,000	14.8	17.9	0.0	4.3
26-28,000	8.4	10.1	0.0	4.3
28-30,000	3.2	4.1	0.0	0.0
>30,000	1.3	1.7	0.0	0.0
Unknown	3.5	3.4	4.3	4.3
Total	100.0	100.0	100.0	100.0

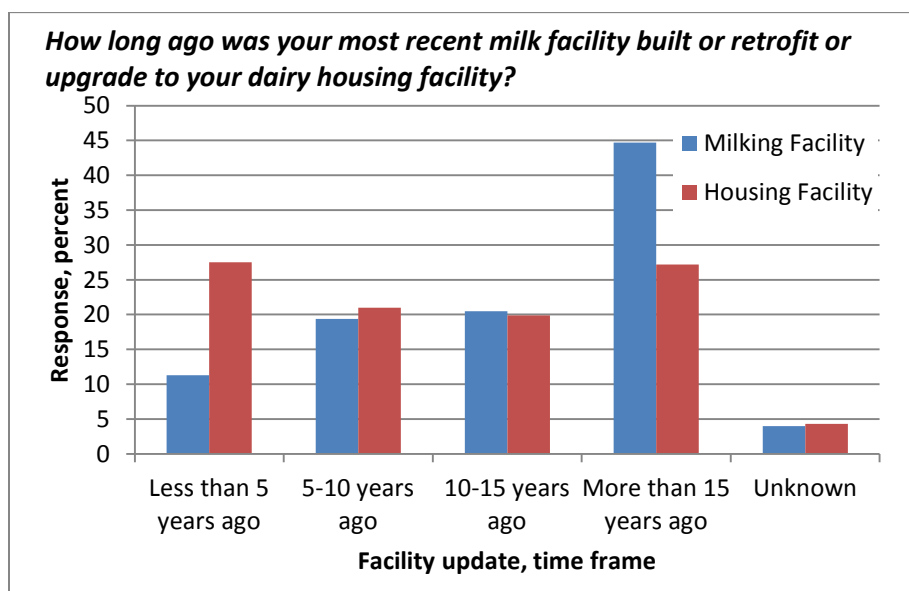
Table 5 Components and Somatic Cell Count Level, Breed Type

<i>What was your 2011 Fat Percentage, Protein Percentage, and Average Somatic Cell Count?</i>				
	All Herds	Holstein	Jersey	Cross-bred
	Response, average value			
Fat percent	3.87	3.76	4.67	4.18
Protein percent	3.17	3.11	3.60	3.16
Somatic Cell Count, thousand	233	234	227	241

Facilities

In reference to dairy operation facilities, 40 percent of operations are utilizing tie-stall or stanchion barns for their milking system. Herringbone and parallel parlors followed at 24 and 18 percent, respectively, in types of milking systems used. Herds less than 100 cows typically use tie-stall or stanchion milking systems; seventy-one percent of herds less than 50 cows and 53 percent between 50 and 99 cows use this system. In contrast to herds over 100 cows which commonly utilize, over 66 percent, a herringbone or parallel parlor facility. Rolling herd average was not directly correlated with type of milking parlor or housing facility; this could mean that other management factors are also important when determining production levels. Respondents indicated their milking facilities are older as 45 percent of operations built or retrofit their milking facility over 15 years ago (Figure 2). Over 70 percent of tie-stall or stanchion milking facilities have not been upgraded in the past 15 years compared to swing, parallel, para-bone, or robotic facilities that been updated more recently. Twenty-one percent of farms updated their milking facility 10 to 15 years ago and 19 percent upgraded five to ten years ago. Over 60 percent of operations

utilize freestall facilities for housing; other options included tie-stall and bedding systems at 33 and 28 percent, respectively. Smaller herds are utilizing tie-stall or stanchion barns while larger herds, over 100 cows, are utilizing freestall housing. As shown in Figure 3, housing facilities have been updated more recently compared to milking system facilities. Twenty-eight percent of operations have updated housing facilities in the last five years.

Figure 3 Recent Facility Upgrade, percent of operations

Dairy Farm Management

Respondents were asked questions regarding practices and records utilized in their operation. The main service operations seek from veterinarians is emergency care while care for sick animals and herd health are other services producers commonly utilize. When selling milk, over eighty percent of producers market milk through a dairy farmer cooperative. Computerized record keeping is a common practice on dairy operations as over 50 percent of operations use a computer to manage farm records.

