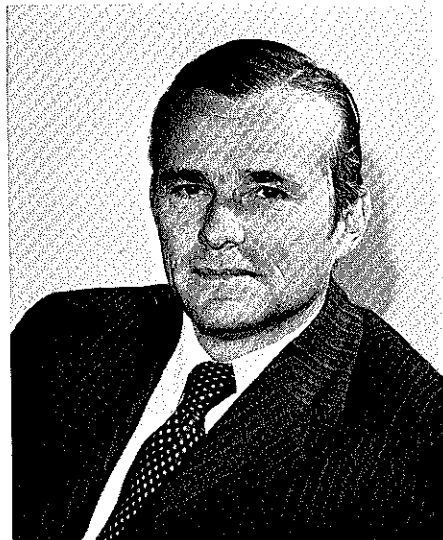




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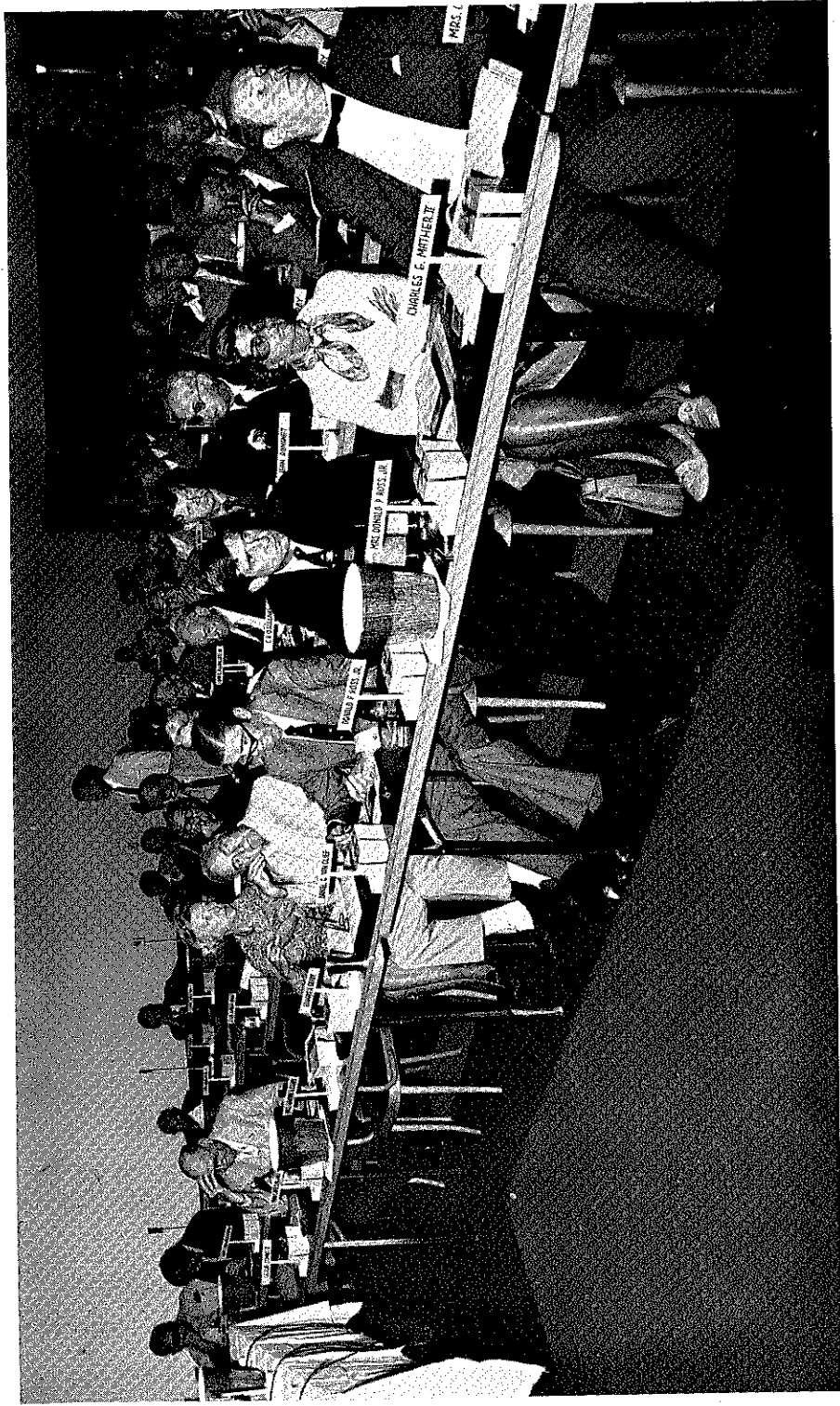
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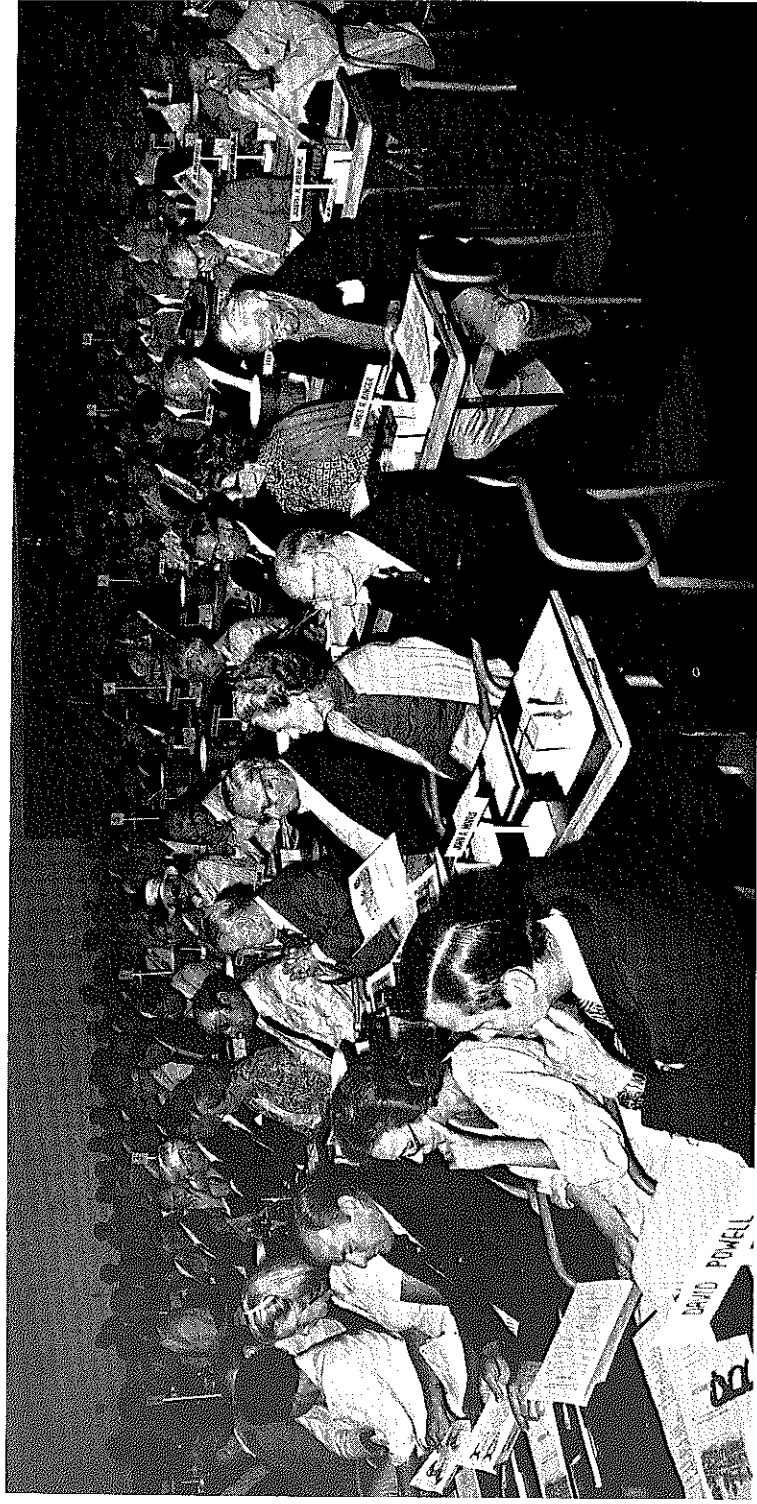
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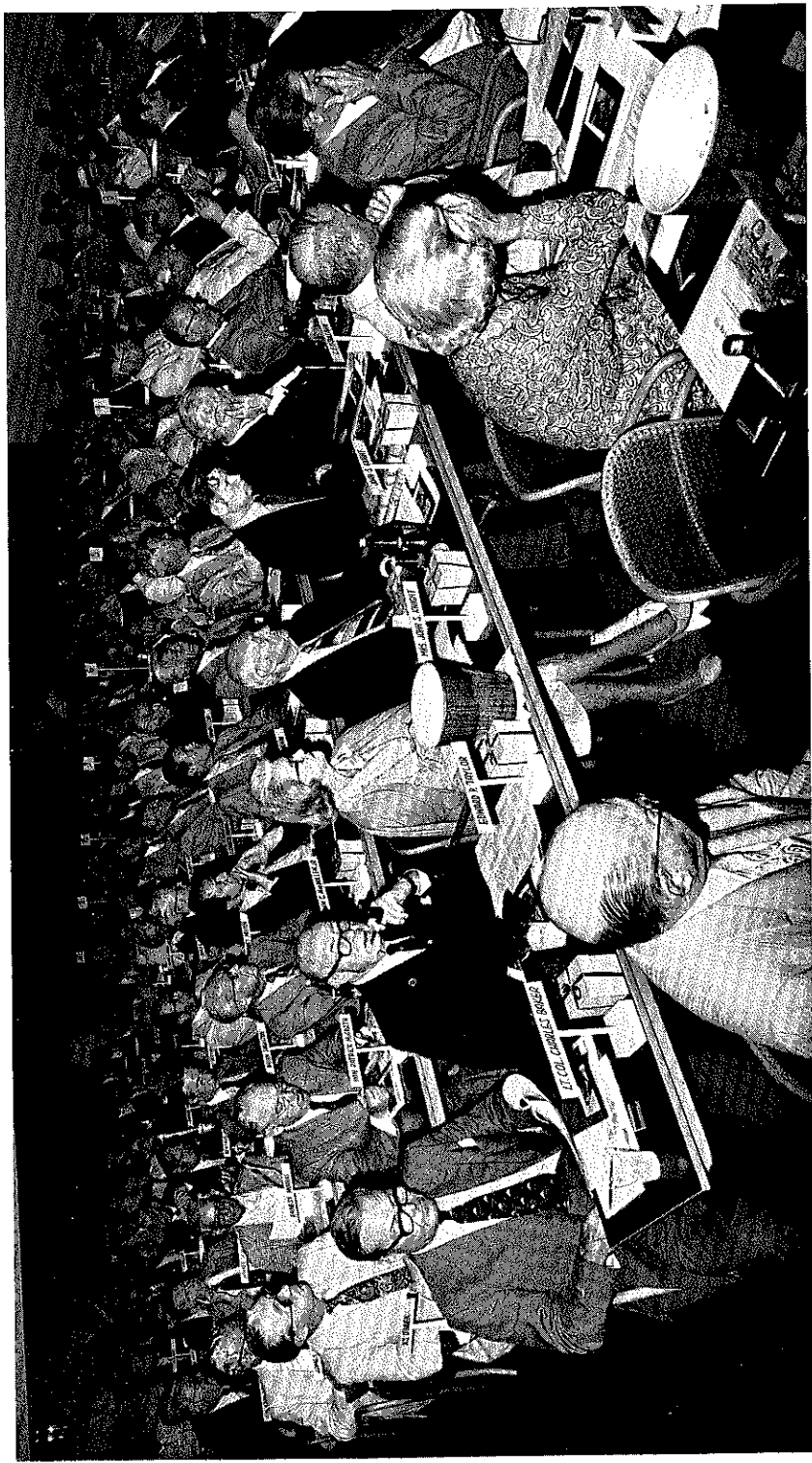
Nicholas F. Brady, Chairman, welcoming the guests.



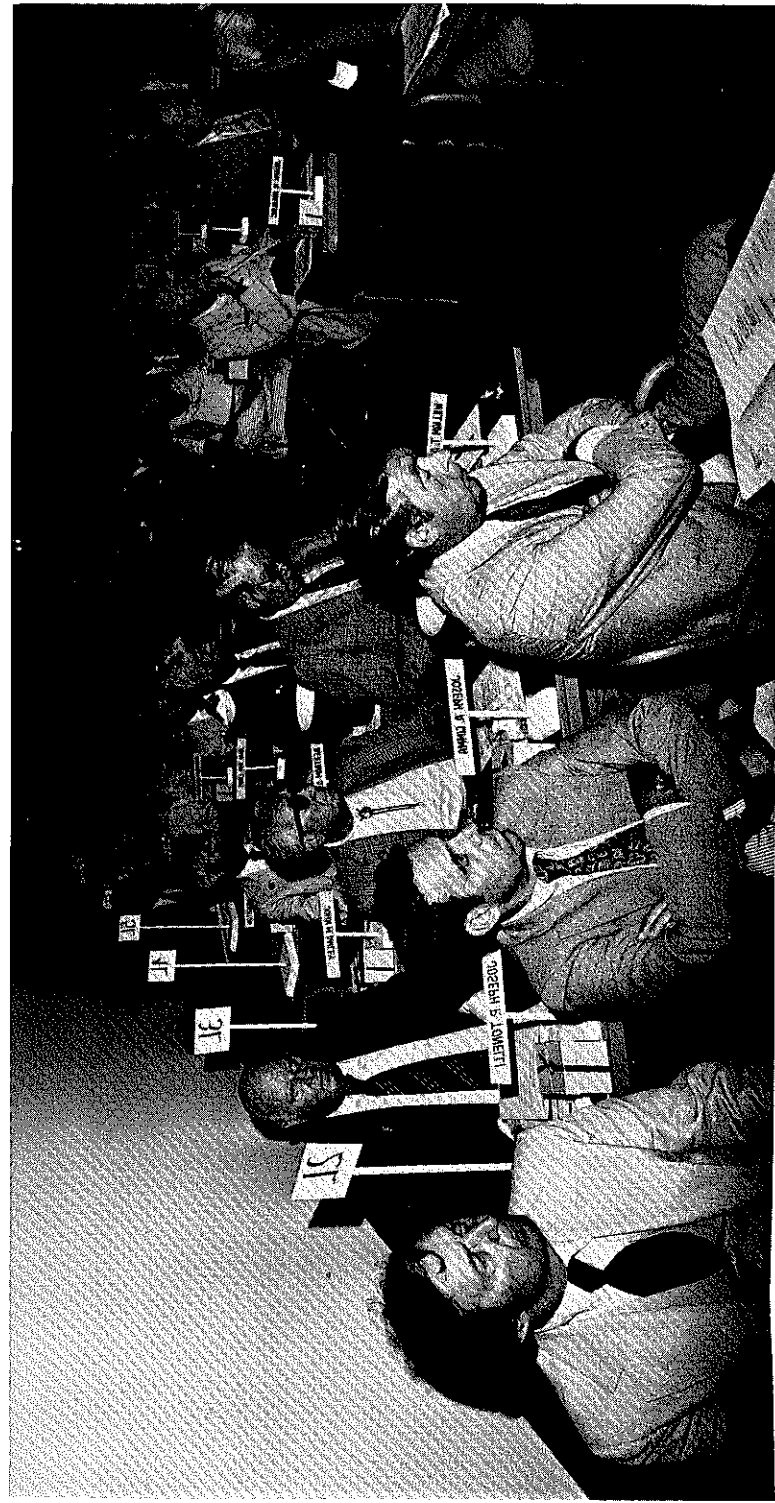
A view of the Conference in session.



