In the Land of Milk and Money: One Dairy Farm's Strategic Compensation System

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Abstract: *Farm businesses need to attract, retain and motivate valuable workers, and meet productivity and quality goals in order to achieve their strategic objectives. Willow Bend Farm, a dairy operation run by the Mueller family in upstate New York, created and implemented a strategic compensation system to help achieve farm growth over its nearly forty-year history. This paper is a case study of Willow Bend's total compensation system from 1957-1996, during which time the farm experienced tremendous growth. The owners of Willow Bend Farm implemented an array of compensation programs over this time period, including a unique worker cow-ownership program that, by design, increases workers' initial investments as new calves are born. Other incentives target key behaviors necessary to farm success.*

Key Words and Phrases: *Compensation, human resource management, dairy farms.*

George Mueller, long-time owner of Willow Bend Farm in upstate New York, sums up his management and human resource practices in the early days of his farm, established in 1957:

> ...you [the owner-manager] make all the decisions and they [the hired workers] supply the muscle. The owner supplies the judgment. In those days if I shook a prospective employee's hand and felt a pulse, I hired him.

A flash forward to a much larger and profitable Willow Bend Farm in 1996 reveals production processes that rely on worker knowledge and judgment. Guided by a mission statement that reads, "...to be among the best in the Northeast at providing large quantities of quality milk at a low cost to the consumer," Willow Bend has implemented a range of well-developed human resource policies.

This is a case study of a subset of these policies, namely Willow Bend's strategic compensation system, which includes base wages and noncash benefits, a unique worker ownership program, and several targeted, supplemental incentives. Overall, Willow Bend's compensation system is designed to meet two sets of goals:

1. Attracting, retaining and motivating valued employees to meet quality and productivity goals (Milkovich and Newman; Hills, Bergmann and Scarpello).

2. Addressing specific production goals directly related to the dairy farm business.

Each of these sets of goals is presented and discussed in turn. After this, we introduce Willow Bend Farm and its compensation system in the "Farm Description" section. Following the farm description, we discuss how the compensation system changed over time. Third, we outline the base pay and benefits package provided at Willow Bend Farm, followed by a discussion of the supplemental incentive programs offered at Willow Bend. This discussion considers alternative solutions to the issues addressed by the compensation system. Finally, we discuss additional human resource activities used by the Muellers to achieve success in their farm business.

Attraction and Retention

Farms employ graduates of two- and four-year colleges and universities with majors in animal and plant science, as well as individuals with a high school education or less. One of the biggest challenges faced by farm employers is attracting and retaining workers in rural areas (Howard et al.). Rural New York state is not an exception. Dr. Charles Elrod, a senior extension associate in the Cornell University Animal Science Department comments that "...a substantial number of dairy farms find it hard to keep milkers for more than a few months at a time" (Elrod). Workers often move to other jobs in the community and/or the local municipality because they perceive farm work to be too difficult for the money earned. That is, a farm job is often viewed as low paying and physically arduous as well as requiring uneven, long hours. Given stagnant milk prices, farms are often unable to offer the premiums necessary to overcome these negative perceptions.

In addition, the migration of young people out of rural areas, as a result of a decrease in the number of farms, has reduced the pool of available workers. In turn, the reduction of the size of the applicant pool has reduced penalties for leaving a farm job, since it is likely that another such job can be found fairly easily.

Productivity and Quality Goals

Similar to many non-farm private sector employers, farm employers are working to improve the productivity and quality efforts of their workforce (Rosenberg and Cowen). On a dairy farm, key productivity indicators are milk sales and the pounds of milk produced per cow. The primary quality indicators on a dairy farm are the bacterial count, somatic cell (infection-fighting white blood cells) count, and the levels of sediment, water and antibiotics in the milk (Bath et al.; Webster).

