

627	85	+	677	29	29
628	43	RCL	678	75	-
629	28	28	679	43	RCL
630	95	=	680	22	22
631	42	STD	681	95	=
632	29	29	682	55	+
633	69	DP	683	53	(
634	06	06	684	43	RCL
635	98	ADV	685	00	00
636	03	3	686	55	+
637	03	3	687	01	1
638	06	6	688	00	0
639	03	3	689	00	0
640	02	2	690	54)
641	07	7	691	95	=
642	69	DP	692	69	DP
643	04	04	693	06	06
644	43	RCL	694	01	1
645	21	21	695	04	4
646	75	-	696	02	2
647	43	RCL	697	06	6
648	29	29	698	01	1
649	95	=	699	07	7
650	69	DP	700	69	DP



Computer Session

Dr. Joe Bitter: I think Dr. Evans' presentation has made it very, very clear that possibly our traditional ways of practicing veterinary medicine are not going to be adequate in the future. If we don't start thinking of veterinary practice from the standpoint of herd health management and expanding our fields of interest from the traditional medical and surgical areas that large animal practice has encompassed into the fields of nutrition and management, bovine practitioners are going to be relegated out of the agricultural picture. If we cannot put the kind of input into a planning program like Dr. Evans has described I question our usefulness to our clientele. I hope that this program serves as a stimulus for us, not only for ourselves but to go back and relay this information to other bovine practitioners in our area and to really stimulate some thought provoking

Editor: Dr. Evans' paper will appear in the 1980 *Bovine Practitioner*.

Computers

Dr. Max Garrison
Canyon, Texas 79015

Dr. Garrison: Probably the reason I am here is because I am one veterinarian that is very interested in herd health practice, not necessarily just in feedlot but in cow calf production as well, and I am possibly one in the state that they could get a hold of that has had some experience with computers and so part of the reason I am on the program. I do not have anything in the way of lot of detailed programs or anything like that to offer you this afternoon for cow calf operations. What I would like to try to do in just a brief few

continuing education programs along these lines in our own areas and states because I see it as a matter of real urgency. The bovine practitioner must begin to think more on the aspects of herd health management if we are going to continue to be economic assets to the agricultural community we serve.

The next person on our program, Dr. Max Garrison, received his B. S. degree in animal science in 1969 from Texas A & M and his D.V.M from Texas A & M in 1971. From '71 to '74 he was in a feedlot and cow calf practice and from '74 to '76 feedlot consultation to Jen-Sal Laboratories. In '76 he got his Master of Epidemiology at Texas A & M University, and in '77 to the present is a feedlot consultant in private practice. I believe Dr. Garrison developed his master's thesis on computer programming as directed toward feedlot medicine. Dr. Max Garrison.

minutes is possibly outline for you or at least give you some thought on to how you could possibly utilize a computer, be it by terminal as Gary talked about or possibly having one of your own or working with a rancher that has his own. I became involved in utilizing the computer four years ago. I knew that there was a lot of information in a feedyard that we were working with that was very accessible and that I could utilize to plot and graph and utilize it as a real tool in doing a very good job of working with the feed yard

improving the health condition. But that information, even though it was available to me, was in filing cabinets and it took lots of hours to dig it out and plot it and put it in a useful form, and then do it. There are several veterinarians in the panhandle area that I work pretty extensively with in this particular area and we proved that the information that we had on a normal basis, it wasn't anything new, if we could just get it into a useable form we could turn it into dollars and cents return to our clients. The first thing I did when I started trying to get involved in this particular endeavor was talk to some people that knew what they were talking about and Dr. Hutchison was the first individual that I sat down and visited with extensively about utilizing the computer in a feedlot situation. Obviously from your exposure to him this afternoon you see why he was recommended to me as someone that has very good working knowledge of animal health, animal nutrition and computer, and so he was the obvious choice and so four years ago Dave and I spend all of one day bumping heads and suggesting different things that we could do and what I ended up doing was stopping my practice, going back to Texas A & M, taking a little bit of computer science, working at the veterinary school and putting this thing together.