A view of the Conference in session.



A view of the Conference in session.



A view of the Conference in session.



A view of the Conference in session.

TWENTY-SIXTH ANNUAL ROUND TABLE CONFERENCE

ON MATTERS PERTAINING TO RACING

HELD BY

THE JOCKEY CLUB

AT

THE NATIONAL MUSEUM OF RACING

SARATOGA SPRINGS, NEW YORK

SUNDAY, AUGUST 13, 1978

IN ATTENDANCE:

Helen C. Alexander, Owner
 Anthony Alonso
 *Eslie Asbury, Owner, Breeder
 Taylor Asbury, Owner, Breeder
 William T. Ashton, Member, New York State Racing Commission
 *Lt. Col. Charles Baker, Chairman, The Ontario Jockey Club; Owner, Breeder
 Lazaro S. Barrera, Trainer
 John A. Bell III, Owner, Breeder
 *August Belmont IV, Owner, Breeder
 Mrs. August Belmont IV, Owner, Breeder
 Paul W. Berube, Secretary-Treasurer, Thoroughbred Racing Protective Bureau
 *James H. Binger, Director, Thoroughbred Racing Association; Owner, Breeder
 Mrs. James H. Binger, Owner, Breeder
 Christopher Brady
 *James C. Brady, Jr., Owner, Breeder
 *Nicholas F. Brady, Chairman, The Jockey Club; Trustee, National Museum of Racing, Inc.; Trustee, American Horse Council, Inc.; Owner, Breeder
 Mrs. Nicholas F. Brady, Owner, Breeder
 Peter M. Brant, Owner, Breeder
 J. Newton Brewer, Jr., Former Chairman, Maryland Racing Commission
 John J. Brunetti, Chairman and President, Hialeah Park; Director, Thoroughbred Racing Association
 John T. Bryans, Professor of Veterinary Science, University of Kentucky
 J. Elliott Burch, Trainer
 Gerard Burke, Steward, New York State Racing and Wagering Board
 Snowden Carter, General Manager, Maryland Horse Breeders Association, Inc.
 *G. W. Douglas Carver, Steward, The Jockey Club; Owner, Breeder
 Mrs. G. W. Douglas Carver, Owner, Breeder
 R. Anthony Chamblin, Executive Committee, American Horse Council; Editor and Publisher, Horsemen's Journal
 *George M. Cheston, Owner, Breeder
 William Christine, Assistant to the Executive Vice-President, Thoroughbred Racing Association
 Melville Church III, President, Virginia Thoroughbred Association
 John S. Clark, Attorney; Formerly New York State Racing and Wagering Board
 Herman Cohen, President, Maryland Jockey Club; Director, Thoroughbred Racing Association
 Janet Cohen, Maryland Jockey Club
 Charles Colgan, Executive Secretary, National Steeplechase and Hunt Association
 Brownell Combs, Vice-President, National Association of State Racing Commissioners; Executive Committee, American Horse Council; Breeder
 *Leslie Combs II, Vice-President, Kenneland Association; Owner, Breeder
 Ed Comerford, Columnist, Newsday
 Kenneth Cox, Chairman, Australian Equine Research Foundation; Victoria Racing Club Committee; Owner, Breeder
 Teddy Cox, Columnist, Daily Racing Form
 John M. Dailey, New York State Racing and Wagering Board
 Thomas A. Davis, Counsel, American Horse Council
 Jack DeFee, National President, Horsemen's Benevolent and Protective Association
 Theodore Demmon, Vice-President, Marketing, The New York Racing Association, Inc.
 L. P. Doherty, Grayson Foundation; Thoroughbred Owners and Breeders Association
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 Spencer Drayton, Jr., Vice-President, Thoroughbred Racing Protective Bureau
 Don Drew, Vice-President, Mutuels, The New York Racing Association, Inc.
 Francis P. Dunne, Steward, Monmouth Park
 Mrs. Richard C. duPont, Owner, Breeder

Lucas Dupps, Patrol Judge, The New York Racing Association, Inc.
Lee Eaton, Owner, Breeder
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Mrs. Bertram Firestone, Owner, Breeder
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Seth Hancock, Owner, Breeder
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H. A. Jones
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Barney Nagler, Columnist, Daily Racing Form
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TWENTY-SIXTH ANNUAL ROUND TABLE CONFERENCE

ON MATTERS PERTAINING TO RACING

HELD BY

THE JOCKEY CLUB

August 13, 1978

MR. BRADY: Good morning, ladies and gentlemen. If you will all take your seats, we'll get under way. Welcome to the Twenty-Sixth Annual Jockey Club Round Table. We're delighted you're here. We also want to thank Charlie Mather and the Trustees of the National Museum of Racing for being our hosts this morning. This is where a conference on racing belongs. Our first speaker this morning will be Jim Moseley, who will bring you up to date on our horse identification program. Jim.

MR. MOSELEY: Thank you Nick. There is little question in the minds of those present here today that the Thoroughbred racing and breeding industry has become, and will continue to be an enterprise of increasing competition and sophistication. It is not immune to trends and pressures that affect the larger business environment in this country and internationally.

As the price of breeding stock rises, and as government now hopefully begins to realize that it is in its best interest to return more to both owners and fans, there is going to be increasing pressure to insure the integrity of all phases of the sport to the various consumers, be they railbirds or large breeders.

It is in this context that I appreciate the opportunity to briefly update the Round Table participants on some of the progress and plans afoot within the industry in the area of horse identification.

I think it should be stated at the outset, that despite the publicity surrounding the so-called "sting", which was the Lebon-Cinzano case, and at the risk of challenge from our international guests, the Thoroughbred industry in the United States has nothing to be ashamed of. We do not have to take a back seat to any sport or nation in the strides we have made, and are continuing, toward the prevention of fraud or simple human error in protecting consumers, and insuring the integrity of its Thoroughbred lines.

The Jockey Club, which pioneered this field over forty years ago, and its Universal System of Identification, that over the years has benefited immensely by the contributions of numerous horesmen, scientists and track officials, (I think it appropriate here to single out the contribution of the New York Racing Association, in particular) is exemplary in this field. The booklet you have before you, updating and improving the *Method of Identifying a Thoroughbred*, (and being released publicly today), is a further step by The Jockey Club in its effort to help owners, breeders, track identifiers, farm managers and others, to improve the quality of horse identification throughout the country. Discussions with the National Association of State Racing Commissioners to implement further the Universal System of Identification, to provide a uniform national standard, have been going forward over the past year. Similarly, a careful evaluation of current and projected technology applicable to the identification process, both at the farm and track, is getting underway. This effort should aid considerably in identifying feasible and economic enhancements available to the industry throughout the country. The contribution of the NASRC in this entire area is surely to be commended and offers great hope for the future. This represents the backbone and skeleton of the identification system.

A major step toward fleshing out the identification system was taken in 1976, when the Chairman of The Jockey Club, Nick Brady, established the Committee on Horse Identification. The efforts of this committee, representing all facets of the Thoroughbred industry, have provided access to a strong technological tool in blood typing for the pre-

sent and the longer term. Already there are over 5,500 active stallion blood types on file. Another 200 kits have been distributed and follow-up procedures are in effect. Thus, the first phase of the committee recommendations of blood typing all stallions, approximately 7,500 by 1979 is on target. This is a testament to the interest and tremendous cooperation of breeders throughout the country.

Negotiations with the University of California at Davis are near completion to expand their facilities. Under the proposed expanded contract, The Jockey Club will initially underwrite a capacity to type over 30,000 horses a year. This will give us the potential to type all foals in 1981, and over succeeding years, encompass the entire Thoroughbred population.

In other areas, briefly, through the cooperation of the International Stud Book authorities, improved measures for the transfer of papers and identification of animals crossing international borders have been implemented. Forms for identification used by The Jockey Club have been improved. Newer and more sophisticated forms that will be easier to use, yet provide greater precision and uniformity are being developed and tested.

In sum, we have a long way to go. The days of strictly *caveat emptor* (buyer beware) appear gone. Parallels in other industries, be they title searches on real estate, putting the same engine in a make and model of car, or proper labeling on products, set precedent and standards that affect us as well. In a society where litigation is quickly becoming a way of life, we cannot afford to relax in our efforts. I think the Thoroughbred industry recognizes this. Although at times it seems troublesome, more paperwork and cost is not insignificant, the understanding and increasing cooperation we have seen, evidence that the Thoroughbred industry recognizes that its long term self-interest rests with our pressing forward. To the degree that man is fallible, as well as ingenious and the environment we operate in keeps changing, additional effort and attention to horse identification will always be necessary. I am confident, however, that in the years hence, others will look on this period as a watershed era, when the men and women represented here will be seen as having had the courage and conviction to insure the heritage they have received in the face of unprecedented technological, economic, legal and social challenges. We have made significant strides in the past several years. With your help, it will continue. Thank you. (Applause)

MR. BRADY: Thank you, Jim. Just a word on the booklets on identification that you have before you. We are handing them out here this morning, and we are sending them to the interested organizations in the industry. We have printed about 25,000 of them and we think that they will be a material aid in the identification area.

The second item on the agenda this morning is a report by Pugh-Roberts Associates, to be given by Dr. Bill Killingsworth, on how regulations in various areas of the country affect racing. You will remember that several years ago we commissioned Bill and Henry Weil to do a Pugh-Roberts study which is an economic forecast of the industry. This study has served as a valuable data base for subsequent studies that have been made by various interested people. Because of the fact that legislators and legislatures all over the country are now focusing on how to tax the racing industry, and because we think that Proposition 13 is going to put an additional burden on the industry (in terms of being looked at as a source of revenues). We thought that this morning would be a particularly good time to look at how regions handle the question of regulation. Regulation is not a national question. It is a regional question, and so we thought it would be helpful to have a look at how various regions handle the problem. It's my great pleasure to introduce Bill Killingsworth from Pugh-Roberts. At the conclusion of his address, if there are any questions, of course, we'll be glad to entertain them. Thank you.

DR. KILLINGSWORTH: Thank you, Mr. Chairman. Many of your comments were from the first page of my speech, so I don't know whether to begin in the middle, or right at the beginning. As Mr. Brady said, many states are facing increasing pressures to either reduce or hold the line on taxes. As a result, they're looking for sources of either

new or increased revenues. Now, as often in the past, the search generally begins with racing, wagering or gambling. Casinos are now being considered in many states, lotteries are spreading, and jai alai being introduced across the country. And all forms of racing—Thoroughbred, harness, quarter horse and greyhound—and, yes, in California, even mules are either being considered for expanded seasons, adding days, or being introduced for the first time. The basic issue is that many government officials and outsiders tend to view wagering and gambling as an industry with unlimited growth opportunities, that it can grow and continue to provide revenues in an unlimited fashion. And this is the basic issue: can it really do that? And most of these states seem to be counting the revenues before any of the industries are actually built. Often this growth in size occurs without addressing some very basic regulatory questions. The first is, what levels of pari-mutuel and gambling activity can be supported in a particular market. The second is what impacts might new gambling opportunities have on the health of the existing industries. And third, what are appropriate tax policies for those industries in that particular market area. Of course, this lack of investigation on the part of the state is nothing really new. States have often leapt into increasing racing days in attempts to provide additional revenues to either the industry or the state, and they've permitted the introduction of new forms of wagering in existing markets in attempts to get additional state revenues.

In a number of these cases, the desired results were actually achieved. The growth did lead to additional revenues. But one would think that this cannot go on forever, that at some point the increasing overlap and the increasing competition would lead to saturation in the gains to be achieved and total attendance would not increase due to this growth. In these cases, attendance would not grow because the racing seasons would likely be moved into winter, competition with other sports increased, and the fans would be totally divided between alternative forms of wagering.

Now in this situation, where a market has been overexpanded, typically the increased costs of that growth are not covered by the slight growth in attendance. When this happens, the financial health of the industry begins to suffer. Now initially, this doesn't usually affect state revenues. The state tends to almost always, for the first several years, benefit from extended seasons, or new wagering industries, even though the industries may be having trouble. But after a number of years, it should be the case that over-expansion would create industry difficulties and then require relief and actions on the part of the state which reduce state revenues in order to redirect revenues to the industry.

Now, probably many of you are sitting there saying, well, what else is new; we've known this for a long time. A market can be easily saturated and you can only put in dogs, jai alai, harness, quarter horse, Thoroughbreds, and casinos up to a certain point. But the basic problem is that this fact has never really been demonstrated, and this is what Mr. Brady was alluding to. Previously, analyses have generally focused on only a single sport or single form of wagering, such as Thoroughbreds or perhaps greyhounds. But no study or analysis has been done which tries to look in an integrated fashion at how all of the different sports, or all of the different wagering industries are actually doing within very limited and specific markets. And basically, this is the objective of our study, to see whether facts can be compiled that will allow the industry to make very completely documented position statements that say — this is what's happened in other markets, there's no reason to think it will not happen in our market.

Now, today, to indicate some of this, we're going to go through a number of slides, and on these slides, I shall present some preliminary findings. Our approach to looking at this regulation is to look at different markets. We've ranged from Greater Boston to Los Angeles to Omaha, and to the Miami area, to look at how, not just the Thoroughbred industry's doing, but how the wagering industry is doing. Again I want to stress this, none of the slides today will be only of Thoroughbreds or Thoroughbred data; they will be for the total wagering activities, which are going on in particular markets. For each of these markets, we've looked at each individual pari-mutuel industry and it's evolution from 1960 to the present time, in an attempt to see how levels of competition, levels of saturation have affected the behavior and health of these industries. I think now if we could

have the lights, we'll begin to look at some of these slides and I'll use my little magic pointer . . . Here we go.

Okay, let me . . . before we start talking about the slide, let me indicate exactly what we're looking at here, so there will not be any confusion. Now, the vertical axis is total annual pari-mutuel attendance.

This is for Eastern Massachusetts, the Greater Boston market. This market is one that I want to start with because it's really at one end of the spectrum, very saturated. And you can see that we're going to be looking at revenues and attendance as a function of total racing or pari-mutuel days. Now the note here is that, for Thoroughbred, harness and quarter horse, it's racing days. For greyhound and jai alai, it is performances because now they're introducing a significant number of matinees. So this is the total number, you might say, of Eastern Massachusetts performances which are Thoroughbred and harness racing days, plus greyhound days and performances for nights and daytimes. So in Eastern Massachusetts, you can see that during the Sixties racing days were relatively stable, about 400 days a year, and total attendance was relatively stable. It was essentially maintaining its position. Now, in '71, and then in '72, and then in '73, racing days were increased substantially. They went from about 400 to 500 to 600. But you see the total attendance did not really grow. A saturation phenomena immediately began and, of course, the average daily attendance went down very sharply. Now, during this period, since attendance didn't go up in total, a position developed where the industry began encountering financial difficulties and many of the facilities began to deteriorate rather badly. Now, total attendance is actually beginning to fall off. Again, this is not average daily, but total attendance which seems to be very definitely on a downward direction, primarily, I feel, because the industry problems created through this overexpansion did not bring any benefits and, without any investment funds coming into the industry — facilities tended to deteriorate and total attendance began to decline.

