The Value of Simplified Records

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It is my pleasure to be here this afternoon and share with you the ideas I have as far as record keeping systems that we can utilize in the feedyard situation. I view consulting with feedyards and trying to put together an animal health program as quite a challenge for our profession. I felt in the years that I have been a veterinarian and associated with feeding cattle both personally and working with feedyards that we as veterinarians need some type of tool to help us measure our performance and the cattle performance. Through my experiences, I knew I had the same kind of feelings that Doctor Vermedahl does about records. I feel that we evaluate our performance subjectively. You know we have opinions on how we are doing, how our programs are succeeding, and so forth. Are they real? Is our death loss improving? Is our cost of gain going up or down because of our treatment cost being too high or too low? My objective in putting together an automated cattle performance system, which is what I call the particular system I put together, came about because I was looking for a tool to utilize in measuring cattle performance. This tool was developed from a veterinarian's standpoint. I did exactly what Leo suggested you do in a good record keeping system. I looked at it as a veterinarian wanting to measure health performance in a set of cattle. What figures do I want to look at? What statistics do I want to put together? Having feedlot experience, I was able to work backwards and knew what source data I could draw upon. I knew what data I could get from a feedyard realistically and so the system was put together.

After we put the system together from a veterinarian's standpoint, of course, it involves a lot of things that management can also use. One of the offshoots that it looks like will be coming out of the system is the usefulness of this tool by allied industries, such as the drug and pharmaceutical industries. I will touch on that later as I get into the system.

As the record system looks now, it will be used as a tool for the veterinarian to measure his performance to a feedlot. It will also be used as a management tool by the feedlot itself, and then, hopefully, the drug and pharmaceutical industry, and maybe some nutritionist can get some benefit out of it. The challenge that each veterinarian receives from the feedyard is to improve cattle performance. Therefore, we have about three challenges that are different from those most other veterinarians face in practicing their profession.

Number one, health is a negative factor in our performance of cattle. We are dealing with some negative attitudes and, of course, that is always the most difficult to handle. If we were dealing with positive situations, it would be easier to get people to accept our programs and follow through.

The second factor is that we are working with a profit-motivated industry. I think Leo definitely got that across to us. People are feeding cattle to make dollars. They hire veterinarians in turn to make more dollars. If we cannot do that, we are not functioning in our capacity. In some areas of veterinary practice, this is not the main consideration. So you have to keep this in the forefront.

The third factor in being a veterinary consultant to a feedyard is that you are going to be dependent upon other people to carry out your work. That personnel manager is awfully important because you cannot stand there and make every diagnosis and recommend every treatment to an animal so you will have to be training people and depending on their performance. My overall solution to the challenges that the veterinary profession has in working with feedlots is that you have to function as an epidemiologist. There are about five key factors that a veterinarian needs to keep in mind as he is working with a feedyard: 1. he has to monitor the occurrence of disease; 2. he has to know what the disease level is in a feedyard; 3. from his observations, evaluate exactly what he is seeing; 4. from his evaluations, make a diagnosis and from the diagnosis put together a prevention and control program. Once he has put this together this is not the end of his job because he goes back to number one again. 5. He has to follow through and see how successful this program is and change things as need be and offer other suggestions. These five things are what we as veterinarians are trying to offer the industry. The problem we have then is how do we monitor disease occurrence and how do we evaluate our own observations?

We are dealing with a lot of numbers. Anytime you start with a record system and start trying to do a lot of it manually, the cost benefit you receive will not pay for itself if you have to hire someone to do it out by hand. We started looking at the computer as a tool to help us gather some of the information, collect it, store it, and give some reports we could utilize.

I feel there are four things we can utilize to monitor disease occurrence in the feedyard. We can look at the different mortality figures, dollars, data gain and conversion ratios, or the actual performance of the

cattle. We look at the computer and see how we can utilize it. We know that most commercial feedyards do utilize the computer for their accounting and financial records, and quite a bit for nutrition information. Most feedyard computerized record systems leave out a lot of the health information. They may get the dollars and cents as far as drugs used but they leave out quite a bit of the information we would like to have. In trying to put together a system we knew several key things would determine success or failure. The number one thing that I knew would spell defeat for our program faster than anything was if we required feedlot personnel to do a bunch of extra work. We were going to have to draw upon the data that they were already creating for the feedyard management.