Employee behavior directly affects these measures of productivity and quality, but the behaviors are not always observed by the managers since managers and employees

may perform work in different locations on the farm. Examples of employee behaviors important to productivity and quality include attention to cleanliness (e.g., keeping stalls raked), using hot water and sufficient soap to keep equipment clean and sanitized, fixing equipment problems that occur during milking, and dipping teats in iodine and wiping them with a clean cloth before and after milking to decrease the incidence of mastitis (Etgen, James and Reaves).

To solve the problems of attraction/retention and increasing productivity while maintaining or increasing milk quality, Willow Bend has necessarily adapted and changed its compensation system over time as the farm has changed.

Farm Description

George and Mary Lue Mueller started Willow Bend Farm in Clifton Springs, New York, in 1957. They began small—under 100 Holstein cows and two employees—but have gradually expanded to own the largest dairy farm in their county, and one of the larger farms in New York state. They are part of two recent trends in New York state dairy farming: 1) decreases in the numbers of small farms and 2) increased competitive pressures to improve productivity.

The Muellers have expanded their farm four times since the start of their operation: 1976, 1982, 1988 and 1994. From 1960 to 1976 the Muellers worked hard to pay down their debts in order to ready the farm for expansion. In 1976, the Muellers built their first 200-cow barn and employed three employees. In 1982 they moved to 400 cows and eight employees. In 1988 they built another 200-cow barn and employed thirteen workers, and in 1994 they added a 300-cow facility. Currently they own 1,000 milk cows and employ nineteen workers.

As the farm has grown, the Muellers have updated their milking equipment and facilities several times. Their first milking system was an eight-stanchion flat barn (i.e., eight stalls) with four milking units. Under this system, four cows were milked at one time in one area, and the other four stalls held the next round of cows to be milked. Next they moved to a milking parlor in which up to fourteen cows could be milked at one time, and currently they milk with a double twenty modern parallel parlor in which forty cows can be milked at one time with only two operators. At present, the farm is structured as a partnership, with all immediate Mueller family members as partners. George and sons John and Steve are the operating partners. Until 1991, George and Mary Lue were the sole proprietors of the farm. Mary Lue continues to work as a partner and bookkeeper for the farm, while George has been promoted to chairman of the board.

Table 1 compares the performance of Willow Bend Farm with other large (more than 300 cows) dairy farms in New York state. Willow Bend Farm compares favorably with other large dairy farms in the state with a higher herd average, higher hay and corn silage yields, and higher percent equity than other farms. Also, Willow

Table 1.
Comparison of Willow Bend Farm with Average Large NY State Dairy Farm (1995 figures)

Productivity Indicator	Willow Bend Farm	NY Average[a] (over 300 cows)
Herd Average (lbs/cow/year)	24,000	21,766
Labor Efficiency (cows/worker)	45	46
Crop Yields (tons/acre)		
Hay dry matter	4.5	3.4
Corn Silage	18.0	17.4
Hired Labor Costs ($)		
Per Cow	587	506
Per Cwt.	2.53	2.67
Equity to Asset Ratio	75	54
Debt per cow	$1,100	$2,574
Total Costs ($)		
Per Cow	2,982	2,760
Per Cwt.	12.83	12.68

[a]Source: Karszes, Smith, and Putnam (1996), *Dairy Farm Business Summary: New York Large Herd Farms, 300 Cows or Larger.*

Bend has lower labor costs per hundred pounds of milk produced and less debt per cow. However, Willow Bend has slightly higher total costs per hundred pounds of milk produced, although George reports that their profitability in 1995 was about the same as the average for other large-herd dairy farms.