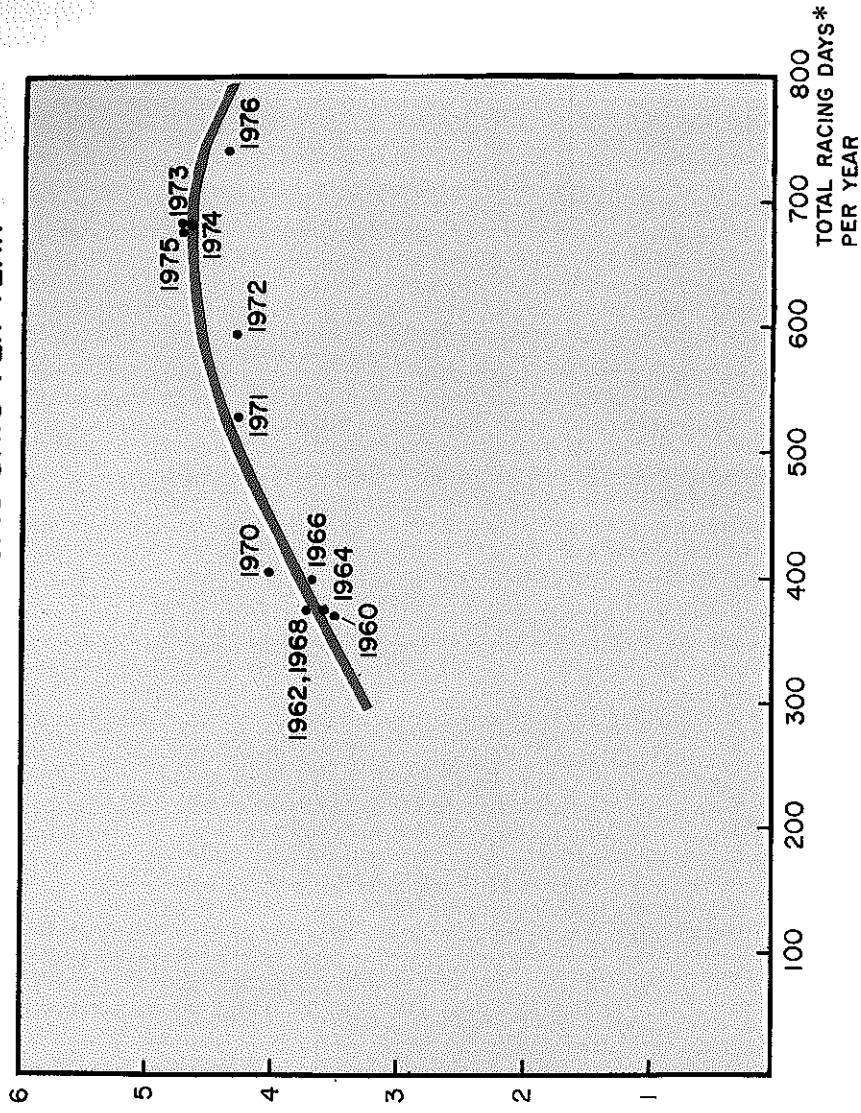
Now, this second slide is of track pari-mutuel revenues. All of the revenue figures that we present today will be in terms of 1970 dollars. The reason we have deflated the revenues and kept them in constant dollars and taken out inflation is that we really want to look at how a racing day, an additional racing day say in 1977 compares to an additional day back in 1970 . . . that is, what was the difference of adding one day from 400 to 401 in 1970 and going from 700 to 701 in 1977. Well, if we look just at current dollars, that included just normal inflation, it would make the later days look better than they really are because, of course, these dollars are not really comparable to the earlier ones. So all of these revenue slides are in constant dollars. The important thing to realize is that these have been deflated by the general consumer price index, and as I think just about any track manager here today would verify, and our preliminary data is indicating track costs tended to grow much more rapidly than just the general consumer price index. So here on this slide, we have, during the Sixties, track revenues growing reasonably strongly in terms of constant dollars. That is, they were achieving real growth. Once the expansion began, again, no additional revenues were coming in and now, with the falling off of attendance, revenues are beginning to suffer even more. So in this case, the overexpansion is very definitely creating a problem for the tracks, both in terms of their attendance and the implications here for revenues.

Now, what does this say for the state? The next slide shows average revenue to the state per racing day and you can see that up to a point, very few additional days were added, and real income to the state was actually growing and growing reasonably stronger. But once days hit about 400; and the expansion began, the average daily began to fall off quite dramatically. Now this typically happens. One would expect that as you grow, the averages would tend to be reduced, but usually people say: well, even though the averages are dropping, the total will increase. Well, in this case, that didn't even happen. Even though racing days were growing, they were just over loading the market. State revenues began leveling off once the expansion began and are now declining.

There are two issues here. We are only looking at days; I don't have slides on the take-out, but during the same period, once this problem became evident, the solution, or the

EASTERN MASSACHUSETTS MARKET 1960-1976
TOTAL ANNUAL ATTENDANCE AS A FUNCTION OF
TOTAL RACING DAYS PER YEAR

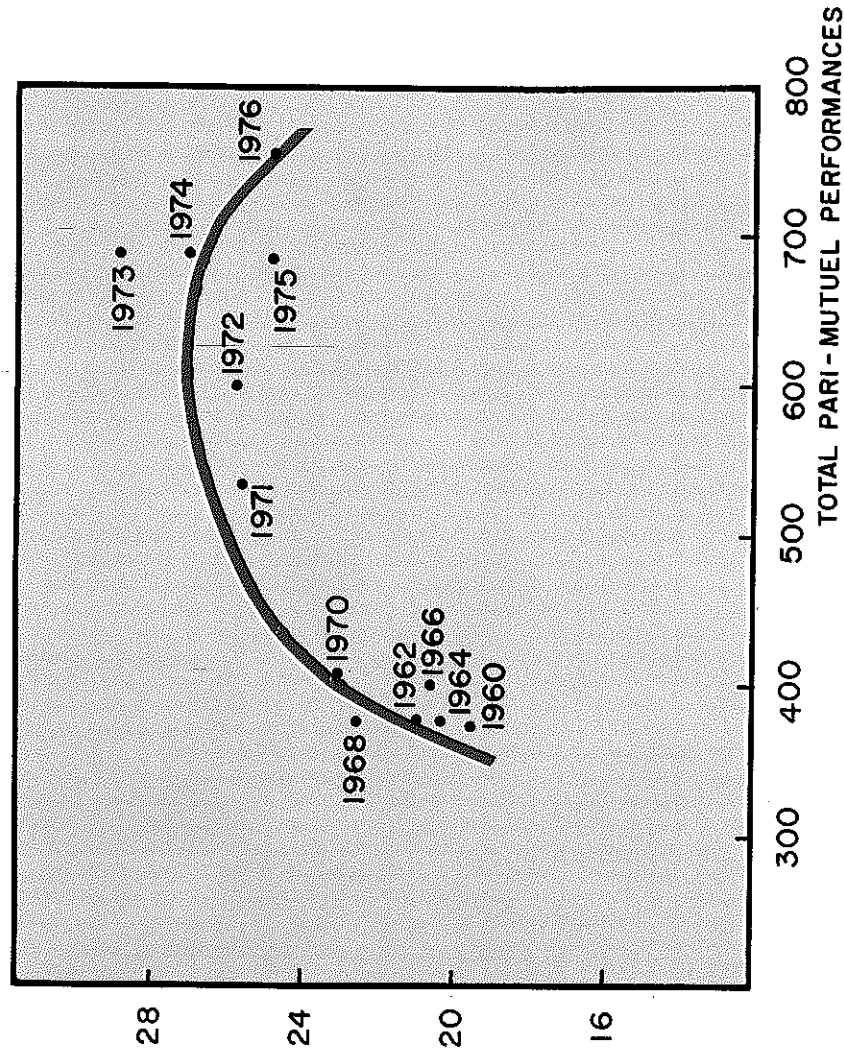
TOTAL ANNUAL
 PARI-MUTUEL
 ATTENDANCE
 (MILLIONS)



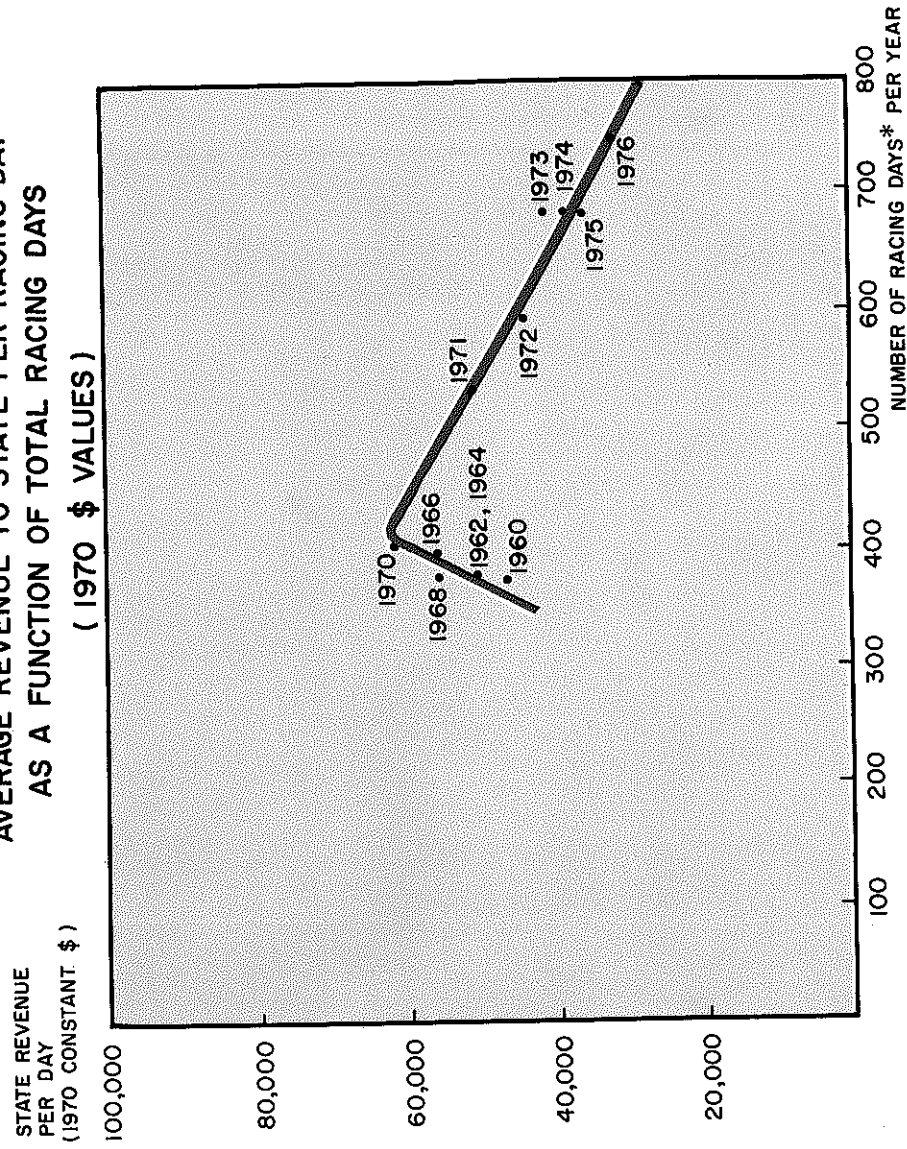
* THOROUGHBRED & HARNES RACING DAYS; GREYHOUND PERFORMANCES

TOTAL ANNUAL PARI-MUTUEL REVENUES
TO EASTERN MASSACHUSETTS TRACKS
(1970 \$ VALUES)

TRACK PARI-MUTUEL
 REVENUES (IN 1970 \$)
 (MILLIONS)

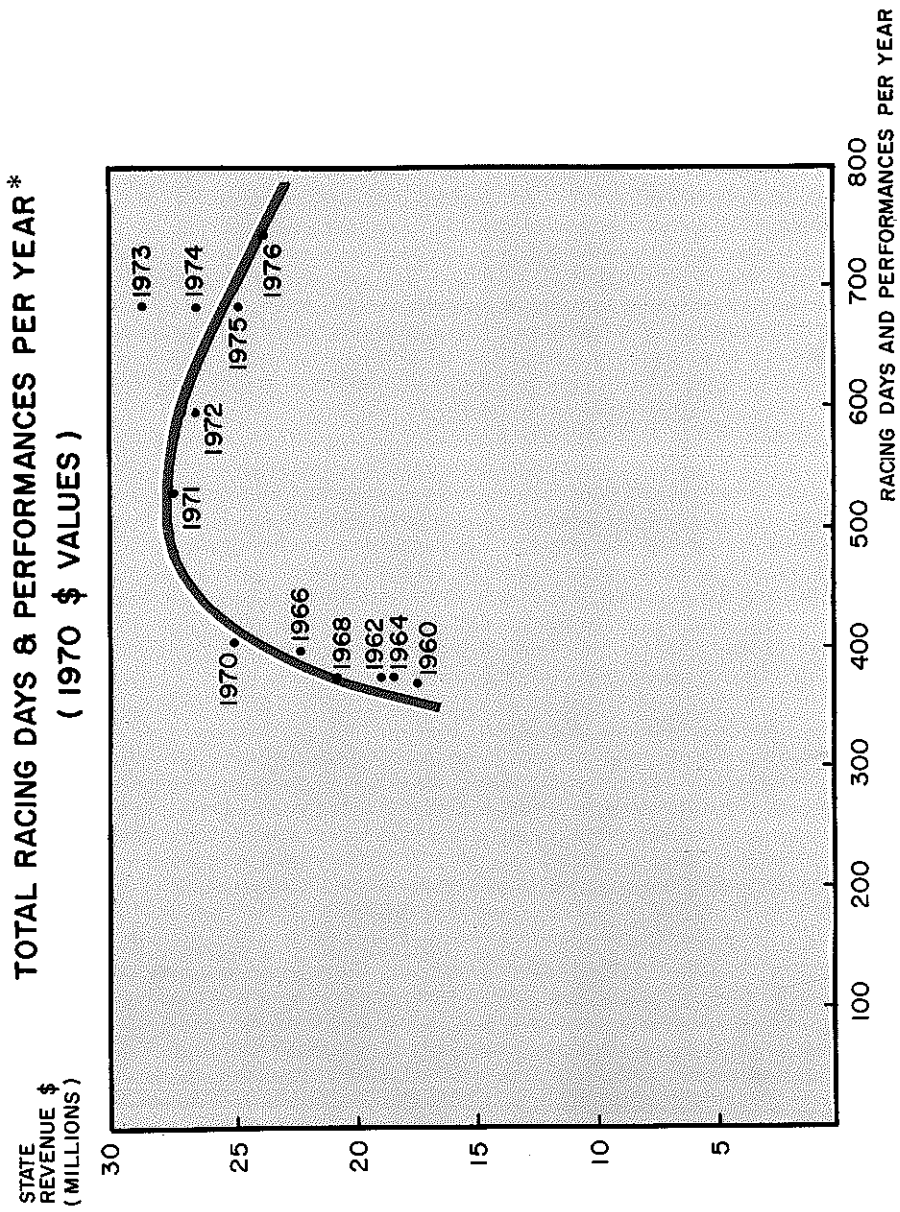


EASTERN MASSACHUSETTS MARKET 1960-1976
AVERAGE REVENUE TO STATE PER RACING DAY*
AS A FUNCTION OF TOTAL RACING DAYS
(1970 \$ VALUES)



* THOROUGHBRED & HARNESS RACING DAYS; GREYHOUND PERFORMANCES

EASTERN MASSACHUSETTS MARKET 1960-1976
TOTAL ANNUAL REVENUE TO STATE AS A FUNCTION OF
TOTAL RACING DAYS & PERFORMANCES PER YEAR*
(1970 \$ VALUES)



* THOROUGHBRED & HARNESS RACING DAYS; GREYHOUND PERFORMANCES

attempted solution was to start increasing the take-out, and the average pari-mutuel take-out across all industries went from about 17 to about now 19%, and again, only tended to worsen the situation. Recently, legislation has been passed in Massachusetts which probably is going to cause a further decline because the state is now going to have to reallocate some of its revenues back to the industry in order to help get it out of the situation that the overexpansion created . . . so that perhaps with the new take-out allocation, real state revenues will be back in this region comparable to the situation before the overexpansion. So basically, what the market went through was a rather terrible learning experience where oversaturation created problems, deteriorating facilities, loss of fans, no real additional growth in revenues for anyone, and now, reductions in state revenues to a level which is perhaps an appropriate level to be supported.