I will just briefly tell you that we have changed our objectives from time to time in our feed lot programs. And one of the primary reasons that we changed our objectives is the computer industry, itself. Technology is changing so fast that I know that I can't keep up with it. The machines and the plans that I chose to utilize in my feedlot operation, the philosophy is completely reversed in just three years' time and so what's in the future I'm not sure. I've got some ideas and some suggestions on how we might work with it. The point that I am trying to make is that the computer can be a tool for you, and it's nothing more than a tool for you, and I think, both Dave and Gary said that very well. It's not a replacement of anything, it's just an additional tool that you can use to make yourself a much better manager, and being able to make recommendations much better to your clients. So I think the first thing that you have got to decide is whether you want to utilize the computer in your practice and to determine what your goals are for your particular practice. You know, if your goals are not such that you want to use this I think you can be a very good practitioner and offer very good service and probably get along fine, but you may not be able to, if you have some neighboring practitioners and other veterinarians that are starting utilizing this sort of thing. Your clients are going to be interested in doing a better job so they are going to be using the more progressive practitioner so I guess in summation, Joe, I really feel like you, if we don't change our ways, our clients are going to find the people that will offer what they need. And so I feel, and this is on a personal basis, we should be the planner that Gary was talking about. Generally the practitioner has probably the best background and is probably the most educated person that your rancher or client has access to, close access to. Obviously, he has access

to a lot of university people and extension people and others but he has access to you on a working basis, on a daily basis and if you will make these types of programs available to them I think you can offer very, very good service to your clients.

Now, what I would like to throw out here is just some possible ways that I see that you can apply that both Dave and Gary have covered. I got excited sitting over there and listening to all the different potentials that we have as practitioners in involving ourself in this type of operation. Obviously, my goals as a veterinarian is to become more highly involved in management. When you start sitting down and looking at the animal health dollars versus dollars that your clients pay for feed, for different resources, other things, range improvements etc, the dollars that he is spending with you is really pretty minimal, as a percentage of his total outlay. You do have a dramatic effect on his over-all performance. But, if you really want to have a say, you've got to look at things through his eyes. In order to do that, you've got to know the type of things that Gary covered, you've got to have it down in black and white what his goals are, what his strategies are, and then when you start working with your client in that manner, then you will start functioning as a lot better veterinarian. You will get a lot better prospective and I think our profession will greatly increase its reputation within the beef industry. What I see as a possible way that we can utilize just what these guys have talked about is the micro computer in your office. Now, I may throw out a few biases here and I guess that is all right, in that I have the mike so I can do that and you can pick me apart later. Dave mentioned very well that the T159 is a great tool, it can be used for what it's made for, it will do just that for you. The limiting factor that you pointed out is the fact that it has no storage so you cannot keep production records there. So it is a very valuable tool, but he mentioned that most of these programs that he covered today are available for micro computers as well as for the T159. A Micro computer is one that will do what you want it to do and you can afford it. It's not a big expensive machine like Gary was talking about in universities, in governmental agencies and others. It's in a price range that you can afford. It's got good calculating capabilities, has good storage capabilities and the computer industry in this particular area has really advanced so that we have a box now, I can pick the cover off and I can look inside and it doesn't scare me and I know what's there, and I know what it is doing! So the micro computer industry has really helped us I think, if we will avail ourselves of it. So the micro computer can do exactly what? Dave said all of his programs, The micro computer can very easily be made into the terminal that Gary was talking about. We'll talk about an IBM 360 or 370 or some of the other machines, in fact we'll talk about anything that has got an access to but, it does not have enough storage capabilities, it does not have enough computer capabilities for me to use it the way I want to use it. I'm glad I've got it because I do have access to a larger machine and I can run some very large sophisticated