Table 6 Dairy Management Practices and Technology, Use Rate

<i>Do you currently use any of the following dairy management practices or technologies?</i>	
Answer	Percent Use
Use a consultant to balance rations	79
Use Rumensin in rations	51
Use a synchronization program for reproduction	46
Compost mortalities	46
Use heat detection aids such as patch, chalk, etc	43
Use of photo period (long day lighting) to increase productivity	38
Use a shorter dry period (30-50 days)	34
Use sexed semen	33
Contract feed through a co-op or supplier	29
Utilize precision farming techniques such as GIS or GPS	22
Use futures markets or options	21
Participate in National Dairy FARM Program (Farmers Assuring Responsible Management)	20
Contract milk through a co-op or supplier	18
Use Posilac (rBST or BGH) on any milking cows	14
Milk cows three times a day	12
Test animals using genomics	9
Use a computerized heat detection system	8
Milk fresh cows more frequently	5
Use an automatic calf-feeding system	4

Seventy-four percent of herds keep records on individual cows; of those operations that keep individual cow records, 80 percent utilize DHIA records while 40 percent use PCDart. Operators employ a variety of practices and technologies to manage dairy cows and their operation. As listed in Table 5, common practices operations use include a consultant to balance rations, Rumensin in rations, synchronization program for reproduction, composting mortalities, and heat detection aids. Operations are less likely to engage in practices related to implementation of technology like automatic calf feeding or computerized heat detection systems.

Crop Management

The average acre base per farm has increased by eight percent for owned land and five percent for rented land from 2006 to 2011. The average acreage base for both owned and rented land is at 298 acres each in 2011. Total land base ranges from 287 for farms less than 50 cows up to 1,759 acres for herds with 500 to 999 cows (Table 7). Since 2006, acres per farm planted to corn silage increased by 23 percent and to small grains by 20 percent.

Table 7 Average Land Base per Operation by Herd Size

<i>Indicate how many acres of farmland you operated in 2011</i>						
Herd Size	< 50	50-99	100-249	250-499	500-999	> 1000
Average Acres per Farm by Herd Size, 2011						
Total acres owned and operated	176.1	219.7	416.1	438.4	727.6	744.3
Total acres rented and operated	110.9	209.6	276.6	550.8	1031.0	787.7
Acres in corn for grain	72.1	118.6	206.7	390.9	501.3	NA
Acres in corn for silage	18.1	38.2	71.7	177.7	468.0	772.5
Acres for hay or haylage	40.0	68.7	123.6	178.6	390.0	NA
Acres of oats, barley or other small grains	14.9	23.7	44.2	63.1	139.0	NA

Over fifty percent of operations custom hire fertilizer and herbicide application. Forty-five percent of operations custom hire hay baling while about one-third of producers custom hire silage chopping, combining corn, and manure pumping and spreading.

Manure Management

Operations were asked several questions regarding manure handling and management. Tie-stall or stanchion operations predominately put manure directly into a spreader or spread daily and leave manure in barns or building. In contrast, free stall operations primarily utilize a lined structure for manure storage. Twenty percent of operations have a written nutrient management plan, while 84 percent indicated they adjust the rate of commercial fertilizer application based on estimate of nutrients in manure. When assessing manure nutrient content, 33 percent use book values and only 25 percent test yearly. When spreading manure, only 54 percent of operations calibrate manure application equipment to determine application rate.

Employee and Family Labor

Challenges producers face when trying to hire a qualified employee are willingness to work needed hours, reliability, meeting desired wage levels, and immigration issues. Seventy seven percent of operations utilize full-time, immediate family labor compared to just over 60 percent as part-time labor. For all farms, the number of immediate family working on the farm for both full and part time is just over two people per category. As the herd sizes increases, the number of immediate family workers increases to almost three. Year round workers on dairy farms averaged over 5 for all farms and increased substantially as herd size increased. Both year round and seasonal part time averaged over two individuals for all farms. In regards to hours worked per week, full-time immediate family and hired workers log more than 50 hours per week while part-time laborers log 17 to 22 hours per week. When evaluating who has responsibility of various management areas for the operation, owners make the majority of the decisions. Typically, owners or herdsman will allow someone else to take on the responsibility of hoof care or genetics and mating.

Information Sources

Operators primarily use veterinarians, dairy nutritionists, and other farmers as information sources for farm management and production issue information. Operators identified dairy nutrition consultants as the primary information source for dairy farm management and production issues.