We could not go in with a bunch of specialized forms and require that these forms be filled out and expect them to be completed and get a good job done. This was the first consideration. I knew I had to use the basic data that a feedyard was already generating and not create a lot of extra work for the feedyard personnel.

I knew I would be duplicating a lot of records the feedyard already had. It is a very good place, being on the program after Leo, because in my estimation he is one of the very best feedlot managers and definitely uses the things that we feel are very important. But he mentioned that there are a lot of feedyards in our region that do not use the records to the advantage that Leo does. We are dealing with these yards as well.

Leo mentioned he uses a computer and he has very accurate and very good records. We want to create a master base where we have the cattle performance not only at yards such as Leo's but yards that are under less efficient management. We are trying to create a large master base which we can evaluate and learn from. This is what we are trying to do there.

The next problem we are having in getting our system implemented is the cost of it. This is an additional cost to the feedyard, and we will have to show them that we can justify that cost in improved performance. The system we have put together does have a lot of cost figures in it, and we hope we can show the feedyard we are improving performance and they are not only recovering the cost of our program but making more dollars for the feedyard as well as the feeding clients themselves.

The system we have developed has input from a lot of you out there. It was started about four years ago in my mind. Through visiting with a lot of practicing veterinarians and a lot of other people I have tried to roll the thing together. We had a meeting about 2½ years ago in Denver where some of you sat, and we more or less had a round table discussion as far as what a veterinarian would look at and what figures he would look at to measure cattle performance. From this we began to draw a picture and put together this system. The input we have in our system is basically from the feedyard and we try to utilize the forms they are now using. Most of the input data is stuff that the feedyard is already using. We utilize their forms and not ours.

The personnel requirement at the feedyard level is kept at a minimum. Since we are using a copy of their forms, about all it takes at the feedyard itself is assuring us that we get a copy of each one of the source documents.

As far as the responsibility of entering this data into the system, it is my responsibility. Where we are dealing with several feedyards, there is no way we can intergrate the system to where we could ask the feedyard itself to input this information. So, we have taken all of those responsibilities. We are just asking the feedyard to give us a copy of each one of the source documents we need and we take care of it from there.

The data base, once we get the data entered, is stored and it creates a large master base. We never throw away any of the data. We keep it all active so we can look at it and create numerous different reports. When a pen of cattle is closed out, we put this information onto a history tape so a year from now or five years from now or whatever, we can draw on it and generate the same reports as if those cattle were just now being fed and compare them to cattle that are being fed this year.

There is always a problem of security of data. In our particular system, the reports that are generated never have a feedlot's or client's name printed. Everything is coded by lot numbers as far as clients are concerned and all feedlots that are using the system are given a code number. We try to assure the feedyard that the security of information is there.

The data base can offer us a lot of things. We can continue to collect good data from feedyards over a long period of time, and we feel it will add to the value of that data base.

The performance reports we supply the feedyard are definable by about three different categories. The number one category is a time period. We can give a feedyard a performance summary on a set of cattle on whatever time period he so desires, by the month, or by feed days, or whatever. The definable thing we have is population. We can develop a performance summary on a set of cattle for the complete feedyard, for the alley, for all of the cattle that are on feed by one particular client, by sex, by age, or we can do all of the cattle that are heifers weighing less than 500 pounds. There are a lot of ways that we can define our population and then, of course, we can also do it by diagnosis. If we want to we can look at only the cattle that have had the rat-tail syndrome, CNS problems, etc.

These are the three things that we realize we will have to have in a good record system–performance reports based on the population, on the time period, and on the diagnosis.