programs, and in fact that is what my feedlot programs were to start with. But we have got them converted now where they will work on a micro computer. I doubt very seriously that the program that Gary just described could ever be converted to run on a micro. So there is always a place that we have to have these big machines that we can use, but you need something you can communicate with. Well, a micro computer can very easily be made into a terminal as well as computer, so you can take one of these micro computers, get it dressed up, so to speak, and make it a very good calculator, a very good record keeping system for yourself, for your own clinic accounting system, individual client records for horses, dogs, cats, herd records for whatever you're dealing with. If you want to be a planner with a rancher, you can sit down with part of your soil conservation people and get in some other resource people, because your micro computer has been dressed up, you could sit down and call up the large computer that Gary is talking about and then you can make that as part of it. So, the way I see it is that veterinarians will be getting involved in this computer industry, and I think we are going to be forced to be involved if you want to continue to practice herd health veterinary medicine, in a very fine way, I think that we are all capable of it, if we will progress and change as times change. With the micro computer sitting in your office its a very, very valuable tool. I think you can draw clients because you do have it. The planning program that Gary outlined excites me tremendously. I can see a lot of uses. I was raised on a ranch in the Panhandle area and I have just recently in the last few months got involved in doing some herd health work for four or five hundred cow ranches and they have got a lot of problems so they are just now realizing that. They are guys that have never used a veterinarian for anything. They are old family friends so I was quite intrigued when they called me and they wanted me to start doing some work for them. I asked them why and it is because production costs are rising and they see that they are going to have to start doing some changing. They can no longer run their ranch like their dad did and their grand-dad did and they are wanting this other information to be made available to them. And so, I was not aware before this afternoon that I had access to something like Gary mentioned, I have already got my micro computer! I have already got communications, will have shortly, to contact Gary so all I need is a little bit of training to be a planner and I can have a lot of fun in the cow calf area as well. So I think this offers us as practicing veterinarians a tremendous tool to work with out clients. Gary just mentioned briefly that you could do all things as far as diagnosis and I think it could be a tremendous tool, but you know it will never take the place of a veterinarian. A lot of time people say if you get a computer it will reduce the number of personnel in an operation and that has been proven time and time again to be a false statement. If you put a computer in your office you won't replace your secretary. You still have to have her put the information it. What a computer does, it gives you more information to assemble, or it assembles more information

for you to use in making management decisions. It does not replace personnel, and I guess that is one of my pet peaves is people making decisions without the facts. And, of course we do that every day as veterinarians because we're making a lot of diagnosis, a lot of recommendations from gut reactions and of course those gut reactions come from a big experience factor. I think we're all a product of our experiences and that's great that we draw on that. If you can get those gut reactions and those experiences down on paper where you can use them and make yourself a better veterinarian year after year, you're going to grow personally and you're going to grow as a respected individual in the beef cattle industry. I think we are at a turning point as far as practicing veterinarians in the beef cattle industry.

I have been involved pretty much full time in the feedlot business and, in my opinion, our profession is not held highly in the feedlot industry, because we do not offer enough good objective advice and recommendations. We are not doing what we ought to be doing. I have visited with most of the consulting veterinarians, not only in our area of Texas, but over the other regions in the state, on the value of what they think a good computer animal health cattle performance analysis system really is and we are all in total agreement that we definitely need something to start assembling our facts and quit making recommendations on gut reactions, but on facts. So I think what the computer is for, is not to replace us or anything else, it's just to make us better, and I think that we should be challenged by the presentations this afternoon to get involved more heavily. I wish I had some cow-calf programs to offer you for micro computer systems. But, you know we don't, but I'm sure that someone will make himself available to do that as time goes along. It may be one of you and I hope it is. I think that has been one of the things wrong with the programming. I know I have struggled the last four years working with a number of programmers. Luckily, I had the opportunity to visit with Dr. Hutchison before I started all my work and the first thing you do if you buy a micro computer and you don't have any programs for it or anything, you'll seek out someone to program it for you, or you may try to learn yourself. I've had some programming, it's not my cup of tea! I know very little about programming. I can sit down and read one and understand the logic but I have a difficult time developing the logic of a program. So I've resorted to hiring programmers. The first thing they will do is have you tell them what you want to do and before long they will be telling you what you want to know rather than you telling them. I don't really blame the programmers that much, because generally we don't define the problem, what we are trying to solve, and what we want the computer to do for us well enough. The first thing Dave told me to do was sit down and develop the exact output that I wanted. Rather than saying, Well, Gosh, the computer would sure be good and I know it would help me as a veterinarian and help my client so let's get a computer and we'll develop a program. Well, the first thing you need to do is determine really what kind of information

would be of value to you and then work backwards. Then you can figure out what input it takes, and if you can get that input and once you have that, then you can start looking for a programmer to help you.

