# USING DAIRY ADVISORY TEAMS FOR BENCHMARKING AND DECISION MAKING

Sub Theme:  Knowledge and Information

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**Abstract:**

*A dairy advisory team is a group of farm advisors working together with a dairy farm family towards a common purpose. Teams need structure and a designated facilitator to work well. This paper outlines the steps to creating an advisory team and shows the impact of dairy advisory teams on goal setting, benchmarking and decision making for improved performance on the farm. Dairy producers had the opportunity to participate in online training on the basics of team operation while facilitators learned about various tools in both case-based workshops and a webinar series. Following team formation and training, dairy producers were asked about their use of tools in decision making as well as successes and struggles with the team. Of the 330 teams that formed between 2011 and 2015 a subset of 47 (14%) provided information about their team. The monthly monitor tool was used in only 42% of the teams, but other similar benchmarking tools were being used by most teams. Nearly all teams used detailed production information, but less than half used financial information with the team. Teams were successful at improving communication and decision making with dairy farm businesses.*

***Key words****:  Dairy advisory teams, benchmarking, decision making*

1. **Introduction**

Merriam-Webster's dictionary defines team as "a group of people who work together." The origins of the word team come from the Middle English *teme* meaning a group of draft animals used for pulling. A "dairy advisory team" or DAT is just the same – a group of people, in this case those advisors that typically work one-on-one with a dairy producer – working (or pulling) together to accomplish a common purpose. The DAT meets on a regular basis with common goals and objectives to improve the decision-making and overall position of the farm. Generally the DAT has a facilitator that is not the dairy producer. The DAT can be from four to as many as 14 or so people depending on the size of the dairy farm business, number of family members involved or the overall purpose of the DAT. The most common size for a DAT is 6-8 people. Variations of the original DAT may be a dairy profit team (teams focused on improving on-farm profitability), a dairy succession team (teams focused on the transfer or management and the business to the next generation or non-family successor) or a dairy target team (teams focused on a particular area of the dairy like milk quality or reproductive management). The most typical composition of a DAT is key members of the farm family, key middle managers in larger operations, the veterinarian, nutritionist, banker and/or accountant as the core. Some teams elect to have other advisors like extension educators, sales and service providers or even other dairy producers be a part of the DAT. The DAT should fit with the needs and goals of the dairy operation.

The concept of a DAT is not new. (Peters et al. 1994) promoted an interdisciplinary extension advisory team, and (Weinland & Conlin, 2003) documented positive results from dairy diagnostic teams. Penn State faculty and staff have worked with a dairy advisory team program since 1996. We have trained, facilitated and worked with nearly 1,000 dairy teams in five states in the United States as well as several countries internationally. Early work (Heald, Hutchinson, & Holden 2002) showed positive impacts of dairy advisory teams on key aspects of the dairy operation. Targeted areas of milk quality and feeding management resulted in lowering of somatic cell counts, reduction in feed costs and economic improvements at the farm level. (Hilty, Tozer & Hyde 2008) showed additional economic advantages to use of dairy advisory teams with follow up programs focused on improving business management. This paper will outline the steps for creating a DAT as well as some impacts of the teams as they set goals, use monitoring tools, make decisions and benchmark their performance.

2. **Methods**

*Steps for Setting up a Dairy Advisory Team (DAT)*

While every DAT may be a little different, there are some common steps to consider when getting started. Here are some step-by-step instructions for starting your own DAT.

*Step 1. Determine a purpose for the team*

Some dairies may form a DAT to focus on an immediate issue facing the business, like a drop in production or a herd health issue, but it is a good idea when starting your DAT to look beyond the immediate and have some idea about what the longer term vision is for your operation. For example:

‣ Will a son or daughter be entering into the operation following school?

‣ Is time in the industry limited (plan to retire/sell in X number of years)?

‣ Are you interested in expanding and making major investments?

‣ Are you interested in diversifying? Creating a satellite operation? Scaling back?

Having those discussions as a farm family or with the dairy partners and owners can help to determine who should be on your DAT and what your long-term vision looks like. Regardless of the focus that you choose, all teams need a well-defined purpose in order to succeed.

*Step 2. Choose a team facilitator and team members*

Every team needs a leader. In the case of the DAT, this is a trusted advisor to the farm, but not a member of the farm family. The DAT provides *advice* about data and possible decisions; the dairy farm owners elect to use or not use that advice and are the final decision makers. For the successful use of a DAT, the dairy owners run the business, and the facilitator runs the DAT. Facilitators work with the dairy owners to set the priorities and agenda for the team, but having the facilitator run team meetings and oversee communication frees the dairy owners to think about how best to use the information and advice. All teams need a good facilitator in order to succeed.

Every team needs good, productive team members. In the case of the DAT, the team members are usually the advisors that the farm normally works with on a one-on-one basis. Those advisors are most familiar with the dairy farm operation. However, some teams have

seen great benefits in asking a trusted dairy farmer or an experienced business person from another industry to be a member of their DAT. These individuals can offer a unique perspective to both the DAT and the farm. It is important to discuss expectations like time commitment (how many meetings per year) and compensation when securing team members. Most new teams begin meeting on a monthly basis, but depending on the purpose of the DAT the meetings often become less frequent over time moving to a bi-monthly, quarterly or even twice yearly arrangement. The exceptions to decreased meeting frequency would be those teams that are focused on significant expansion plans for the operation. All teams need reasonable meeting times and productive team members in order to succeed.