The specific reports we have available in our system are as follows. Number one is a yard sheet. In most feedyards, I guess, all yards have a yard sheet

whether or not it is printed out by computer or whether it is done by hand. Our yard sheet is not much different from anyone else's and the usefulness of it is primarily in inventory. You know exactly how many you have on feed and what pen they are in and the location of each animal in that pen. We know whether he is in the hospital or the buller pen or whether he has died or been sold. We know what day the cattle were processed, the day they were dipped, what the received weight was, their shrink, if we can get their purchase weight. We also print out a calculated weight and the way we figure our current calculated weight is to input the pounds of feed that have been fed. When we put a feedyard on the system, we use information from the ration, and, by knowing the weight of the cattle, we utilize the formula available to arrive at a current calculated weight. Of course, we realize that this is only a calculated weight and experience with the system is going to tell us whether this is a good active figure to utilize or not. It is there and we will be watching it closely. We keep up with the days the cattle have been on feed and we do this by head days. It also prints out the current ration number the cattle are on and how many days they have been on that ration. It also has a place to list any additives that are being fed those cattle at that particular time.

The consumption information on a yard sheet is pretty much standard for what most other yard sheets have. We print out the average consumption per head per day on a to-date basis. In other words, from the time a set of cattle come in until whatever date the report is generated. We express it not only in pounds but on a percent body weight basis and for the percent body weight we use the current calculated weight to figure that percentage so there may be some error there but we feel that it is a figure we can look at.

I feel that for any system to be of value to you, you have to know how the figures are calculated and where they are coming from and what personnel are giving them. I can sit in the office and generate these reports but interpreting them will come from the veterinarian that is doing the actual work in the yard and the management, too.

The consumption we do on a to-date basis, pounds and percent body weight basis, the last three days and the last six days. Then we actually calculate a percent change. We take the last three days, the last four days actually on feed and we will calculate out on a daily basis on a three-day average. Then we also print out a daily gain and a conversion ratio and again we are utilizing our current calculated weight to reach this figure.

The yard sheet was not the major reason we developed the system. I was wanting a performance summary on the cattle primarily based on health. But before you can actually analyze the health performance of a set of cattle you have to know what kind of cattle you are talking about. The next report that we have then is a report summary and this simply classifies the cattle we are talking about.

The first thing you can do with this performance summary is stipulate what population you want to look at. If you want to look at the complete feedyard, this report will give you the total number of cattle on feed, how many lots of cattle are concerned, how many lots of cattle are involved, and how many pens of cattle. It will tell you the turnover of cattle as far as how many cattle have been shipped the last seven days, the last thirty days and how many cattle have been received during those periods. It will calculate a percent turnover for you. It will classify the population by sex, age, grade, breed, and days on feed. It will give you the average received weight of this particular population, the average percent shrink, and it will tell you the number and percent of each one of the rations that you are feeding.

The consumption data that is printed out is simply an average of all of the pens of cattle that are involved in this population. It will give you that daily gain and the conversion, and if a feedyard wants to tell us what their rations are costing, we will also print out a feed-cost per head per day as well as feed cost per pound of gain, based on our current calculated weight.

We can also classify the cattle as far as the stretch rating and inflation condition if these subjective measures are made when cattle enter the feedyard. We keep up with the hours hauled, the market type that these particular type of cattle came from and the background type. This type of information we do not get most of the time in our feedyards but if we do have it, we have a place in our system to enter and keep up with this type of data.

We also can keep up with the processing cost per head which Leo touched on a while ago. We have a figure by which we actually keep up the total health cost per head where we put in the medicine cost as well as the processing cost.

When we get our health summary, we generally run the performance summary and the health summary by diagnosis reports together. When I look at the health performance on a set of cattle, I know what kind of cattle I am looking at. I know whether I am looking at cattle that have been on feed zero to thirty days or I know whether they are steers or heifers, etc. The health summary by diagnosis report we can clue in on any diagnosis that we want to. We can look at respiratory disease. We can look at the CNS problems. We can look at lameness. Or, we can look at all of them in combination. So, it is a very adaptable health summary in that you can look at any one or any one combination of diagnoses that you so choose.