I think you will get into a storm if you don't define first what you want out of it, whether or not you can get the information that is required to get the output and then if you can do all that you can get it down on paper, you can write out all your formulas, how you want to figure interest, how you want to do everything and you could give it to a programmer, you won't have any problems. It will develop fairly rapidly. One of the things I feel obligated to share with you is what it costs to do some of this programming. Programmers are just like our profession. We have some good ones and we have some bad ones and we have some inbetween. You know, the good ones may cost the least and some of the good ones may cost the most, but it can cost you a lot of money if you don't get some good ones and you don't really know what you are doing. Defining and setting up the program and everything yourself is probably the most important thing before you can go to a programmer. The

better job that you can do there will save you many dollars down the road. It's going to cost you a good deal of money to develop any programs that have much sophistication to them at all. We have lots of input, we input every drug that is administered by day, by dosage to individual animals, feed input, we have a complete drug inventory system and a feed inventory system. We have lots of input and so the program is lengthy. It just does a lot of jobs of shuffling figures around here and there and it has taken a lot of money, a lot more dollars than I ever thought it would when I started, I guarantee you. So, I think in summation, the computer is a very good tool for us to use as practitioners. I think each one of us should become more familiar with it. If you are not ready to make a decision after this presentation today, to go out next week and get started, keep it at the back of your mind. Keep reading about these type of programs that Gary has, make yourself available to practitioners that have started using these particular things. Be thinking, because I feel that in a very, very, short period of time we are all going to be using them to our advantage and to our clients' advantage.

Panel Discussion

Moderator: Well, I plan on different levels of herd health management.

The cattle cycle put us out of business. When cattle prices went down to where no one was making any money they were looking for ways where they could lose less and veterinary service was one of the things that suffered. But as the cattle cycle picks up again I expect herd health management to pick up as well. This one ranch is the only one we have worked with using computers and the only computer work I've done is through Dr. Evans. I have no knowledge of computers myself. Just an abiding interest and that is the reason for the program.

Question: Do you have a record keeping system?

Dr. Bitter: As far as my own practice is concerned, none. Because each record system for each of my clients is different and all of it is based pretty much on what information they had available when I started with them and what we could prod them into. Keeping records is probably one of the hardest things I faced when I worked with clients, because I don't have time to keep their records for them. Many of these people don't feel that they have time to keep records for themselves. So, whatever information my clients have when I work with them on a herd health management standpoint we utilize and we try to enlarge upon, but one thing that I definitely try to avoid is to over burden people with records, especially in the early stages of a herd health management program because that's the first thing you can do to turn them off. You have got to work with them right where they are, and not say, okay boys here's the program and flap a book down there and say these are the things we are going to

have to start doing tomorrow because they just cannot adjust that fast. I think Gary wants to add some information to this.

Dr. Evans: I would like to make one comment about the particular rancher that Dr. Bitter and I worked with. The first year that we evaluated his operation resulted in three major changes in the way in which he was managing the rotation of his grazing. We also found out that he was putting exceeding large amounts of fertilizer that wasn't buying him a darn thing. In fact, he was over fertilizing. The next time that I went out, which was two years later, all of the analysis that we had run showed that he was coming up with severe protein deficiencies. This was starting to affect his breeding cycles, as I remember. You could not get enough protein by slugging more and more nitrogen to the grass. That was not the way to go. It's wet down in that part of the country, and some of the other protein supplements that were being considered had such a short life that we started looking for ways of improving the protein quality of the pastures. With some work at one of the experiment stations, we found both the arrow leaf clover and the sub-terranean clover were becoming viable alternatives for increasing the protein quality of the particular pastures that he had available. Because of the information that we had developed, he didn't hesitate ten minutes to come back and say and where can I get the seed, when should I put it on and what kind of a management system do we need to put into this thing so that we will have the protein quality in the forage from year to year. I really feel that if we had not spent the time working with him, we would not have been able to take that step in one brief meeting. Instead of a long selling