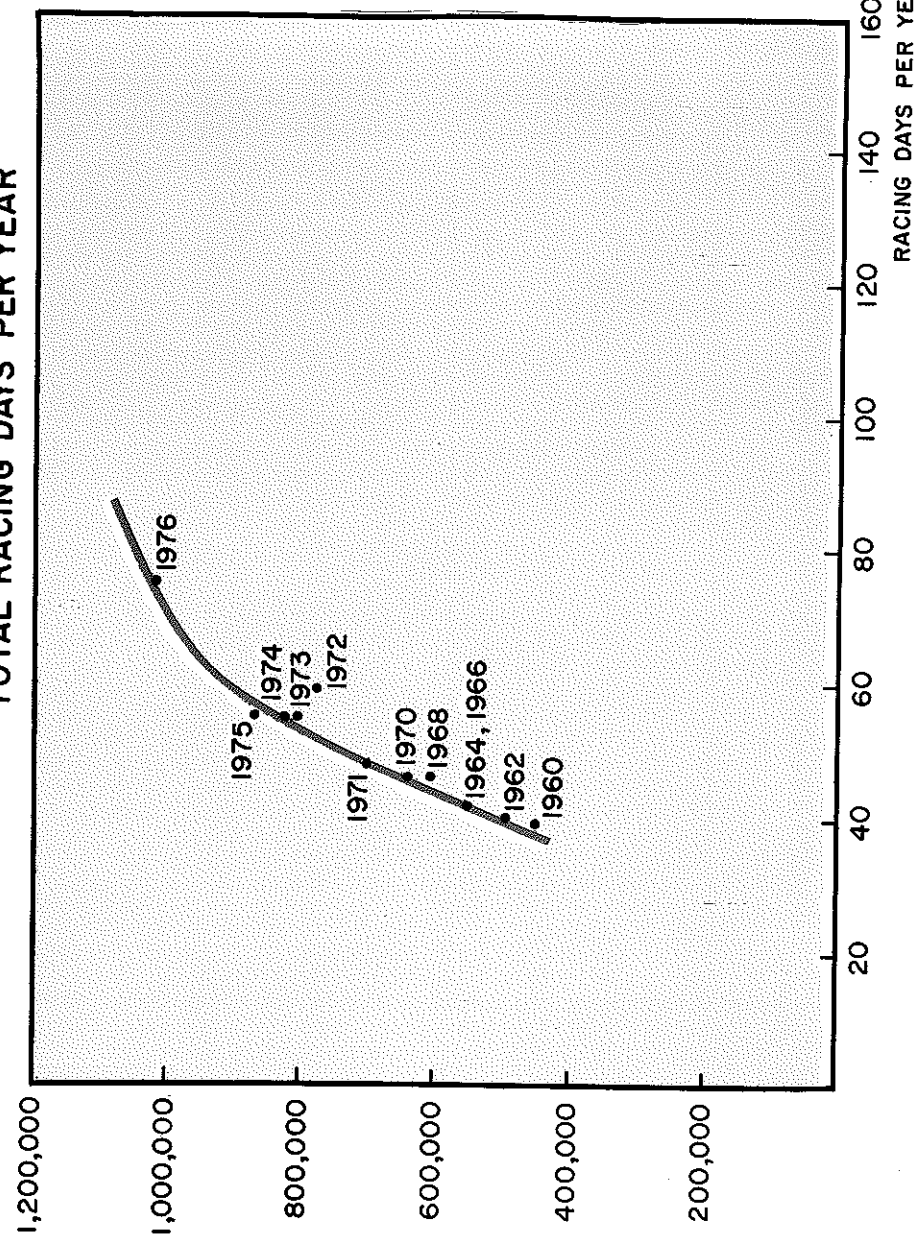
Now let's look at a very different type of chart, looking at another market. This is the Omaha, Nebraska area which is Ak-Sar-Ben. You can see we're dealing with completely different types of competition here, essentially, there is none. About 40 days or so in 1960 and in 1976 it zoomed up to perhaps 80, but still very, very limited pari-mutuel wagering in this market area. And you can see, total annual attendance has been growing very strongly and tending to keep pace or exceed the growth of population. It is not suffering from the types of extreme oversaturation that was evidenced in Eastern Massachusetts. Now you can see that, with the latest increase in days, there's a slight bending over. I think this is a very definite indication that, even in a market like this, the racing, wagering and gambling industries are subject to very substantial potential for saturation.

Now, the next slide shows total annual revenue to the state. Again, this is in 1970 dollars, so this is very sharp real growth. The industry is not being overdivided between too many tracks, or too many other activities, and the state is participating in that growth. One could pose the question — and this is the type of final issues we hope to be able to answer — what level of pari-mutuel activity might this market be able to support before those very damaging saturation impacts begin to occur. I think by the end of the study we'll be able to give some reasonable indications of that answer.

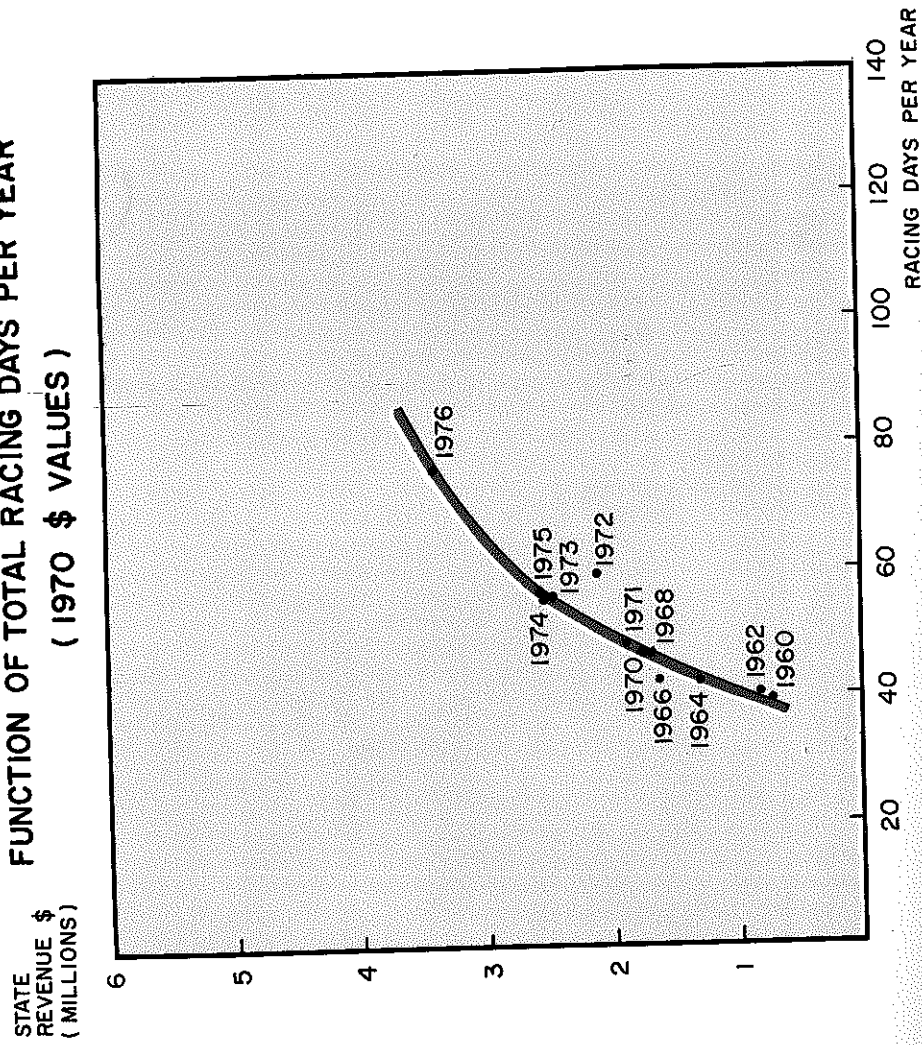
Let's go back to the other end of the spectrum . . . a market with high saturation. This slide is just southern Florida, the Miami area — 1600 performances — Thoroughbreds, harness, quarter horses, dogs, jai alai, everything is included here, and this is total annual attendance. Now, Florida, of course, is very special because of tourists being a fairly large component of their attendance, perhaps 50 to 60%, but you can see that through the Sixties, the days grew reasonably strongly, actually, and yet attendance still was able to keep up as the Florida tourist business developed. Then there was an increase over to this point in 1970 which was due primarily to two things — the introduction of matinees for the dogs and the opening of the new Calder track. The growth that then occurred in the early Seventies, is primarily the result of Calder very effectively developing that summer market. But now you can see some rather disturbing indications of falling total attendance, and it's very unlikely that adding days or performances would bring in any greater total revenues. This market is an indication of being very close to being saturated. Now, in terms of total revenues to the state, again, a fairly dramatic bending. And in Florida, the exact type of evolution described initially with Eastern Massachusetts has been occurring. State revenues grew during this period in real dollars, and, in a sense, these additional days were productive. As more and more days were added, state revenues began falling. The primary reason is a stabilization in attendance and a reallocation of the take-out directed to the industry to help get it out of the hole, that the overexpansion had provided. So you see state revenues coming down and again, they're coming down largely because the state is having to compensate for the fact that damaging saturation has occurred and the industry needs to return to some type of reasonable condition.

The next slide is an interesting chart. Maybe we should all pause a moment and just reflect on this. Again, we're talking here of a fairly specialized situation. Oaklawn Park around Hot Springs, a track that has been at about the same number of racing days since about 1968 or '70, between 40 or 50 days. This is growth in total annual attendance, from say 250,000 to 900,000. Now the issue here is not simply one of nothing else going on in

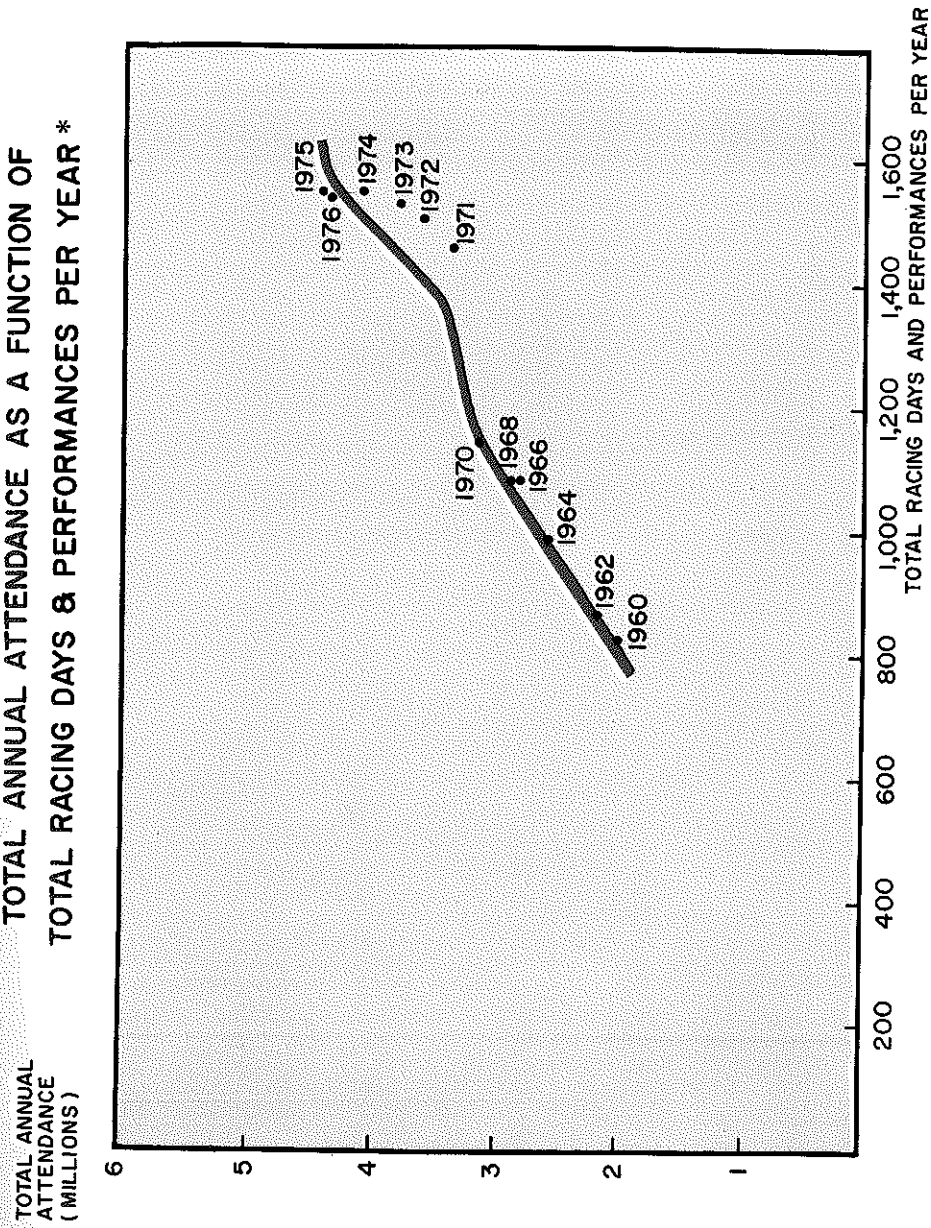
AK-SAR-BEN MARKET 1960 - 1976
TOTAL ANNUAL ATTENDANCE AS A FUNCTION OF
TOTAL RACING DAYS PER YEAR



AK-SAR-BEN MARKET 1960 - 1976
 TOTAL ANNUAL REVENUE TO STATE AS A
 FUNCTION OF TOTAL RACING DAYS PER YEAR
 (1970 \$ VALUES)