An integral part of the success of Willow Bend Farm has been its workers. There are four different jobs at Willow Bend supervised by the managing partners: milker (barn crew worker), herd manager, field crew worker and crop manager. There is not a standard work week, although the field crew normally works sixty hours per week or more from April to mid-October and about forty hours per week the rest of the year. Milkers work about fifty hours per week year round. If the milkers want to work more hours, they are permitted to care for the young stock or work as part of the field crew. Being a farm business, Willow Bend is not subject to the overtime provisions of the

Table 2.
1995 Actual Annual Compensation for Four Farm Jobs

	Crop Manager	Field Crew Worker	Herd Manager	Milker
Hourly Wages times	$14.00	$8.00	$13.00	$8.00
Hours Worked	3200	2600	3000	2600
Base Pay plus	$44,800	$20,800	$39,000	$20,800
Incentives				
Field crew	$700	$700	N/A	N/A
Quality	N/A	N/A	$1,100	$1,100
Heat	N/A	N/A	$2,600	$1,000
Total Cash Compensation	$45,500	$21,500	$42,700	$22,900

Fair Labor Standards Act. Table 2 provides a summary of these jobs and their respective pay rates.

Willow Bend's human resource management system developed and shifted over time as the farm and numbers of employees grew. In the early years, with only a few cows to milk, George provided the day-to-day management and supervision of employees, and found this task to be fairly easy. With the first expansion in 1976, the Muellers realized they needed high-quality workers who could share the management of operations with George. With additional expansions in 1982 and 1988, they realized they needed a way to maximize the productivity and quality of work of non-management employees.

Along the way, the Muellers designed compensation programs to supplement base pay. These programs include the following:

- A worker cow-ownership program (WCOP).
- Incentives for high quality milk production.
- Incentives for noticing cows in heat that need to be bred.
- Incentives for achieving field crop production goals.

Compensation System Varies with Farm Strategy, Ability to Pay

The Muellers have structured their compensation system to help them achieve their primary organizational goal of growth in farm size. Historically, Willow Bend's growth rate has changed from start-up and a moderate level of growth, to high growth,

to a sustained rate of growth at present, and the Muellers have tailored their compensation system to match these three stages of growth. The Muellers have experienced varying degrees of liquidity and cash flow at the three growth stages. For example, in the early days, there was little cash available to provide benefits such as health care, since most cash was invested in new equipment or buildings, or used to pay down debt. Table 3 presents the Muellers' compensation system from the start-up stage until today.

The success of the compensation system and related human resource policies of Willow Bend Farm over time is evidenced in the continued growth of Willow Bend Farm, its consistent profitability, an award-winning milk quality record, low turnover of workers, and requests to work at Willow Bend from individuals with formal agricultural training. According to Dr. Elrod, the Mueller's pay programs have resulted in employee tenure rates far above the average for New York dairies (Elrod). Dr. Elrod believes this enhanced employee retention gives Willow Bend Farm a competitive advantage over other dairies in the region. Table 4 presents the changes that have occurred for a number of performance measures as the farm has grown and the compensation system developed. Overall, Willow Bend has witnessed improvements in employee turnover, labor efficiency, employee tenure, employee satisfaction, herd productivity and farm profitability. The average number of milk quality awards declined slightly from Stage 2 to Stage 3. George explains that it is more difficult to maintain quality on a larger farm. However, he believes the quality incentive program is essential for prevention of more substantial drops in quality as farm size increases.

Base Pay and Benefits

The Muellers pay an hourly wage to their employees that ranges from a $6.00 per hour starting wage to $8.50 per hour. The Muellers set the non-management wages to meet the wage levels paid by their local municipality and quarry, and they believe that paying less than $6.00 per hour would make it difficult to recruit workers. Managers can earn up to $14.50 per hour. The Muellers pay evening (3 p.m. to 11 p.m.) and night (midnight to 8 a.m.) shift premiums of $0.75 per hour, since these shifts are more difficult to fill than day shifts. Two weeks of paid vacation and six personal days are offered by Willow Bend Farm each year.

The Muellers supply single coverage health care for workers, and employees pay extra for spouse and family coverage. Managers receive full family health care coverage. Willow Bend's cost per employee per month for health care costs is estimated to be $150.00.