Producers preferred method to obtain farm management and production issue information is through magazines. Fifty-six percent of operators utilize the internet for farm management information. According to Table 8 at right, mastitis prevention and treatment, reproductive management, and basic nutrition are the top three topics which need more programming for producers in Iowa.

Table 8 More Training Needed in Iowa for Producers, Rank by Response

<i>Which of the following topics do you think should have more training available in Iowa?</i>	
Answer	Yes, percent
Mastitis prevention and treatment	51.8
Reproductive Management	48.8
Basic nutrition	45.8
Crop Production for Dairy Feed	44.2
Calf feeding and young stock management	43.4
Vaccination, herd health and treatment	42.3
Financial Record Keeping and Analysis	39.9
Housing, Bedding, and Ventilation	39.1
Locomotion and hoof care	32.6
Herd Record Keeping	31
Specialized management for free stall facilities	30.2
Robotic Milking	26.4
Feed Bunk Management/Feed Mixing	25.9
Automatic Calf Feeding	24.5
Specialized management for grazing dairies	24.5
Calibrating manure application equipment to determine application rate	22.4
Specialized management for organic dairies	19.7
Body Condition Scoring	17.3
Handling and Sorting	13.7

Issues in the Dairy Industry

Respondents answered questions pertaining to the impact of and their level of agreement with current issues. Commodity prices and increased milk price volatility are two conditions that have some impact on farm businesses while operations perceived the dairy check-off had low to no impact on operations. Operators had a strong agreement that family-operated dairy farms are essential to the future of rural Iowa. Additionally, over 50 percent of respondents agreed with the statement that they would encourage their children to become dairy farmers. Operators also agreed with the statement that what they feed to their cows can affect the taste or flavor of the milk.

Future of Dairy Industry

Participants were asked questions pertaining to future plans for their dairy operation. Thirty-two percent indicated they plan to expand their herd, 63 percent of those expansions are planned to occur in the next five years. Herd expansion equaled average growth by 86 head; when segregated by herd size; average herd expansion is at least by 40 percent for all categories. In regards to updating facilities, 43 percent indicated they plan to update calf or heifer facilities. With the exception of adding robotic milking systems, 50 percent or more all respondents who plan to make facilities changes expect to make them in the next five years.

Table 9 Projected Facility Expansions or Upgrade, Time Frame

<i>Do you plan to expand or update any of the following within the next 15 years?</i>					
Response, percent	Plan to expand or update	In less than 5 years	In 5-10 years	In 10-15 years	Do not plan within 15 years
Expand your herd? EXPAND BY HOW MANY? _86.4_ Head	32	63	29	8	50
Update freestall barn?	29	54	33	13	55
Install robotic milking system?	14	25	40	35	68
Update manure storage?	29	50	37	13	54
Update calf/heifer facilities?	43	56	32	12	42
Update transition/dry cow facilities?	32	54	29	17	51
Update parlor? (see text file)	22	53	34	13	59

*'In less than 5 years', 'In 5-10 years', and 'In 10-15 years' equals 100 percent and is a percentage of 'Plan to expand or update'.

Today's operators plan to stay in the business as the majority of respondents do not plan to retire, discontinue milking, or sell the operation in the next 15 years. When responding to questions regarding options and programs for beginning farmers, 75 percent indicated low cost loans should be made available to beginning dairy producers and 83 indicated educational meetings for these producers possibly or definitely should be made available.

Comparative Analysis of the Iowa Dairy Industry

Industry demographics and assessment has been completed in the past through Iowa State University (ISU) and United States Department of Agriculture (USDA). Dairy industry surveys have been conducted by ISU Extension in 2000 and 2005; however, the 2000 survey only covered 19 counties in Northeast and North central Iowa. The USDA performs a census every five years; the most recent data available is from 2007. The results from these studies are compared to the 2012 Iowa Dairy Industry Survey below.