What is actually in the report is morbidity and mortality figures. It gives us the total number of animals that have been hospitalized to date on whatever population we are talking about, whether it is one pen of cattle or a complete feedyard. It will tell you the number of animals that have been in the hospital the last seven days and the average days that those animals were staying in the hospital. It will give

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you a number and percent as far as disposition of these cattle from the hospital. In other words, how many have recovered and how many have died. How many you have put in the railer pen and how many you have sold.

It counts the total number of deads from this particular population. It gives you percent death loss of the total population, and it will calculate out a case death loss or a case fatality ratio if you please. It takes the number of animals that have died, divides it by the total number of animals that was treated and so you know how to get a measurement of the success of your treatment program.

We get rehospitalization death loss, also. In other words, we know the number of animals that have died that have been in the hospital more than once as a percent of all death losses. We calculate the average days that all of the dead cattle stayed in the hospital. We calculate the average days between hospitalization if we are talking about some cattle that have been rehospitalized.

We keep up with the number and percent of cattle that have been necropsied and we keep up with the location of death so we know what number and percent have died within the feeding pen, within the hospital or chronic pen. We also keep up with the cost of treatment by diagnosis. We also keep up with the cost of treatment, whether this calf is on his first trip to the hospital or whether it is a repeat or whether the second, third, or fourth time.

I would like to briefly run through some of these reports and then if anyone has any specific interest in looking at our particular system I would be glad to sit down with you and show the actual report and go over it in a little more detail.

The health summary by diagnosis report is printed out with numbers and percentages. We also present this report in a graph form so that we can utilize it in talking with feedlot management or whomever we are trying to convince that something is wrong in this pen or a particular program needs to be changed, etc. We can specify the time period we want to look at. We can specify the population and the diagnosis. We can choose whether we want to look at incidence or prevalence, whether we want to look at the cattle that have been treated one time or whether we want to look at the ones that have been treated more than once.

The graph basically represents an epidemic curve so this is a lot more readable and more understandable and can be used as a tool by you in talking to management about a particular problem.

We can also do death loss on the same type of format. We can do prevalence. We can also do feed consumption. We can look at the feed consumption on a particular set of cattle with the same graphing pattern and we can look at the consumption on a dry matter basis.

One of the big variables that influences cattle performance is environmental data, so we have an environmental report which keeps up with weather con-ditions. We present this data in the same way we do our other graphs. We can stipulate whatever time period we want. Day one is the beginning day and we simply record the weather conditions. We will plot then whatever moisture is received, whether it is rain or snow.

We also do the low and high temperature starting with day one and for the time period we specified we get a low reading and a high reading and it calculates the variation between the two. You can look at feed consumption, morbidity, mortality, and weather data all on the same format. You get a little better feel for how each one of these variables is attributing to the total performance of that set of cattle.

There are several other reports that we have at the end that we can use more as a day-to-day tool. For each set of cattle that comes in we print out a specific cattle received form just for that pen of cattle. That way we know how many cattle are included, what sex and age, what their weights were, their origins, and we can keep up with the trucking company as well as the specific market these cattle came from. We print these sheets out and keep them in a notebook for reference. If you are posting an animal and you would like to know a little bit of history on the animal, you would have to go back to the feedyard and get the lot jacket and look up this specific information. By having it in your notebook in your pickup, you are able to flip over and get the history without having to go to the feedlot office and ask their personnel to look up specific information. We already have it. We also get a separate printout on the cattle that are being processed and how they have been processed. We list what drugs the cattle received, the date the cattle were processed and some other specific information. That is readily available to us too as we are looking at particular problems.

We have two exception reports that we print out on a set of cattle. We keep a hospital inventory going on all the cattle going into the hospital. We print out a hospital exception report if there are more than five animals from any pen in the hospital at any one time. As we go to the feedyard, we know what pens have been presenting a problem. Now, I said five head, but the way our programs are set, we can change this to any particular number. I just arrived at five head as being the figure I wanted to look at myself. If an individual wants an exception report on three, we can do it on three.