Another benefit provided by Willow Bend Farm is housing. Similar to other large farms, Willow Bend has expanded through the purchase of smaller farms in the area and accumulated houses they cannot use. These houses are offered to employees. At

Table 3.
History of Compensation Programs and Other HR Activities at Willow Bend Farm

	Stage 1 1957-1976 (1976 expansion) Start-up & Moderate Growth	Stage 2 1977-1991 (1982, 1988 expansions) Rapid Growth	Stage 3 1992-now (1994 expansion) Sustained Growth
Worker Cow Ownership Program (WCOP)	--	very active[b]	active
Milk Quality Incentive[a]	--	active	active
Heat Incentive	--	active	active
Field Crew Incentive[a]	--	--	active
Hourly Wage	active	active	active
Night Pay Premium	--	active	active
Housing	active	active	active
Health Care	--	--	active
Performance Reviews	--	occasional	very active
Formal Training	--	occasional	very active
Staff Meetings	--	--	very active

[a]In stage 2, the field crew was eligible for the milk quality bonus; in stage 3, the field crew was ineligible for the milk quality bonus.
[b]Very active means that management emphasis and employee participation high. Active means that management emphasis and employee participation moderate. Occasional means that management emphasis and employee participation low.
-- Program not in existence.

Willow Bend, the Muellers deduct $500.00 per month from employee wages to cover part of the rent and utilities. George explains costs and benefits to the farm of this arrangement:

Table 4.
Changes in Performance Measures Across Development Stages of Willow Bend Farm

Performance Measure	Stage 1 1957-1976 (1976 expansion) Start-up & Moderate Growth	Stage 2 1977-1991 (1982 & 1988 expansions) Rapid Growth	Stage 3 1992 to now (1994 expansion) Sustained Growth
Annual Employee Turnover[a]	40%	35%	25%
Labor Efficiency (cows/employee)[a]	35	40	45
Average Employee Tenure (years)[a]			
-managers	--	6	10
-others	4	3	5
Estimate of Employee Satisfaction[b]			
-managers	--	medium	high
-others	medium	medium	medium to high
Herd Average[a] (lbs/cow/year)	11,000	18,000	24,000
Milk Quality Awards Per Year - 12 possible	10.5	10.5	10.0
Overall Profitability[a]	medium	medium	high

[a]Willow Bend Farm Records.
[b]Estimated by George Mueller

> The benefit for us is that the employee is available to look after things and chase the cows when the cows get out. The loss is that at $500.00 a month, we will never cover the cost of owning [the houses].

The estimated annual cost per employee for the housing benefit is estimated to be $500.00. This has increased from $350.00 per year in Stage 1 and $450.00 per year in Stage 2.

Several other low-cost benefits help make Willow Bend a desirable place to work. The biannual beef give-away, in which employees receive a quarter of beef twice a year, is one of the more popular benefits. Birthdays are recognized with lunch parties

on work time, and the Muellers organize and pay for annual dinner outings with employees.

Innovative Compensation Programs

The Muellers designed innovative pay programs to address their attraction/retention and quality/productivity challenges. A discussion of four supplemental incentive programs follows: 1) worker cow-ownership program (WCOP), 2) quality incentives, 3) heat incentives, and 4) field crew incentives.

Worker Cow-Ownership Program (WCOP). George's rationale for developing the worker cow-ownership program is an old farm saying: "It's the eye of the owner that fattens the calf." Since 1977, WCOP has enabled employees to purchase and raise their own cows at Willow Bend Farm. The Muellers believe it is important for employees to own cows in the herd for reasons often found in the compensation management literature. George explains,

> ...If you are financially involved in the business, you're going to do a better job....the employees have their own animals and it causes them to look after the cows with more interest because they have a financial stake in the cows' health and productivity.

For example, cow owners will often assist with the birth of calves from their cows even when they are not working the shift during which the birth occurs. Cow owners, even those who work in the field crew, will tend to watch their cows closely for evidence that the cows are in heat, since their investment will grow as calves are born. In addition, the Muellers have observed that employees who own cows tend to monitor other employees' care of the animals. Because WCOP encourages employees to breed their own animals and tend to them more closely, George believes he has a higher quality herd than if only "run of the mill" animals were purchased from an outside supplier.