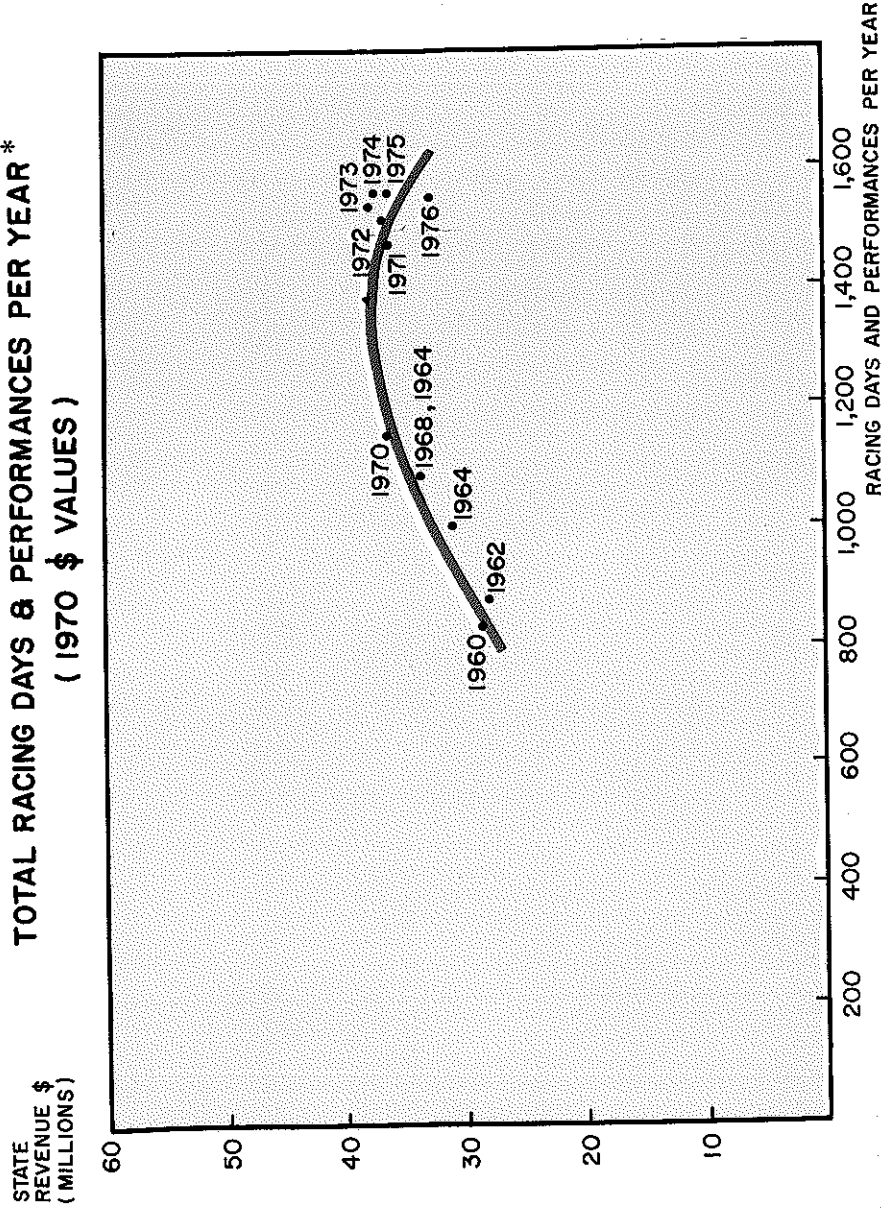


SOUTH FLORIDA MARKET 1960 - 1976
 TOTAL ANNUAL ATTENDANCE AS A FUNCTION OF
 TOTAL RACING DAYS & PERFORMANCES PER YEAR *



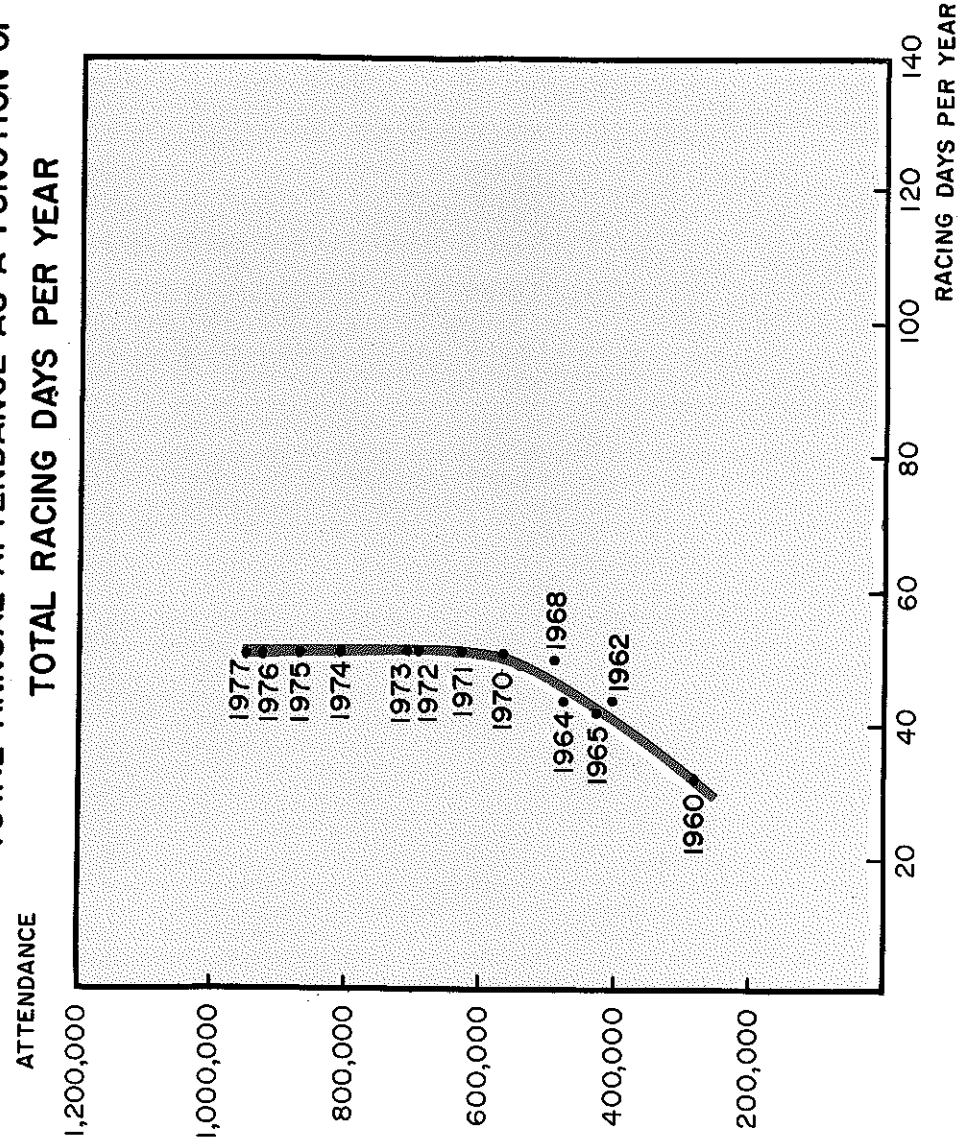
*THOROUGHBRED & HARNESS RACING DAYS; GREYHOUND & JAI-ALAI PERFORMANCES

SOUTH FLORIDA MARKET 1960-1976
TOTAL ANNUAL REVENUE TO STATE AS A FUNCTION OF
TOTAL RACING DAYS & PERFORMANCES PER YEAR*
(1970 \$ VALUES)



* THOROUGHBRED & HARNESS RACING DAYS; GREYHOUND & JAI-ALAI PERFORMANCES

OAKLAWN PARK MARKET 1960-1977
TOTAL ANNUAL ATTENDANCE AS A FUNCTION OF
TOTAL RACING DAYS PER YEAR



the market area. This track has been very active in marketing and has captured a large part of the increased traffic coming to the National Park there. We've gotten information from the Chamber of Commerce and the National Park Service in terms of the number of people coming through the area, and this growth reflects that the track is not sitting there maintaining just its existing base, but is actively capturing part of that increased traffic. But again, if days were increased dramatically, one would have to wonder where might this go. This is a very dramatic type of slide for indicating the types of performance that restraint can provide.

Now, of course, state treasurers across the nation would smile, seeing something like this next slide. These are state revenues, and again, these are in 1970 dollars, so there has been substantial real growth in revenues provided to the state. So, it's a real contribution to the state, not just an inflationary contribution, and that during this period, again, the growth composed of two aspects, the increased attendance and the per capita wagering which has been very strong.

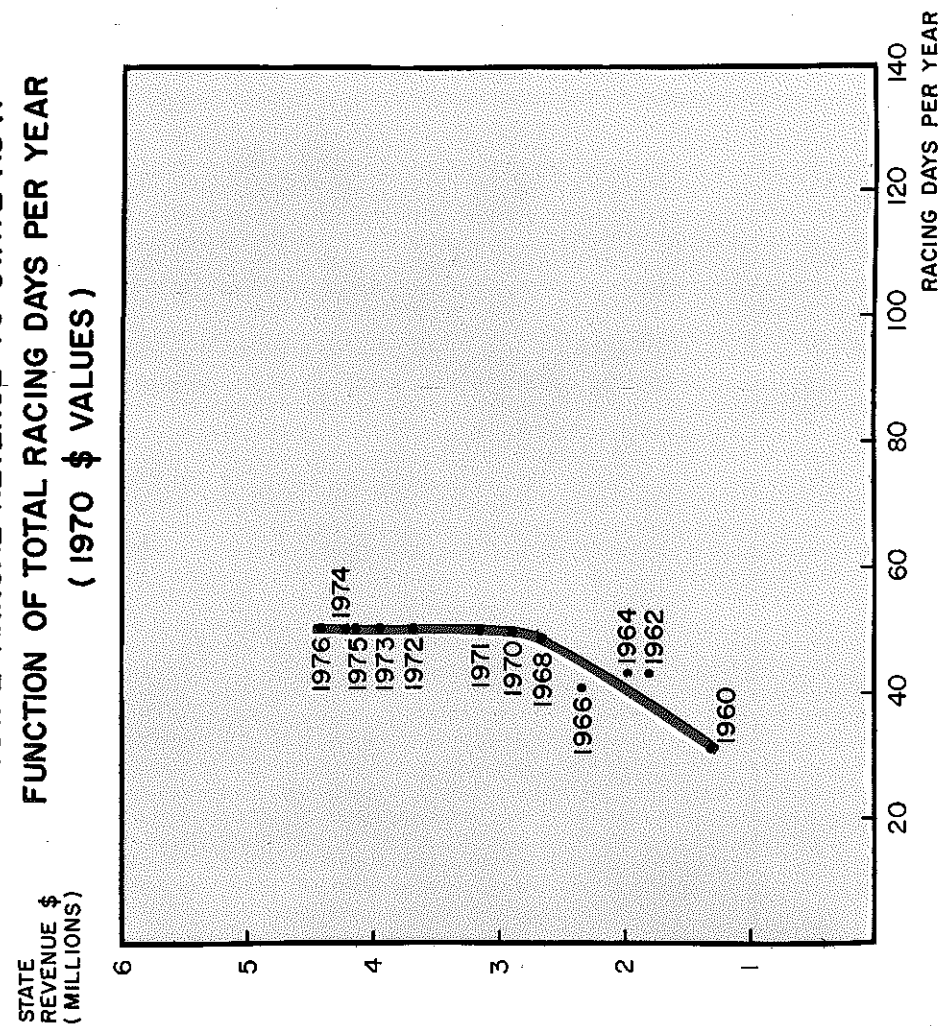
The next slide is the Los Angeles market which includes Santa Anita and Hollywood, western harness at Hollywood and western harness at Hollywood and Los Alamedos. Total racing days have gone from about 200 in 1960 up to around 700 in '77. I think this is a very good slide in terms of indicating that, even in a market which is very widely regarded as being very successful, there are still very definite indications of very real saturation beginning to occur. If Proposition 13 leads to a situation where racing days, or competition is dramatically increased in California, it's very unlikely that total attendance gains will be strong, and in fact they might be very limited, or just stay flat.

The next slide is total annual revenue to the state. There is a very definite bend as we get into the Seventies when racing days were being expanded. Again, adding additional days now probably wouldn't cause a jump to a new level in state revenues but actually probably they would maintain a flat line and then one could speculate, as has happened in Florida and Massachusetts, that line would then come back down after a few years because of industry difficulties. So one could then really ask the regulatory bodies — Is it worth going through those difficulties to just learn that lesson again?

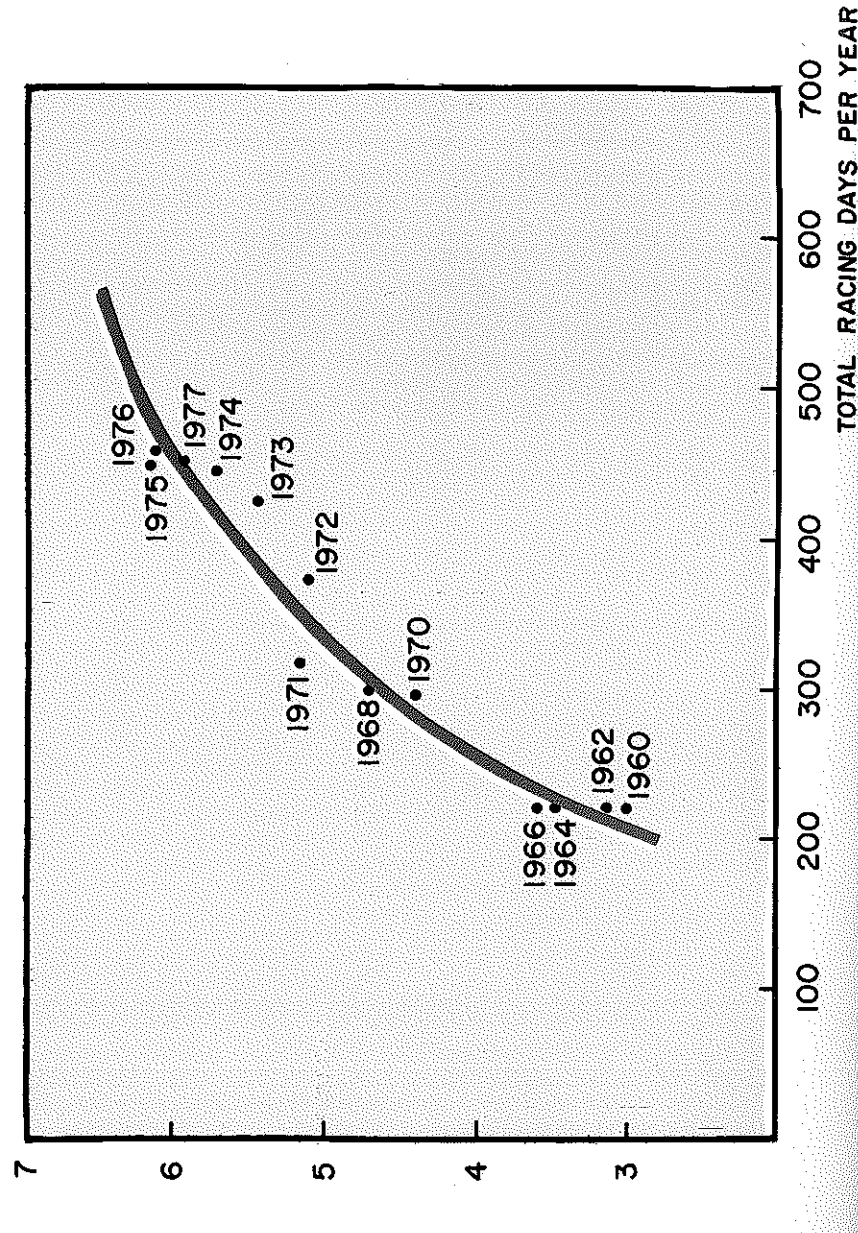
On the next slide we've tried to pull this all together, and see if one slide might perhaps convey a lot of information. On this slide, we have curves for what I've called market types. I think that market types will ultimately be defined in terms of the population within an area, the type of weather that's in an area, and several other factors. For example, one would expect Eastern Massachusetts, with snow and sleet to be quite different from the L.A. market. That's why it's not just population dependent. I think that these markets vary in terms of weather, population, income, perhaps even competition with other activities, such as pari-mutuel sports or perhaps even outdoor activities. These curves, however, do move very nicely with population. Los Angeles at perhaps around 7, Chicago about 6, Eastern Mass. Greater Boston around 4, Portland, Seattle, and Denver at about 1 or 1½. Again, you can see that there's a very definite similarity in terms of how these markets are behaving. I think that one can draw some conclusions and can make some important statements to regulatory bodies. Eastern Mass. has gone from here to here in terms of racing days and total attendance really didn't do anything; Los Angeles is moving along those curves and one would expect that further movement in days would lead to likely saturation; Chicago fits in very nicely. Denver has, of course, the Centennial Thoroughbred Track plus several greyhound tracks, and you have about 200 Thoroughbred days and about 200 greyhound days. For Denver you see the movement from '70 to '76, with almost a doubling in days, total attendance hardly budged. Similarly in Seattle and Portland. Now again, the one that stands out here as being somewhat different is Omaha, which again, doesn't quite have the population of these but is up on this curve. Omaha is very different from, say, Denver with professional sports, and the mountains. I think factors such as that will come into play in terms of defining these markets.