### Step 3. Set the Agenda

All team meetings need an agenda in order to be productive and use time most efficiently for the members of the team. Typically team meetings will last 60-90 minutes for those DAT meeting monthly, bi-monthly or quarterly. For a DAT that meets only twice yearly, the meetings may be longer. For the first team meeting, the agenda needs to include time for introductions of team members, sharing of dairy farm data, time to begin developing team goals and usually some time to walk around the farm and make sure all team members are familiar with the dairy. Following this first meeting, the agenda should be developed with input from the farm family and team members ahead of time. Assigning agenda topics to team members and sharing the agenda about a week ahead of the scheduled meeting can help to ensure that everyone is prepared and use of meeting time is most productive. Meeting times should be planned in advance during the previous meeting and often are set on a regular day and time of the month to aid in scheduling busy people. Choose a meeting place that is quiet and free from distractions either at the farm or a convenient off farm location.

### Step 4. Set up a system for communication and monitoring of progress

It is important that a record of meetings is kept and shared as well as action steps (what is to be done, who is responsible and what is the timeframe). These notes do not necessarily need to be formal but rather can be short bulleted notes that follow the written agenda along with the completed action steps. Having some meeting notes and a copy of the action steps allow each team member to complete tasks between meetings, keep track of progress and come to the next meeting more prepared. The facilitator is generally responsible for putting together an agenda (in consultation with farm owners) and circulating the meeting notes following each meeting.

All team meetings need to have some structure in order for team members to be most productive and for teams to be able to make progress. Team meetings with a strong structure include the following attributes:

- <u>Written agenda</u> that is shared ahead of time so that everyone walks in to the meeting prepared to work

- <u>Tracking system</u> of brief meeting notes with important points along with an action plan for tasks to be accomplished

- <u>Use of tools for measuring performance</u> like farm records or spreadsheets as well as the one page monthly monitor tool that was developed to help a DAT record and track important production and economic measures

### *Using a DAT for benchmarking and making better decisions*

Working with the both the Pennsylvania Center for Dairy Excellence and a grant from the Northeastern Sustainable Agriculture Research and Education program, a series of trainings, tools and resources were developed to help the DAT focus on better use of benchmark data for comparison and analysis. Dairy farm businesses are complex entities with many different facets within a single operation. Forages and cropping enterprises impact the feeding and production levels of young stock and milking animals. Reproduction and animal health have either positive or negative effects on levels of milk yield, cow longevity and overall productivity. All of the pieces with the whole dairy farm system are interlinked, and all have an impact on the overall profitability of the operation.

Many teams found the use of extensive data from multiple sources cumbersome to use to evaluate weaknesses or make recommendations for decisions. In response to this need, a one page "monthly monitor" tool was developed in order to help teams focus on key data for the month as well as compare the trends of that data over the past year. The monthly monitor is a customizable spreadsheet that allows only key data to be easily recorded and tracked for use by the DAT. For example, while conception rate of the herd may be excellent in January, but poor for June through August, tracking this trends in this key reproductive measurement allows the DAT to pinpoint seasonal issues that may not be revealed with yearly averages. Since benchmarks alone, without trend data may be misleading, the monthly monitor allows the dairy farm business to look at the current benchmark values as well as the trends for the

business. In this way, decision making is more systematic and focused on areas of greater need rather than just current situations. In the example earlier with conception rate, adding a heat abatement system could be a profitable decision. The DAT can use the data from the monthly monitor in order to calculate the economic impact of the change.

For this project, the formation of the DAT ranged from 2011 to 2015. Each DAT had the opportunity to access online training in development and operation of a DAT as part of the project. The DAT dairy producers were also encouraged to have their team facilitators or other team members attend a case-based workshop in local areas. The monthly monitor was only one tool that was presented at this training. Tools including a variety of production and financial software and programs that were available locally were also shown to team members during training so that they were aware of what was available or being used by other farms in their local areas. These workshops allowed team facilitators to learn more about better use of tools for both benchmarking and decision making. The workshops were held in Pennsylvania, New York and Vermont, so the types of tools presented varied according to local availability, but included production information from Dairy Herd Improvement, benchmarking information from both university and private firms, and a dairy chart of accounts available for use with several accounting software packages. After the workshops, a series of webinars about the specific tools were offered to team members again based on local needs. Facilitators could also participate in an online "Friday Facilitator Forum" that provided follow up for training and also allowed for discussion and feedback about work with teams.

Following the formation of these DATs and the Tools for Teams training workshops, dairy producers from a subset of the DAT that formed were interviewed via online sessions to discuss the strengths, weaknesses and impact of tool use on the DAT. From 2011 to 2015 330 new dairy advisory teams were formed through a program sponsored by the Center for Dairy Excellence. Following formation of the DAT a subset of 14% (47 out of 330) teams were asked about successes and struggles with their DAT as well as specific questions about use of tools for benchmarking and decision making. This data was gathered through online webinars and follow up phone calls to DAT facilitators.