Beyond enhancing employee performance and herd quality, George believes WCOP has helped his farm establish a reputation as a good employer because Willow Bend is one of the few farms in the area that has such a program. This reputation has proven valuable for recruitment and retention of high quality employees. George explains:

> I think we have established a reputation for being a good employer. We had an article written about [us] in *Hoard's Dairyman*, a dairy trade magazine (Benedict). As a result of that article, I have had three or four people write to me asking about [employment opportunities] at our farm.

> And I think the word in the neighborhood is that we treat our people well. We have people waiting to work here, which is a rather unusual situation in farming.

All employees of Willow Bend Farm are eligible to participate in WCOP through two methods: 1) buy a calf (not yet giving milk) for $175.00 or 2) buy a cow ready to produce a calf and give milk for $1,100.00. An initial investment is largely self-perpetuating, since cow owners keep all calves born from their animals. (Table 5 summarizes the life stages and corresponding market values of a Holstein cow). Female calves are kept as future milkers; male calves are sold for veal. Employees may leave Willow Bend with their cows to start their own farms or they may sell their animals back to Willow Bend Farm for $1,000.00. The potential competition from former Willow Bend workers who may start their own farms nearby is not a serious issue since one additional producer of milk does not decrease the price that Willow Bend receives for its milk. In addition, George feels the benefits of WCOP far outweigh any potential competitive threat from a few new farms.

Table 6 illustrates the cash flows involved with WCOP for the case of a hypothetical employee who purchases two cows to start his/her investment. Calf ownership costs the employee $1.05 per day to cover feed and other expenses. After two years, the cow is ready to "freshen" or have a calf for the first time. The employee pays for the breeding, which is approximately $40.00. After the cow begins to give milk, the Muellers pay $25.00 per month ($300.00 per year) in rent to the cow owner. This $25.00 monthly rent payment considers the purchase price of a "fresh" cow, its depreciation and its resale value as beef. The farm receives the milk profits from these cows, net of rent paid.

Out of the nineteen current employees, nine own cows on the farm. Cows owned by these employees total approximately 70 out of 1,000, or about 7 percent of the herd. George feels this current 7 percent figure is too low to maximize the benefits of the WCOP, and may revisit the finances of the arrangement in order to encourage more employees to participate. He would like additional employee ownership because the key to the success of this program is that employees own enough of the operation to work harder for its success. George has not found a need to set a maximum limit on the percent of the herd owned by workers.

Since the middle of the 1980s, workers on Willow Bend Farm have owned 350 cows and 175 heifers. Two hundred-eighty three of these cows have left the farm and the remainder are either owned by current employees or were sold back to the Muellers.

The Muellers considered two alternatives to WCOP before implementing it. First, they considered paying a premium wage to all employees, reasoning that such a wage would attract better workers who would take better care of the animals and who would be able to work independently. However, they were already attracting these high-quality workers and still felt they needed a targeted incentive to motivate workers to provide extra care and attention to the animals. The second alternative considered was

Table 5.
Life Stages and 1995 Market Value of a Holstein Cow

Life Stage	Duration	Market Value
Calf	1 year	$175 - $600
Heifer	1 year	$600 - $1,100
Producing Cow	3 1/2 years	$1,100 - $400[a]
Cow Sold for Beef	N/A	$400

[a]Decrease in value of cow over time from $1,100 to $400 reflects decreasing number of years available for cow to produce milk.

closer scrutiny and coaching of workers by the Muellers and their managers regarding workers care and management of the animals. This alternative was considered impractical in that the labor of partners and managers was needed to run the farm, with no extra time available for additional monitoring. In addition, George felt that micro-management of the workers did not fit with his management style.