So in terms of conclusions, I think that one can say that, in each market which we've looked at, there's been strong indication and evidence of saturation and that it doesn't take that much pari-mutuel activity before you get into that saturation range. And the

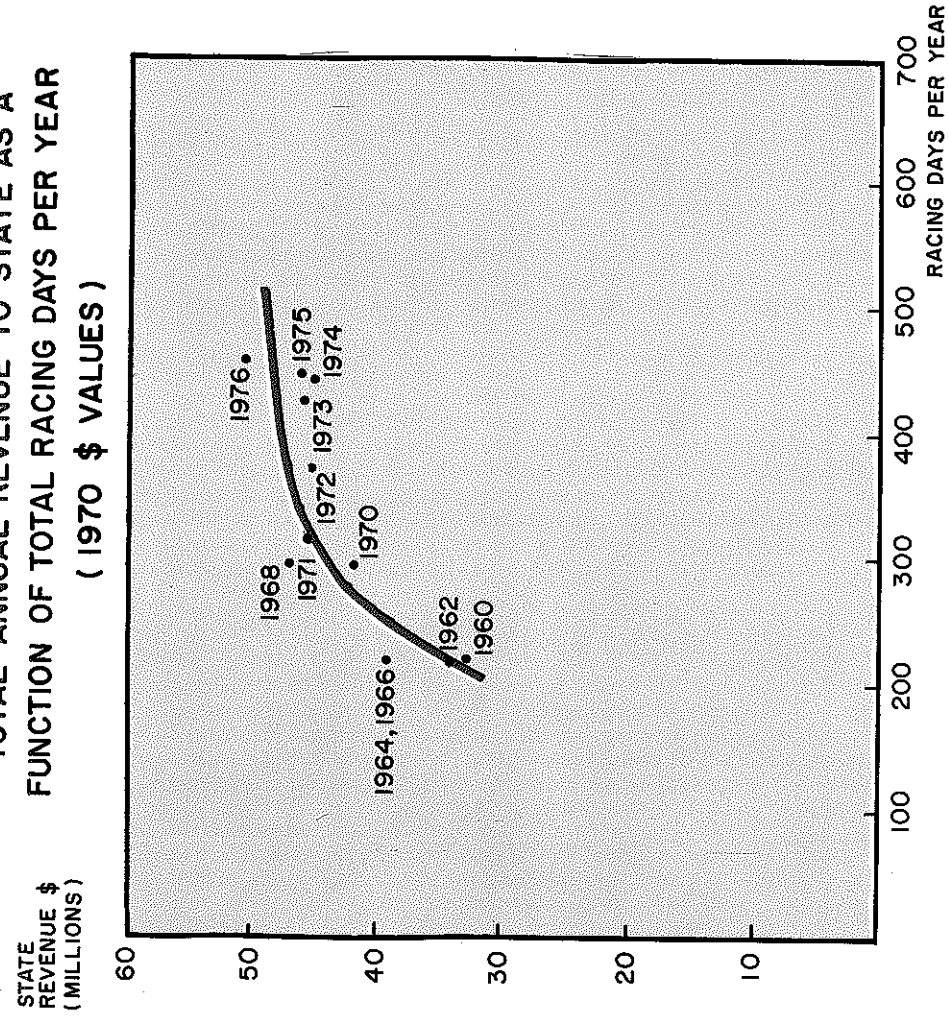
OAKLAWN PARK MARKET 1960-1976
TOTAL ANNUAL REVENUE TO STATE AS A
FUNCTION OF TOTAL RACING DAYS PER YEAR
(1970 \$ VALUES)

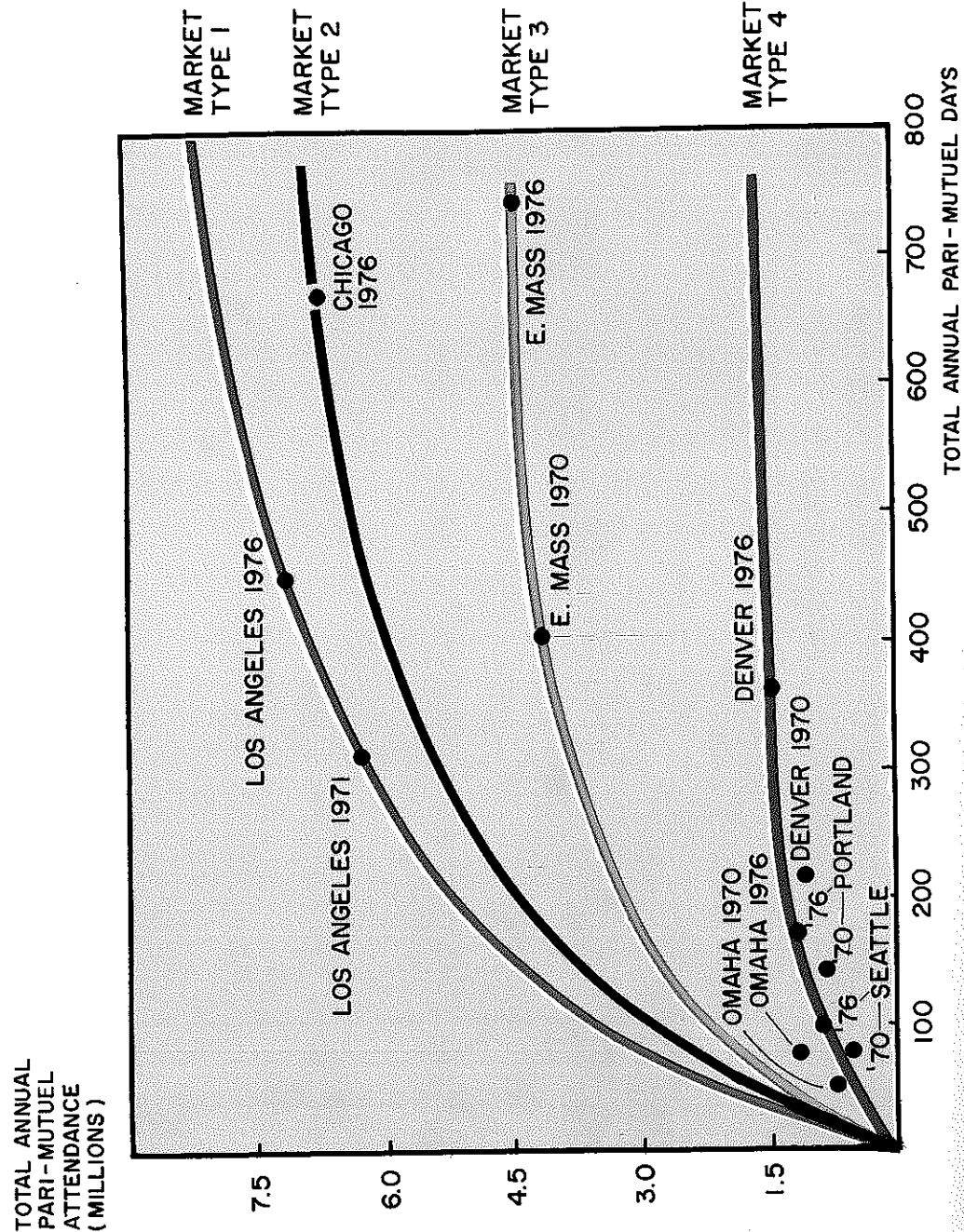


LOS ANGELES MARKET 1960 - 1977
TOTAL ANNUAL ATTENDANCE AS A FUNCTION OF
TOTAL RACING DAYS PER YEAR



LOS ANGELES MARKET 1960 - 1976
TOTAL ANNUAL REVENUE TO STATE AS A
FUNCTION OF TOTAL RACING DAYS PER YEAR
(1970 \$ VALUES)





range of supportable activity and the level of saturation is dependent upon things such as define the market — population, weather, income, etc.

Now what does this really say then in terms of regulating these industries. What can be done in Eastern Massachusetts that might help. Or in Denver, Chicago or L.A. Well, I think as these slides indicate, certainly adding racing days doesn't look very promising. We've done other work that's shown that increasing the take-out is not very promising — it tends to be counter-productive and just causes the per capita to be reduced. So, in my view, the industry seems to be faced with perhaps four policies to help try to get it out of the condition which the oversaturation has led to. First is the reallocation of the take-out — that is, the states must realize that these types of behavior patterns are not unusual; they can be substantiated, and that essentially, the state benefited briefly over a period of years from overexpansion but now has to begin moving back in a more reasonable direction. The second type of policy would be a reduction in the take-out, such as currently going on in New York, where one tries to attract in more fans and treat your existing fans better since racing costs less. Both of these, of course, are very difficult politically. We are talking about a situation where the states are now needing more revenue, and the industry is saying, not only can we not provide you more revenue, but you're going to have to make corrective actions for decisions that were taken five years ago. This is likely to be very difficult legislation to enact. The third policy option, and it's not really a policy option at the state level, is marketing, very active and aggressive marketing on the part of the industry. This marketing can do two things: one, it can increase attendance somewhat by bringing in people who are perhaps more entertainment and sports interested, rather than just wagering or gambling oriented. Second, for Thoroughbreds in particular, marketing can reallocate attendance from say dogs or harness to Thoroughbreds. But that's a trickier issue because often you find people not being completely able to come in the afternoons, but advertising can have part of getting a larger market share.

The fourth area policy, which does go back to the state, is facility programs. Typically during a period of oversaturation, facilities tend to deteriorate because industry financial health has deteriorated and investment funds have dried-up. Many states are now implementing capital improvement programs, and I think that these are beginning to show some promise. Of course, the last option is off-track betting, where revenues are increased primarily by going to areas beyond the commuting distance of the typical fan, reaching out and tapping new markets.

As I indicated, these are rather preliminary findings. We hope to have a final report in several months. I think that armed with facts such as these, the industry can then develop well-documented, highly defensible position statements that can hopefully play a role in leading to enlightened regulation. Thank you. I enjoyed being here very much. (Applause)

MR. BRADY: Thank you, Bill. I think those slides are going to be worth a great deal in the future. Now we would be delighted to have any questions that participants might have, as well as any comments. Any questions for Bill Killingsworth? Yes sir, in the back. Can we have a microphone back here so everybody can hear, please?

MR. DEMMON: Have you begun to get a handle on the percentage of the population which is predisposed to participate in gambling and wagering activities as part of their leisure time?

DR. KILLINGSWORTH: The gentleman who asked the question was Ted Demmon, Vice President of Marketing at New York Racing, and his question was — had we begun to get a handle on the percentage of the population which was predisposed to participation in gambling and wagering activities. Is that a correct paraphrase of your question?

I think we're beginning to get a handle on it, Ted, but again, it varies. I think that that percentage is much smaller, say, in Denver than it is in New York because in Denver — we're doing some work there now — you find a tremendous percentage of the population being very outdoors oriented, and on a weekend, the roads heading for the hills are just clogged. I think that the percentage is going to be, again, something that depends very definitely on the market area. I couldn't say exactly in New York it's 15 or 20% and in Denver it's perhaps 10% — those probably are not totally unrealistic numbers, but I think it will very definitely depend on the kind of market you're dealing with.

MR. DEMMON: Have you seen, in your travels around the country, any example of a market in which the available marketplace, people willing to wager, has been expanded in some manner — be it marketing or whatever manner, probably marketing.

DR. KILLINGSWORTH: Well, specifically in terms of marketing, I think right now, the only two examples that I can think of where marketing has played a role that I believe can be identified as expanding, one, is Santa Anita, where, as you know, many more of the what I call fringe type of fans, the ones who come in primarily to have a pleasant afternoon, more entertainment oriented, have been brought in. And the other is some of the work Chick Lang has been doing in Pimlico in terms of being very attuned to the developments in that market area and trying to very actively go after new people. But again, marketing is often not the highest priority at many tracks. I think it will become much more important. Don Ross.

MR. ROSS: I think Nick is making me pay for some mistakes last night. We had the opportunity to meet with Bill two afternoons ago so we'd have a little preview of his presentation, and it occurred to me in listening to what he had to say that our situation in Delaware is of particular importance to the industry because I do not think that there is a track operating in the United States that is in a more tighter grip competitive-wise than Delaware Park. We are surrounded by Pennsylvania, Maryland, New Jersey and so on, and our competition is so extreme that we are forced to race a very short period of time when that competition is not particularly strong. But what's even more alarming, and Bill's study bears this out, is that, in terms of pari-mutuel take-out and what the state receives, is of extreme consequence to us and I'm sure to the rest of the industry. What's happened in Delaware is alarming because we are a totally charitably owned racetrack. There are no revenues at all going into any stockholder's pockets. We are wholly owned by a charity, and this charity turns over the revenues that we make to the state supported hospitals, not even the private hospitals, but the state supported ones. So in other words, we are paying a large portion of the bills that the state would have to pay from other tax revenues if we were not in existence. Well, the effort to educate the state as to the importance of Delaware Park has been an extremely difficult one. In fact, we came down to the wire not too long ago, having to say: unless we get pari-mutuel assistance from the state, we're going to have to close our doors. Believe it or not, it wasn't much prior to our open-

ing a year ago that the state finally did say, well, we will give you this legislation and we were able to remain an operating racetrack. I bring this up only to support Bill's statement that, as things get tighter and tighter, it is more than ever necessary for everyone to get to your legislators and educate them as to what really is going on here. It's a very difficult job and if you have to wait till the last minute, you often face the alternative of perhaps having to close your doors. Thank you.