The other exception report we print out is a report that looks essentially like any hospital card would look. It prints out what particular lot and pen this animal came from, his tag number, what his temperature was when he came in, what diagnosis he was assigned, how many days he was treated, his disposition and by dosage the drugs by day. We get treatment card stacks like this when we visit a feedyard, enabling us to see if they are maintaining the treatment program we want. It is really difficult to go through that big stack in a short period of time. We have developed an exception report where a

report is printed if an animal has spent more than four days in a hospital or if he is discharged from that hospital for any other reason than being recovered. In other words, if he died or if he went to the chronic pen or railer pen, his hospital report is going to be printed out so we can go over it rather than having a stack of cards to look at.

These are the main reports that we have available. We are in the process of developing a report on drug inventory and this is still in the developing stage. But, everything that I have covered today is now available. As any system evolves, you have a lot of problems in getting the thing running smoothly but, hopefully, we are just about to have our bugs worked out. We are to the stage where we are actively trying to market our system and use more and more.

The primary purpose again is to offer the veterinarians a tool to use to work with feedyards. The secondary factor is to utilize the system as a management tool with the feedyard making day-to-day decisions. The third factor, of course, is helping the biological and pharmaceutical industry in evaluating products and doing drug trials. We are creating a large data base on cattle and we feel there is a lot to be learned by this information.

I know a lot of you have been approached by different drug companies for your opinions. We are always free with our advice as far as our subjective opinion, but we cannot back it up with numbers and percentages. And so, that is one thing we hope this system will do. As we get experience with it and build our data base we can document the occurrence of different disease conditions. The diagnoses that I have mentioned are the cowboy diagnoses. They are not our specific diagnoses. So, there are general conditions that we see in the feedyard diagnosed by feedyard personnel and then it is up to us to take the diagnosis further than that.

The total system that we have tried to put together is really phase one of a multiphase program we hope to develop in the next few years. This system primarily entails keeping up with the feedlot observations, the performance of the cattle, and the diagnoses that are being made at the feedlot level. We hope to follow through with our own veterinary observation as far as necropsy reports, clinical signs and laboratory findings on samples that we submit and this will be phase two that we can work into our total project.

The data forms we utilize to develop all of these reports are already being filled out by most commercial feedyards. There are six source documents that we utilize to print out these reports. Number one is the cattle receiving form. All feedyards fill out the number of cattle received, their weight, age and sex, this sort of information. The other source document is how the cattle are processed. Most everybody writes down the vaccines that are administered and we enter this data. The other source document is a hospital card. Most feedyards do keep an individual card to keep up with the drugs so that they will know how much to charge their individual clients. So we enter this data. Then we have to keep up with pen moves.

Obviously we can decrease the lag time. The faster we can get the reports after the events happen, the more valuable the information will be to you. As we gain experience with the system we can utilize a courier service or something like that to get data overnight and the data can be entered the following day and by the next afternoon we will have reports available. We are shooting for something like a 24- to 36- to 48-hour lag time as far as reports being available. This is one thing that is not as good as a system such as Leo has at his feedyard where everything is happening right there and I am sure he has a 12- to 18-hour lag time from the time the data is entered until the report is done so we are fighting to cut our lag time.

I am sure as I went through these reports I probably used some terms and some things that may be a bit confusing. I wanted to show you what we are trying to do and the reasons why we are trying to do it. If you have any specific questions or anything, maybe we can handle them later and I will be glad to get with you individually to go over each individual report and give you a few ideas as to how we are utilizing them and how we think the system can be utilized to monitor your performance in the feedyard and monitor the cattle's performance. We feel this is something that we have been needing as veterinarians working with feedyards to document what we are doing.

As Leo says, when you are talking about a multimillion dollar operation, you need some good hard facts and figures to back up what you are doing. We feel a system such as this will tell us if we are getting the job done and certainly we want to know if we are not getting the job done. This is the reason we developed the tool and it is only a tool as far as I am concerned. We still have to use all of our other powers and other factors that we as veterinarians have to offer the feedyard, but hopefully this is a tool that we can utilize to increase our productivity to that industry.