Quality Incentives. It is fairly common for milk processors to offer quality incentives to their dairy farm suppliers, and larger dairy farms have begun to distribute this incentive to employees. The milk processor to whom the Muellers sell their milk pays a bonus based on the quality of the milk as judged by criteria such as low bacteria, somatic cell, and sediment counts. When earned, this bonus amounts to approximately $1,200.00 per month for the farm, and it is split equally between the twelve workers who milk and feed the cows, for a bonus of $100.00 per worker per month. If the farm can qualify for the bonus for three consecutive months, then the milk buyer doubles the bonus, which translates into a $200.00 milk quality bonus per employee for that month.

The decision to split the quality bonus equally among full-time milkers was based upon the nature of the production process—the fact that all milk produced is shipped together to the processor.

By distributing the quality bonus directly to employees, the Muellers hope to encourage employee behaviors to ensure high milk quality. For example, employees can wipe udders clean and dip teats before and after milking to ensure that milk is not contaminated. Milking employees who work closely with the animals can prevent shipment of milk from cows with mastitis (infection of udder), which tends to have a high somatic cell count. More generally, employees who share in the milk-quality bonus may perform tasks outside their specific jobs, such as taking more care with the milking equipment during the clean-up and washing process that occurs three times per day.

Table 6.
WCOP Cash Flow Analysis for 5 Year Time Period for Hypothetical Employee Who Begins Program with 2 Cows

Summary of WCOP investment at end of 5 years:	
Investment (2 pregnant cows x $1,100 each)	-$2,200
Present Value of Inventory at Year 5	$2,460
Present Value of WCOP Net Revenue, Years 1-5	$ 752
Net gain from WCOP after 5 years	$1,012

Supporting Calculations:

	Year 1	Year 2	Year 3	Year 4	Year 5
Cash Inflows:					
Cow Rent ($300/year)	$600	$600	$900	$600	$900
Beef Sales ($400/cow)	$0	$0	$800	$0	$400
Veal Sales ($25/male calf)	$25	$25	$25	$25	$25
Total inflows (a)	$625	$625	$1,725	$625	$1,325
Cash Outflows:					
Calf Costs ($1.05/day)	$383	$767	$767	$767	$767
Breeding Fees ($40/conception)	$80	$120	$80	$120	$120
Total outflows (b)	$463	$887	$847	$887	$887
Net for year (a less b)	$162	-$262	$878	-$262	$438
Net for years 1-5	$954				
Present value of net for years 1-5	$752				

Assumptions: Present value calculations are based on a 7% discount rate; 10% calf mortality rate (1 male calf death); tax effects not considered. After five years, the employee owns the following:

$2,000	2 cows
$1,100	1 cow ready to give birth for the first time
$ 350	2 female calves.
$3,450	Total worth
$2,460	Present value of inventory worth

There are also penalties for poor quality milk. If milk containing penicillin, which is used to treat udder infections in the cows, is mistakenly shipped, the farm is fined. Antibiotic residue in milk resulting from treatment of mastitis is an industry-wide concern. Some people are allergic to certain antibiotics (Larson); and antibiotics infused into the udder may cause problems in the manufacture of fermented milk products (Jenness). Webster argues that the most common reason for antibiotic contamination of milk is worker or management error. This illustrates the importance of coherent management programs aimed at preventing contamination. George explains what this industry concern means for Willow Bend Farm management and employees:

> Penicillin in the milk is a disaster. We'll be fined two days milk if penicillin is detected....Two days milk is worth about $18,000.00 to us....If penicillin is found twice, the fine is four days milk or $36,000.00.
>
> If we are fined, the barn crew does not get the quality bonus again until the fine is paid back out of the quality awards. This provides them with incentive to be darn careful about [allowing penicillin to get in the milk].

The Muellers considered alternatives to the quality incentive before implementing it. Again they considered paying a premium base wage to attract higher quality workers who would be more skilled at ensuring milk quality; however, they felt they had these workers already and that still more targeting of behaviors was necessary. The Muellers considered additional training for workers on quality issues; however, George felt the lack of milk quality was not so much a question of skills as it was motivation. In fact, he says a lot of "cajoling" of milkers takes place even with the current quality incentive program.