MR. BRADY: Thank you, Don. Any other questions or comments? Jim Heffernan, NYRA.

MR. HEFFERNAN: Bill, you mentioned what states are developing capital improvement plans. Just what are these plans and what impact do you see them having?

DR. KILLINGSWORTH: Well, typically the capital improvement plans are structured so that a certain portion of the take-out will be allocated to be reinvested in the plant specifically. A certain amount of revenue will be generated, and often this percentage is part of what had been the state's share of the take-out. So a certain percentage of that, perhaps half a percent, or a quarter of a percent is allocated specifically to go as reinvestment back to the plant. I know Maryland has it, and I believe, Ohio and Illinois have it. There are perhaps four to five states that have now begun developing a program. This is a political issue when a politician can justify voting for monies that are definitely going to be spent on facilities, as opposed to just providing money flowing generally into the track. Often it's politically more acceptable. And Nick one other point I wanted to raise in terms of something Mr. Ross brought up, was that, in terms of the states, one of the things that we've been looking at is that — can a state really look at a tax dollar, generated by greyhounds say, as exactly the same as the tax dollar generated by Thoroughbreds? That is, should they be viewed as equal tax dollars not mattering where they came from. Our work in New York and in Pennsylvania, in terms of the overall contribution to the state, indicates that this is certainly not true. That they're not equal, that if one focuses only on pari-mutuel revenues, you're only getting a very limited part of the picture, that if one looks at employment, wages and salaries, investment and purchases of goods and services from other industries, the Thoroughbred industry pari-mutuels are just the tip of a very big supporting pyramid that's providing cash flow throughout the entire economy. Greyhounds and jai alai have a very small comparable pyramid in terms of the number of employees, the amount of services they're buying from other industries. So this is another aspect of our work.

MR. BRADY: Thank you, Bill. Peter Kissel.

MR. KISSEL: Nick, can I ask one quick question — Bill, what is your guess on casinos ... they're talking about it.

DR. KILLINGSWORTH: The question was, of course, the hardest at the very end and the quickest. What impact will casinos have? We're trying now to investigate that question; we've had discussions with the people in Atlantic City. Of course, that's a very special situation now because of altered competition. I think that probably we'll find that casinos fit somehow into the overall picture, perhaps not just a straight addition in terms of the number of days they are open, but I think one can find that there are interactions and that they'll somehow fit into this. We do not have a very definite fix on that yet.

MR. BRADY: Thank you, Bill. We're going to take a five minute break, then we will have our panel on metritis. I want to mention that the NYRA has asked all of you for lunch at the track. Also, after the final panel, we'll have some refreshments right outside the door. Let's take a five minute break.

MR. BRADY: . . . Prior to asking Dr. McGee to chair the fine panel we have prepared this morning on equine metritis, I thought it would be appropriate to comment on the very tender subject of A. I. from The Jockey Club's point of view. In addition to my remarks, I would commend to all of you Whitney Tower's article in *Classic Magazine*, which I think does a very fair job, not only of examining a lot of the questions in the industry, but also of setting forth The Jockey Club's position rather clearly. Our position is simply this: we are not opposed to A. I., we have a rule that does not allow it. Now that sounds like a cute statement, but it really sums up what our position is. We are not opposed to A. I., we presently have a rule that allows Thoroughbreds to be entered into the Stud Book only as a result of natural breeding. We are conducting a study, a very thorough study, which will take us about a year, of whether or not we should continue to have this rule. The study will have five parts to it, and a number of outside experts will be involved. First of all, we have a legal question to answer: where are the legal boundaries of what can be done? A lot of people have suggested that it would be simple to go to A. I. and then have The Jockey Club place a limit of 40, 60, 70 or whatever number you choose on the number of breedings that are allowed under this method of breeding. However, lawyers have informed us — preliminarily, but in no uncertain terms — that this would be an act in restraint of trade and would not last a month before somebody tested us in court. So we're going to need a complete legal understanding of that matter. Here I just want to caution everybody who is thinking about A. I., that the solution is not simply on limiting the number of services that can be done with A. I., that simply won't work; it's been tested many times in the courts and we know it would not be appropriate from our point of view.

The second study that we are having done is in the area of genetics. We are in the process of selecting some geneticists to tell us what would happen to the genetic pool as a result of A. I. As you all know, the breeding of Thoroughbred race horses is subject to fads. If somebody wins a Triple Crown, then everybody wants to breed to that sire next year. So we already have an industry where inbreeding is a problem. What is going to happen if we go to A. I. and there are only a limited number of genes available to keep the industry going? We want a thorough scientific study of what might happen to the genetic pool — maybe nothing, maybe something important. But we are going to try to determine that.

Third, we are going to have a veterinary report. What are the veterinary consequences of going to A. I.? We think we all know, and it may be a foregone conclusion, but it is a report that we want to have.

Fourth, we are going to make an economic study. We have already commissioned Pugh-Roberts to find out who benefits and who loses from A. I. When you do something this drastic to an industry where for 200 years things have been done another way, there are going to be some very drastic economic consequences. These may all be very good, but we want to know what they are. Who suffers and who gains?

Last and not by any means of least importance, what are our foreign friends in the Jockey Clubs around the world going to do? What are the feelings of people in Australia, France, Italy, England, Ireland—wherever there are stud books? As you all very well know, we cooperate with these stud books; each stud book recognizes the stud books in other countries. So we are not free simply to make a determination and go our own way. We have to have the cooperation and understanding of Jockey Clubs all over the world. We are moving towards that, and this fall we are going to have our first international meeting, at the time of the Arc de Triomphe, to see what other stud books are doing. Hopefully, we'll all be in agreement so that we don't come to the end of our study and find out that we are thinking one thing and our sister or brother Jockey Clubs around the world are thinking something else.

So today I just want to tell you that we are studying A. I. and we are being very judicious about it. We do not have a conclusion, we think we are thinking of all the important things that must go into a determination. It will be a year or so before we get there.

As you all know, we have been experiencing in the industry a very severe disease — contagious equine metritis. The panel this morning will be led by Dr. William McGee,

who was our advisor during the outbreak in Kentucky this year and who I would like to publicly thank for all of the help that he gave to us, Dr. McGee will lead this panel. Bill.

DR. MCGEE: Mr. Chairman, ladies and gentlemen . . . Our time this morning, I think, leaves little time for the flowery introductions and the questionable stories that usually launch these programs, and suffice to say that I'm privileged to be here today with three scientists that are well recognized in their respective fields. What we have asked them for this morning is to present to you in what necessarily must be a capsule form, because of the time, the current status of their arts as respect to contagious equine metritis 1977. Mr. David Powell is a veterinarian who functions primarily in the field of epidemiology and, as such, of course he's drawn into bacteriology, he calls the Equine Health Trust Research Laboratory at Newmarket, England, his home base and there has had an intimate working relationship with CEM organisms since its christening, I think in June of 1977. David and his colleagues, along with the equine practitioners in England, have been most generous in sharing their knowledge, their time and their experience with us and have hopefully enabled us to weather our outbreak of CEM with considerably less trauma than they suffered themselves. David, we would be most interested, I think this morning, in your observation and conclusions, if you've had time to draw any, relative to the past breeding season in England; also what you perceive to be the main concerns of breeders as regards CEM at home and on the international scene . . . in the foreseeable future. What are we looking at in another breeding season, if you please. Mr. David Powell, Newmarket, England. (Applause)

DR. POWELL: Mr. Chairman, ladies and gentlemen. This morning I would wish to discuss with you what progress has been made with Contagious Equine Metritis and how the Code of Practice was utilized during the 1978 breeding season. The code was introduced in September of 1977 as a voluntary code with two basic features. First the Code recommended an extensive bacteriological screening program of Thoroughbred mares and stallions before mares were covered during the current breeding season. Secondly, it recommended that there should be a considerable improvement in the standard of hygiene on the stud farm.

In order to carry out these recommendations it was necessary to designate a number of private veterinary laboratories to carry out the bacteriological examinations and forty laboratories in various parts of England and Scotland were approved. Each laboratory reported its findings on a monthly basis to a central source at the Equine Research Station, Newmarket. The information I want to discuss today includes the results of these examinations from the beginning of September to the present time. The Contagious Equine Metritis organism (CEMO) was isolated from 52 Thoroughbred mares and two Thoroughbred stallions with no reported isolation from the non-Thoroughbred population. The organism was isolated from 32 barren and 17 in-foal mares before they were covered in 1978. Of the 49 mares from which the organism was recovered prior to their being covered in 1978, 44 had been on stud farms in England during 1977, three in Ireland and two in France. Forty-one of the 44 mares resident in England had been covered by known positive stallions or had been on infected stud premises. Three mares had no history of contact with CEM and we have to speculate about these mares. It may be that there are organisms in the genital tract of mares that are similar to the CEM organism and may be confused with it. It is possible that the CEMO is more widely distributed than we currently acknowledge or it may be that these were false positive results because of some error in the laboratory.

The majority of the positive barren mares showed signs of CEM during 1977 but a number showed no clinical signs. It is important to recognize this point as the early reports of CEM emphasized the copious nature of the vaginal discharge. In outbreaks that have occurred subsequently, not only in England but in Kentucky, Ireland and France, a copious discharge was not always a feature of the disease. The majority of the pregnant positive mares did not show any signs and it was only during the latter stages of preg-

nancy when they were examined in the clitoral area or after they foaled and were examined at the foal heat was it recognized that they were carrier mares and potential spreaders of the disease. Two pregnant mares did have a discharge throughout pregnancy. A further two mares were infected in the early part of the 1977 season, were treated, covered and became pregnant. However, CEMO persisted in the genital tract of these two mares throughout this period.

During the 1978 breeding season two small outbreaks of CEM were reported, both on stud farms in the Newmarket area. In both outbreaks it appeared that the stallions which transmitted the disease themselves became infected as a result of covering a carrier mare which had given false negative results during the screening program.

Donald Simpson, the veterinary surgeon at the National Stud on which one of the outbreaks occurred, was intrigued to discover how one of the stallions on the stud became re-infected in 1978. He examined the mares that the stallion had covered and one of these mares had a history of infection. This mare had been swabbed with negative results from the sites recommended at that time. However, a detailed examination of the mare which included a thorough investigation of the clitoral area including the clitoral sinuses resulted in the isolation of the organism. Based on this and other collaborative evidence we now recommend that the clitoral area should be examined in detail particularly in those mares with a previous history of infection.

In the light of the information which has just been presented, what is the position at the present time? We have been tremendously encouraged by the positive response of the industry to the voluntary control measures and by the apparent success of these measures. We are now formulating a new Code of Practice for the next breeding season which will be based on our present model but will take into account the information that we have obtained over the last few months. There has been a notable improvement in the standards of hygiene and management on the stud farms which has helped not only to control CEM but other genital infections as well.

A further development has been the excellent rapport which has developed between various sections of the industry both at national and international levels. The good will that has been generated through this difficult period should help to solve some of the problems that we will face in the future.

DR. McGEe: I think as a matter of expediency, we'll go through the entire panel and at the end of that time, if there are questions, we'll handle them on a panel basis. Dr. Jack Bryans certainly needs no introduction to most of this group, as Professor and Chairman of the Department of Veterinary Science at the University of Kentucky, he and his staff isolated and identified the causative organism from the first case of CEM in this country in a mare; that is, the first case known to have occurred. This, I think, along with the very prompt follow-up and identification of carrier stallions and other infected mares is largely responsible for the success in containing this disease in few individuals in central Kentucky. I think we owe considerable to this wonderful staff who worked well beyond the call of duty in man hours that they put in to catch up and get ahead of this particular outbreak. Jack, without looking back too far, what are your feelings relative to the future threat of CEM? Do we really know enough to warrant a feeling of security come next foaling and breeding season, and if not, where will we go from here?

DR. BRYANS: Mr. Chairman, ladies and gentlemen. In an attempt to answer the question that Dr. McGee has posed for me, it will be necessary to give you a very brief resume of exactly what occurred in Kentucky during the past breeding season. Before doing so I feel that it is highly appropriate for me to publicly acknowledge the tremendous amount of assistance given us by our colleagues from Newmarket, Donald Simpson, David Powell and others who were involved in the British investigation of CEM as well as Peter Timoney of Ireland. The British investigators began to transmit information on CEM to us as early as May 1977 and continued to do so throughout the period of their investigation. This is an excellent example of the type of international communication that is so

important for the control of infectious diseases of the horse in various countries. Because of this we were able, long before we encountered the disease in Kentucky, to keep our practicing veterinarians well informed of the nature of this disease and to set up the laboratory facility which made the earliest possible recognition of the disease in Kentucky possible.

Perhaps the best way to explain to you what went on in Kentucky and to set the scene for the expression of an opinion I may venture on what is going to happen in the future and how the course of events may be influenced by proper control measures is to show you an epidemiological history of CEM in Kentucky.

Contagious equine metritis was diagnosed in Kentucky by bacteriological culture and by the use of a blood test called the complement-fixation test which we were fortunately able to develop at the University of Kentucky within a few weeks of first recognition of the disease.

Figure I represents the epidemiology of the disease on one of the two affected stud farms at Lexington. The first clinical case of CEM was recognized in the first mare covered by stallion No. 1 on the 28th of February by Dr. David C. Parrish. This stallion was imported from France and all of the evidence that has accumulated indicates that it was the source of the disease. The figure identifies each infected mare that was identified in the course of our investigation and places each mare in a daily time frame which correlates the infection of other stallions or of mares with the presence of an infected horse in the breeding shed on the same day. The evidence indicates that spread of the infection occurred largely by human agency; stallions became contaminated from the first stallion and some of these transmitted the infection to many of the mares that they covered. There is no evidence for the contamination of every stallion on this stud; the majority of the stallions did not contract CEM because of the stringent precautionary measures instituted immediately after the disease was recognized. Some mares apparently became infected in the breeding shed by human agency without the stallion to which they were bred becoming infected. This data illustrates the high contagiousity of this disease.

If you will examine the column in the figure representing the mares covered by stallion No. 9, you will note that only one mare covered by this stallion was diagnosed as a CEM positive mare, that this mare was doubled a couple of days later and that no other mare bred before or after this mare contracted the disease. This case was diagnosed by the blood test. A positive blood test signifies that the animal found positive has been infected by the CEM organism at some time in the past; it does not signify that the animal is presently infected by the bacteria. We investigated this mare and found that it was a mare imported from France; the mare is negative to culture and is an example of a mare that was infected and that has completely recovered from the infection. This mare is one example of three such mares, found positive to the blood test with no other evidence of infection. The other two were mares, not bred in Kentucky, that were imported from Ireland in the Fall of 1977 both being covered by the same Irish stallion which has since been discovered to be contaminated by the CEM organism.

Figure II illustrates the epidemiological picture developed from our studies of mares bred by stallions on the second stud farm on which the disease occurred. Again, stallion No. 1 was a horse imported from France. That horse was the source of the disease for mares bred on this farm and the spread of the infection occurred in the same manner as on the first farm.