## 3. **Results**

Data from a subset (n=47) of the DAT started following the series of trainings provided information about goal setting, use of tools and benchmarks, and some information about the impact of the teams. Table 1 below shows the average number of team members was 6.4 $\pm$0.28, average herd size was 171.1 $\pm$20.25 and the average milk yield was 31.8 kg per cow per day $\pm$0.45. Since the focus of the data collection was not production, limited data in this area was available for this dataset.

Table 1. Demographics associated with DAT for a subset of teams (n=47) from 2011-2015.

| Measure | Mean | SEM | Range |
|---|---|---|---|
| Number of team members | 6.4 | 0.28 | 4-12 |
| Number of cows in herd | 171.1 | 20.25 | 40-815 |
| Average milk yield, kg/cow/day | 31.8 | 0.45 | 26-44 |

A companion study, (Buza, Holden, & Goodling, 2014) looked at the impact of DAT on key dairy farm measures of production in years overlapping the current dataset. The study found that from 2008 to 2013, herds with a DAT has significantly lower (P<.001) age at first calving and better milk quality with a lower percentage of herds with a SCS>4. (Buza, Holden, & Goodling, 2014) also found that for these herds using a DAT, herd size grew and milk production increased compared to Pennsylvania averages in similar geographic areas.

In the current project, the subset of dairy farms using a DAT were asked specifically about their use of the monthly monitor tool following training and 20 out of 47 or 42% of the teams used the monthly monitor in their regular team meetings. While this number appears lower than expected, a number of teams were also utilizing similar tools in lieu of the monthly monitor. When asked about other tool use, most DAT farms indicated that they were using on-farm software summaries or Dairy Herd Improvement (DHIA) monthly herd reports as being used in team meetings. In a follow up question, it was noted that more than 93% of the DATs used some form of production monitoring (like Dairy Herd Improvement records) for team analysis, but only 28% of the teams used some type of financial monitoring.

Lack of use of financial data with the team was often because of concerns about confidentiality. About half 49% of the teams had some financial monitoring that was shared with at least some, but not all team members. In some cases this sharing was only with the financial representatives (lender, accountant, financial advisor) who were the team members that already had access to the financial data. Discussion around this point on the follow up showed that dairy farm owners did not share financial data as part of their DAT because the they either did not have good financial data or did not choose to share their financial data with team members. In subsequent phone calls with facilitators, lack of financial data and dairy producer unwilling to change were the top two reasons for lack of progress noted with some DAT. The use of financial data with DAT is a key area targeted for improvement in future projects.

Both dairy producers and DAT facilitators were asked informally during webinars and phone calls to share their "successes and struggles" following training about and use of a DAT. When asked about successes of their DAT, major areas included improved communication, better decision making, and improvements in productivity and profitability at the farm level. Specific items included more milk yield, growth in herd size, and better reproductive performance. When asked about struggles with their DAT, major areas included lack of progress, scheduling and difficult personalities. When asked if the DAT helped generate more ideas and helped them to make better business decisions, 45 out of 47 found the DAT helped with ideas and 40 out of 45 found that they were able to make better decisions with the team.

No matter what the purpose, the DAT can be a useful decision making tool because all the advisors are together in one place, at one time – making it easier for the dairy farm owner to get new ideas and key questions answered. The DAT has been shown to be a more efficient use of advisors and dairy farm owner's time and resources.

4. **Conclusions**

Use of a DAT resulted in better communication among advisors and dairy farm owners as well as improved decision making overall. Providing training for the DAT encouraged the use of benchmarking tools, but did not result in additional financial data being used with the team.

5. **References**

Buza, M. H., Holden, L. A., & Goodling, R. C. (2014). The impact of dairy advisory teams on farm improvement on Pennsylvania dairies. *Journal of Dairy Science*, Suppl. 1. *97*, 365.

Heald, C. W., Hutchinson, L. J., & Holden, L. A. (2002). Dairy advisory teams - A tool for production medicine veterinarians. *The Bovine Practitioner*, *36*, 485–487.

Hilty, B.J., P.T. Tozer, and J.A. Hyde. 2008. Analyzing your dairy business. *http://extension.psu.edu/publications.* . Available at: Hilty, B.J., P.T. Tozer, and J.A. Hyde. 2008. Analyzing your Dairy Business. Penn State Extension Publication. http://extension.psu.edu/publications. [Accessed February 7, 2017].

Peters, R. R., Cassel, E. K., Varner, M. A., Eickelberger, R. C., Vough, L. R., Manspeaker, J. E. Wysong, (1994). A demonstration project of Interdisciplinary dairy herd extension, advising funded by industry and users. 1. Implementation and evaluation. *Journal of Dairy Science*, *77*(8), 2438–2449. doi:10.3168/jds.s0022-0302(94)77186-1

Weinand, D., & Conlin, B. J. (2003). Impacts of dairy diagnostic teams on herd performance. *Journal of Dairy Science*, *86*(5), 1849–1857. doi:10.3168/jds.s0022-0302(03)73772-2.