Heat Incentives. The Muellers pay bonuses to employees who find cows in heat. On a dairy farm, identifying cows in heat and breeding them in a timely manner is important for generating revenue from milk production (Bath et al.; Webster). George explains,

> If a cow is in heat and you don't get her bred, pretty soon you're out of business. A cow is supposed to have a calf every year. If a cow has a calf every two years, you have a long dry period [when the cow gives no milk] and the cow costs you money but provides no income. So it's very critical [to identify cows in heat].

In addition, Bath et al., p. 268, note that:

> One of the major management problems confronting dairymen [sic], especially in larger herds, is heat detection. There is no substitute for frequent and

systematic observation of the cows. One study has shown that as many as 26% of the cows in estrus could be easily overlooked.

Given the relative number of working partners, employees and cows, it is likely that an employee will notice a cow is in heat more quickly than one of the Muellers. Employees watch for cows in heat and alert management so a breeder can be called to artificially inseminate the cow.

"Heat checks" are issued along with paychecks. They can run as high as $80.00 per week, but are more likely to range from $12.00 to $30.00 per week. Employees are paid $4.00 if they spot a cow in heat and it is the cow's first time to be bred. They are paid $2.00 if it is the second time for the cow to be bred, and $1.00 for any time thereafter. If an employee incorrectly identifies a cow in heat, a manager cautions him/her to pay closer attention to the cows.

Heat checks have improved employee reporting of cows in heat. George explains this program to doubters,

> Quite often my fellow dairymen will comment that workers are supposed to be watching for heat anyway and it is foolish to pay them extra for something they should be doing anyway. This may be, but it is surprising how much sharper workers' eyesight gets if they know they might get $4.00 for reporting a cow in heat.
>
> One of the men on our midnight shift will come in an hour earlier and just observe heats. Quite often he will take home an extra $60.00 per week.

The Muellers considered one alternative to the heat incentive before implementing it. Willow Bend considered assigning certain workers solely to heat detection during a portion of their shifts (Webster). However, George believes that since milkers and other workers in the barn are constantly interacting with the cows, it is a more efficient use of labor to have them detect heats while performing their regular production tasks. In addition, ensuring that employees learn and apply a range of skills, or skill breadth, is important to the ability of the managers to assign farm tasks. In addition, skill breadth may be important in maintaining employees' job satisfaction (Hackman and Oldham).

Field Crew Incentives. The field crew, who plant and tend the corn and hay crops, previously shared in the milk quality bonuses because they produced the feed for the cows. However, George came to believe that the field crew's impact on milk quality, while important, was too indirect to continue sharing in the milk quality bonus. So the Muellers developed a separate bonus system for the field crew. Field crew bonuses are based on planting and harvesting goals set each fall and spring by the workers and management. George explains,

> If you get the crop in before a rain instead of having three weeks of rain and then getting the crop in, it makes a big difference as far as the quality of the feed from that crop. So if we (George works on the field crew) get the hay harvested by June 10th, we get a bonus. And if we get the corn silage (the whole corn plant harvested green) done in a [predetermined] number of weeks, we might get a $300.00 or $400.00 bonus per employee.

The bonus is intended to encourage employees to work the long hours required during planting and harvest. The quality of the feed produced on a dairy farm will often depend on the timeliness of planting and harvesting. For example, rain damage reduces the feeding value of hay (Bath et al.). In addition, the bonuses encourage employees to take care to avoid mistakes that could potentially slow down planting and harvesting. Such mistakes include backing trucks over equipment.