2007 Census of Agriculture - USDA

Based on 2007 Census of Agriculture data, 48.8 percent of dairy farms in Iowa had less than 50 head of milk cows, over double the response from the ISU survey for all years. When comparing to the census, the demographic of the primary operator in Iowa is representative to the national industry. The U.S. Census in 2007 recorded the average age of operator at 52 years which is one year greater than the survey average, and 94 percent of operators were male in both studies. Also, nationally 87 percent declared farming as their primary occupation; this can be compared to 88 percent of Iowa survey respondents who do not have an off-farm job. According to the census, just fewer than 80 percent of farms were organized under a family or individual; this is higher than Iowa operations coming in at 69 percent. Compared to the U.S. in 2007, a slightly greater percentage of farms are currently organized as a corporation in Iowa. According to the U.S. Census, the sample of farms in the Iowa Dairy Industry survey were larger than the average, but the operator demographics were very similar between at the state and national level.

ISU Extension Dairy Industry Survey, 2000 and 2005

The 2012 Iowa Dairy Industry Survey included similar information to surveys completed in 2000 and 2005; therefore, we can draw comparisons between the results.

Operation Demographics

The average herd size in 2000 was 76 cows with 52.3 percent of herds between 50 and 99 head and 17.7 percent of herds over 100 head. The current distribution of herds has changed with more herds in the larger herd size categories. Currently, 36 percent of herds have between 50 and 99 head and 39 percent over 100 head in 2012. Along with herd size growth, crop acres have increased by 228 acres since 2000. In 2000, operations had 368 total acres, owned and rented, compared to 596 in 2011 (Table 10). Acres in corn have doubled and corn silage almost quadrupled from 2005 to 2011. In reference to custom field operations, custom hire fertilizer application, chemical or herbicide application, and hay operations were the top three operations hired out in both 2000 and 2011.

Table 10 Farmland Operated, 2000, 2005, and 2011

<i>Average acres of farmland operated</i>			
Crop Acre Type	2000	2005	2011
Average acres owned	220.4	255	298
Average acres rented	155.2		298
Acres for corn	~120	67	163
Acres for corn silage	~30	20	79
Acres for hay/haylage	~85		98

Production has increased over time; both 2000 and 2005 reported average Rolling Herd Averages close to 20 thousand pounds while 60.4 percent of farms in 2012 produced at levels over 20 thousand pounds.

Operator Demographics

As shown in Table 11, the average age of the producer has increased by five years since 2000. Between the surveys, the percent of operators working off the farm has remained the same while the percent of spouses working off the farm has decreased by 10 percent. Across both surveys, predominately the highest level of education of the operators was high school; however, the percentage of respondents obtaining education above a high school degree has increased.

Table 11 Dairy Farm Operator Characteristics, 2000 and 2012

<i>Dairy farm operator characteristics</i>		
Operator Characteristic	2000	2012
Average age of principal operator, years	46.1	51.1
Average age when first become a farm operator, years	21.4	21.6
Average age when took over current farm, years	25.9	26.4
Current farm was originally owned by parents/got started with parents or family, percent	66.8	70.7
Participation in off-farm employment – operator, percent	10.0	10.2
Participation in off-farm employment – spouse, percent	44.1	34.0
Family's quality of life – very or somewhat satisfied, percent	78.7	74.1
Family's quality of life – become much or somewhat better during past 5 years, percent	35.6	36.7

Since 2000, the percent of farms organized under a sole proprietorship has decreased by 12 percent, but the percent of farms in a partnership or corporation have increased by two and 11 percent, respectively. As shown in Table 12, farms in Iowa predominately use family labor as over 20 percent of operations hire non-family labor in both 2000 and 2012.

Table 12 Farm Enterprise Characteristics and Labor, 2000 and 2012

<i>Farm enterprise characteristics and labor</i>		
	2000	2012
Organization of farm enterprise	Response, percent	
Single family or individual operation	81.5	69.3
Partnership	9.6	11.6
Corporation	4.3	15.6
Other	4.6	1.5
Labor		
Hire regular non-family employees	21.4	25.9 (part-time) 29.9 (full-time)

Facilities and Management Practices

Compared to 2000, producers have moved out of stanchion or tie-stall barns, percent of operations milking in a stanchion or tie-stall barn had decreased from 75.5 to 39.6. And the percent of farms using freestall barns for housing has increased from 31.2 to 60.6 percent.

As shown in Table 13, producers are not likely to adopt new practices or technologies; there was a small percent change for most practices that were included in both 2000 and 2012 surveys. In regards to manure storage handling, an increasing percent of operations use a lined structure and decreased percent put manure directly into a spreader or spread daily since 2000 (Table 14).

Table 13 Dairy Management Practices and Technologies used, 2000, 2005, and 2012

<i>Dairy management practices and technologies used</i>			
	2000	2005	2012
Management Practice or Technology	Response, percent		
Use Posilac (rBST or BGH)	23.6	21	14.0
Milk cows three times a day	1.7	4	12.4
Use a shorter dry period		54	34.2
Use consultant to balance rations	73.9		79.2
Use precision farming techniques	19		21.8
Contract milk through co-op or supplier	9.1		17.5
Uses regularly scheduled vet visits/utilize vet for herd health	68.3		78.2
Keep production records on individual cows	59.4		74.4
Use a computer to manage farm records	64.5		51.8
Access the internet for farm information	46.5		56.3

Table 14 Manure Management Practices, 2000, 2005, and 2012

<i>Manure management</i>			
	2000	2005	2012
Manure Handling Practices	Response, percent		
Directly in spreader or daily spread	53.3		43.9
Leave manure in barn/buildings			55.8
Manure pack	8		
Pile manure on ground or slab	13		58
Store in unlined manure storage basin			18.4
Store manure in lined structure	23.4		53.4
Other	2.5		3.2
Written Nutrient Management Plan	23.3	13	19.7

Future of the Dairy Business

Forty percent of respondents in 2005 indicated that bringing in a family member was in their transition plan; the same percentage indicated transferring ownership to a family member will occur in the next 15 years. In 2005 there was stronger support for consideration of leasing facilities or being a mentor or partner with a beginning dairy producer compared to 2012.

Conclusion

When comparing survey results, the dairy industry has progressed in the past twelve years. Currently, the typical herd in Iowa has less than 250 head, predominately of the Holstein breed, and has between an 18 and 26 thousand pound rolling herd average. While producers are still milking in tie-stall or stanchion facilities, a growing number of operations have pit-type parlors, typically with herringbone or parallel stalls. Additionally, producers have transitioned into freestall housing facilities and out of tie-stall or stanchion barns in the past decade.

Producers utilize various management techniques across the operations; however, the most commonly used practices revolve around feed and reproduction management. Operations are farming more acres today compared to 2000, but a similar rate of farms still custom hire some field operations compared to 12 years ago.

Implementation of manure application management practices varies as a high percentage of operations adjust the rate of fertilizer applied to fields but under half of operators calibrate manure equipment or test manure for nutrient content. Operations still highly rely on family labor, as just over one-fourth of operations hire full or part time help.

Operations have primarily been organized as a sole proprietorship structure while most operators get started with their parents or in-laws. The average operator is in their 40's or 50's and is male with a high school level education. Operators are generally not active in community or industry organizations, but typically are satisfied with their family's quality of life.

Only about one-third of operations plan to expand their herd, while over 30 percent plan to update calf and heifer or transition and dry cow facilities within the next 15 years. A majority of the operators do not plan to exit the industry in the next 15 years; however, 40 percent of operators plan to discontinue milking and continue farming and 39 percent plan to transfer ownership of the dairy operation to a family member in the same time frame. These results show that farms are still predominately small in size, family oriented, and plan to remain in the industry.

The length of the survey may have caused a bias in the results due to amount of time required to complete. Time is a valuable commodity for dairy producers, and finding additional time may have cause a reduced response rate. Additionally, the paper based, mail survey could have created a bias in the survey for producers who are more computer oriented. The timing of the survey was during a period of low milk prices which may have caused bias in some of the responses to the questions concerning industry issues. The survey did however capture the picture of the Iowa dairy industry and reveal opportunities for educational programming.

A vast amount of information is available to be extracted from the Iowa Dairy Industry survey. This survey information can be further interpreted to analyze on a cross-section basis, possible analysis includes looking at data by age, education level, size of farm, and type of milking system. This type of analysis will help educational institutions and industry further define the potential future of the industry and needed areas of education. Additionally, more abbreviated, topic focused reports can be extracted from the general results outlined in this report and from further analysis.

The opportunities for industry, educators, and the public to learn about the Iowa dairy industry from this survey are numerous. This survey was organized by ISU Extension under the direction of Dr. Leo Timms and Jenn Bentley. Their direction and guidance on this project is greatly appreciated. Additionally, extension received generous support from industry collaborators that helped to make this project a success. The ISU Extension Dairy Team would like to thank Brickle Brothers, Foremost Farms USA, Iowa Farm Bureau, Land O Lakes Purina Feed, Midwest Dairy Association, Northeast Iowa Community College and Vi-Cor for their support.

... and justice for all

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