The Muellers considered alternatives to the field crew incentive as well. Since Willow Bend is not subject to the overtime provisions of the Fair Labor Standards Act, management could simply require employees to work the long hours needed to harvest crops in a timely manner to maintain feed quality. However, George has found that the incentives create a sense of camaraderie which make it less of a sacrifice to work on weekends, if necessary. Moreover, employee turnover during planting or harvest could be quite disruptive, and paying a bonus may help retain workers during these periods. In addition, the field crew incentive was necessary to ensure equity in pay between the milking jobs and field jobs to ensure that skilled and experienced field employees would not request a transfer to the barn crew.

Integrated Human Resource Policies and a Supportive Culture

The Muellers have instituted several other human resource policies to assist them in meeting their human resource goals of attraction/retention and enhanced productivity/quality. They have also tried to create a culture of employee empowerment to help meet these goals. These efforts are discussed next.

Performance Reviews. Since 1992, the Muellers have conducted performance reviews twice a year. In addition to employees receiving feedback regarding their performance, employees are given the opportunity to rate their bosses and the farm. Both the supervisor and subordinate appraisals are the same format. Raters are asked to list four good points and four areas for improvement. This format serves as a vehicle for discussion between workers and managers, and a means to improve the performance of all. From the performance review information, the Muellers award annual merit raises to employees that are rolled into their base wages.

Training. While most training provided by Willow Bend is on-the-job training, the farm sponsors tours of other farms during the winter months when the work is slower. For some employees, Willow Bend sponsors participation in specialty clinics

that provide instruction in such areas as labor management, feed management, machinery adjustments, milking procedures and crop production.

Staff Meetings and Employee Empowerment. Over time, the Muellers have strived to create a culture at Willow Bend in which suggestions by employees are encouraged and considered. Given the small size of the work force, no formal suggestion program is in place, but employees provide suggestions to managers during performance reviews, in staff meetings and while working on the job. In addition, employees are introduced when visitors are present to recognize their important role in farm success. George talks about this culture shift,

> Our [management's] natural instinct is to fight a new idea....I never cease to be amazed at the source of some of our best suggestions. Even the least educated employee can see things the boss never notices and make excellent suggestions.

Since 1992, the dairy team has met periodically to discuss problems and improvements that could be made to dairy production. This meeting serves as a means to elicit worker suggestions regarding milking procedures, and to disseminate information about particular animals. Since 1992, full staff meetings have been held to facilitate communication and to discuss problems facing Willow Bend. George comments,

> It is a very pleasant surprise to see how progress seems to accelerate after these meetings. We feel that formal staff meetings are a tool that could be used much more on farms.

Working Conditions. The working conditions on farms present high physical demands for farm workers. Workers perform much of their work outside in a wide range of temperatures and precipitation. The work with animals requires physical strength and a tolerance for dirt, grime and the strong smells of the animals. The Muellers have made efforts to help improve these working conditions and make them more tolerable.

In 1988, the Muellers built an employee break/lunch area with kitchen facilities and lockers. This area now serves as a gathering place for employees. There are laundry machines and a full shower so workers do not need to commute, or arrive home, in dirty work clothes.

The design of the milking parlor also considers the employees who work there. A breezeway was built into the design to cool workers and give them the feeling they are on floor level rather than in a pit. The parlor is heated during the winter. Windows were built into the parlor as well so that it is well lit in summer and winter. In addition, the location of the vacuum pump (part of the milking equipment) in a well-insulated, remote room helps lower noise levels heard by employees.

Conclusion

With business acumen and a good dose of common sense, the Muellers of Willow Bend Farm have developed an innovative, strategic compensation system. This system was tailored to the needs of the business and adjusted over time as necessary. In much the same way as a start-up business might use stock to motivate employees to pursue firm goals during a period of limited cash flow, the Muellers designed and implemented a unique worker cow-ownership program. Willow Bend's incentive programs parallel lump sum bonuses paid in an array of non-farm settings. In summary, we suggest that farm businesses, like other for-profit businesses, can reap benefits from well-crafted pay programs that focus employees' sights on organizational goals and share proceeds of these efforts with workers.

Notes:

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