Immediately after the disease was recognized in Kentucky our State Veterinarian, Dr. Tom Maddox, with the agreement of the breeders, applied the laws under which his office operates to stop all breeding in the state. The law does not allow the state veterinarian to prevent you from breeding your own mares but, it does allow him to prevent all movement of mares and that had the necessary effect of producing a breeding moratorium in the state for Thoroughbred horses.

During the period of the moratorium, the veterinarians, breeders and the University of Kentucky laboratory set out to attempt to identify the size of our problem. The familiarity with bacteriological diagnostic techniques afforded us by the British and Irish investiga-

Figure I: Epidemiological record of contagious equine metritis in mares covered by stallions on farm No. 1 (Kentucky 1978)

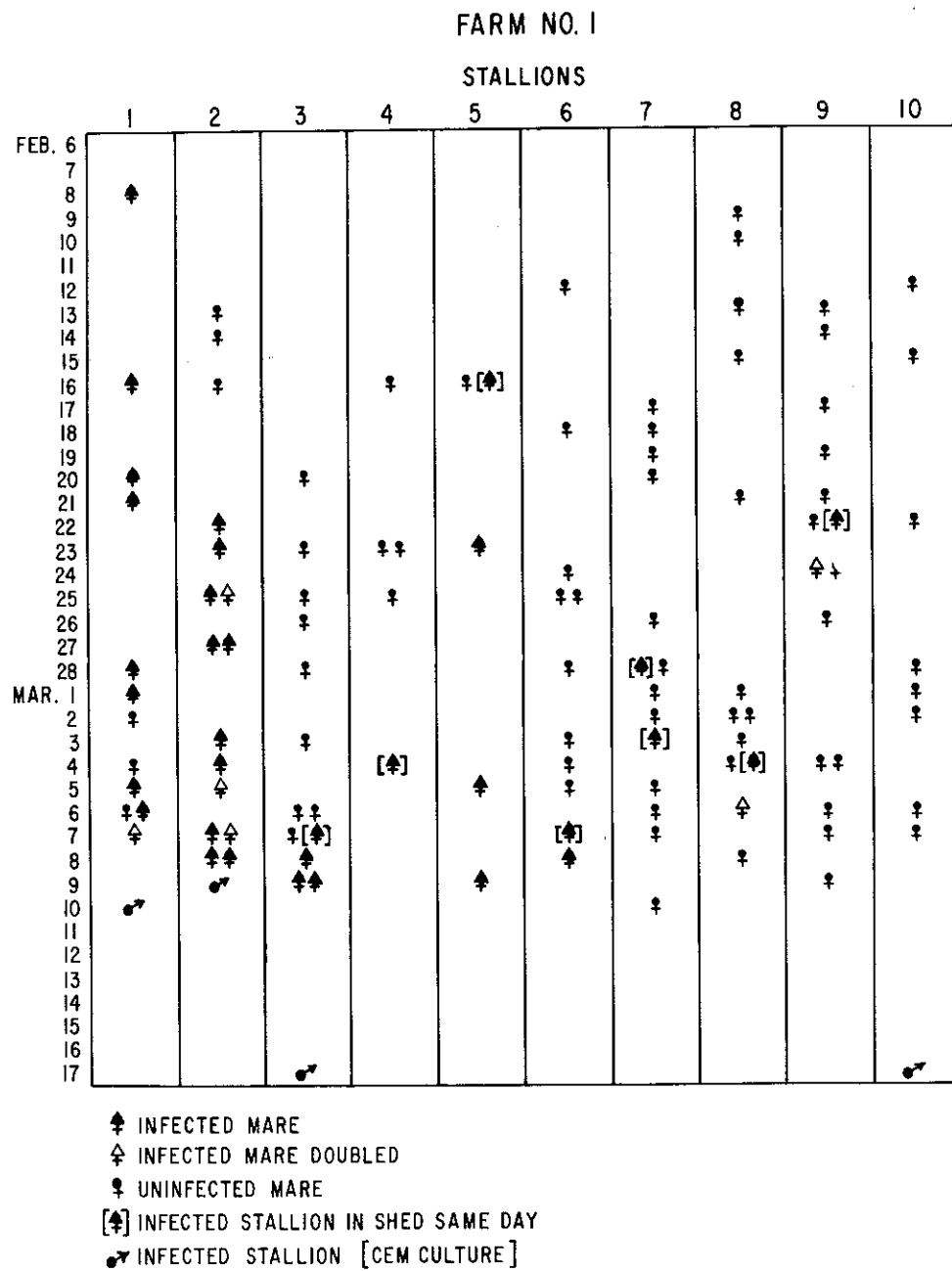
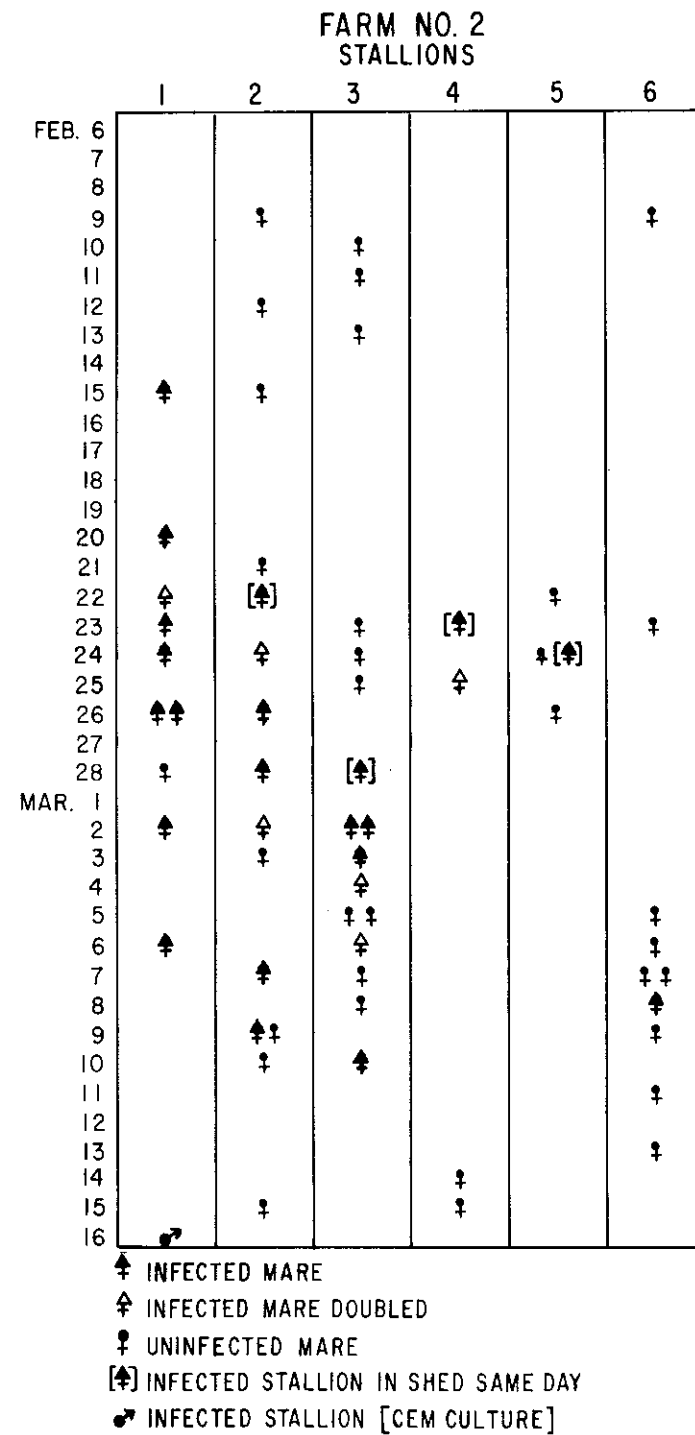


Fig. II: Epidemiological record of contagious equine metritis in mares covered by stallions on farm No. 2 (Kentucky 1978)



tors and the fortuitous development of the blood test allowed us to determine, within a few weeks, that the disease was confined to mares bred on only two stud farms and to a limited number of the stallions on these two farms. A code of practice was developed and its terms were stringently applied by all concerned.

All of the stallions were treated according to methods found to be successful during the Newmarket epidemic, all were returned to service in a few weeks and no further cases of CEM have occurred in Kentucky since the moratorium was lifted. So far as transmission of CEM by stallions is concerned, CEM was under control in a period of three weeks after the disease was recognized.

The present situation in Kentucky is as follows: before the moratorium was declared, 412 mares had been covered by all of the stallions on the two farms. Of these mares only 54 have been found to have contracted the disease; there is no evidence for infection of the remaining 358 mares. The size of our problem is therefore 54 mares.

The question that remains for the containment of CEM in the United States is to clean the infection out of these mares and to prevent reintroduction of the disease by developing methods for certifying imported mares free of the infection.

This job will be accomplished by applying what knowledge we have of approaches to treatment of infected mares most of which has been supplied us by our British colleagues. I do not feel that we know enough, at the moment, to describe methods for treatment of such mares that can be guaranteed to produce success. On the positive side, there has been a great deal of information on the diagnosis of the chronic carrier state for CEM come forth in the last several months. The most noteworthy bit of knowledge in this regard is the discovery by Donald Simpson that the clitoral sinuses of the mare are a site in which the CEM organism persists. David Powell has described this finding for you in detail this morning. Research is continuing with the close collaboration of the veterinarians and laboratories in several countries which is designed to supply us answers to this problem.

Preliminary meetings have been held during the past few weeks with laboratory personnel, federal and state livestock disease regulatory officials and breeders which have led to plans to revise the Kentucky code of practice to institute measures to return our infected mares to breeding as soon as possible. These plans will be presented to our Agricultural Commissioners CEM committee on September 7. We feel that the plans that have been made will assure that the disease will not spread from the infected group of mares. As these mares are certified free of the infection they will be allowed to be bred in the 1979 season but, they will be restricted to stallions standing in Kentucky until at least the 1980 season. This measure should insure that should we make a mistake, the disease will remain confined to Kentucky, not sent to other Thoroughbred breeding states.

The information given us this morning by David Powell indicates that CEM has been successfully controlled in Newmarket. Our plans will take advantage of the information that has been supplied us from England that has allowed them to accomplish this and I see no reason to expect that we will not have the same level of success.

DR. McGEE: Now, as most of you probably know by this time, if and when a so-called exotic disease or a disease that has not been diagnosed within the boundaries of the United States is diagnosed, two things take place in rather rapid fire order, the laboratory that makes this identification calls and notifies his State Veterinarian. The State Veterinarian in turn calls and notifies the United States Department of Agriculture. This, of course, kicks the regulatory mechanism into action and both state and federal regulations are made to stop whatever movement is deemed necessary to prevent the spread of the specific disease we're talking about. And of course, this is monitored until the disease is either controlled or eradicated. Dr. Ralph Knowles who heads the equine activities for the regulatory division of USDA is certainly no stranger to any of you, especially those involved in interstate or international movement of horses. He is here today to update us on the regulatory aspects of this disease, and I would ask Ralph, how do your people feel about the present controls and are they comfortable with the past imports, that is, the

imports prior to the breeding ban or prior to the importation ban that we had last year, as a possible source of trouble? Also, you can see . . . anything definite regarding the importation of breeding stock in the foreseeable future? Dr. Ralph Knowles.

DR. KNOWLES: Dr. Bill McGee, members of The Jockey Club and guests. This is a pretty weighty thing you've put on me here today, Bill. I might say this, that I'd like to put a little perspective on CEM as it's taken place and the story's unfolded in the last year. Last summer, in May and June, we were reading in the British Veterinary Journals about this new genital disease of mares. We made two sets of telegraphic inquiries of the governments of England, Ireland and France, getting back less than satisfactory answers. We in USDA were quite disturbed about the complacency that the governments of these three countries were taking with CEM, or this new entity, as it were. Then in September, based on the feeling we had, we put together an investigative team, including Dr. McGee, myself, Dr. Multhroup from Rome and Dr. Jerry Walker from our Plum Island Laboratory, went to England and Ireland, and we received the utmost cooperation from the scientists of England and Ireland in terms of what they knew about the disease. And based on the overall views that were put together and that we have gleaned, I would like to show you on slides here that rather puts the thing into focus. First slide, please.

This is entitled "Spread of Contagious Equine Metritis, CEM, Between Countries". Let's start at the point where CEM was identified as a new entity, that is, Newmarket, England, in May 1977. It was reported that 29 among 52 stud farms in the Newmarket, England area were affected in the spring of 1977. The question was asked, how did CEM get to England and there's pretty good evidence to say that an inapparent carrier mare brought CEM from Ireland. There should be a correction here — this . . . these represent the number of stud farms where CEM was reported. This should be the spring of '76 . . . there was some delay in reporting four farms in the fall of '76 and again, three farms in the spring of '77. So the question comes to mind, where did CEM come from? And of course, in epidemiology, the farther back you go, the "colder the trail gets." And it has been speculated by some that CEM was existing in France in '75 and '76, and you notice I've put a questionmark here. It was confirmed by the government of France in 1977 in Thoroughbreds.

Meanwhile, in September of 1977, CEM was reported in four stud farms in Australia . . . believed to be brought there by inapparent carrier mares. Then finally we see the lines coming from France with two stallions imported just before the ban was placed by USDA on September 9, 1977, coming to Kentucky, remembering that we did not have methods of definitive diagnostic testing at this time. Next slide, please.

These are the kind of headlines that met us on September 10th, 1977, in Dublin, Ireland. These are the kind of headlines nobody in the horse business likes to see, but occasionally, these things come to pass and it causes us to do a lot of soul-searching and decision-making on how to deal with such situations. Slide off, lights on, please.

It is a philosophy of USDA that quarantines and embargoes should only be used to provide safety regarding disease, with the least disturbance to commerce. This is a pretty big bill to fill sometimes. Preventing the spread, control and eradication of animal diseases is no new exercise for USDA; we've dealt with VEE, and as some of you who've been around a long time may remember Dourine, a venereal disease of horses that was stamped out. We've dealt with diseases of cattle and I think in my daily workings, I try to keep the department on track to say, let's deal with horse diseases based on their specific problems and not mix them with diseases of swine and the problems of diseases of cattle, and in terms of the embargoes that must be placed or would not be placed, and so forth.

I'd like to talk a little bit about the control of CEM, that is, the philosophy of control and what, in fact, did take place in Kentucky and why it did, in fact, take place. Control of CEM, considering the tools of diagnosis lack high precision — Dr. Bryans pointed some of this out — emphasis must be placed on preventing the spread of this disease. Breeding moratoriums and quarantines are considered by many to be severe measures to use on a mobile and seasonal breeding population such as Thoroughbreds. However, history tells

us that these measures have proven to be worthwhile in assisting horse owners, clinical veterinarians, farm managers and animal health regulatory officials in stopping the spread of this disease within an area. Preventing the spread of CEM is the key to controlling this disease. The following actions are necessary. 1) — CEM must be recognized as a mandatorily reportable disease. 2) Quarantine and surveillance of infected and exposed horses is necessary. 3) A moratorium on breeding to clearly define the total problem of CEM within a horse population becomes necessary. However traumatic it is, it did and does, in fact, become necessary. The identification of satisfactory medications to treat infected animals, of course, is necessary. And finally, education of breeding farm personnel concerning the methods of transmission is extremely important and should be carried out. Now, let's talk about the outbreak in the U.S.A. Although CEM entered the United States, that is, Kentucky, with two inapparent disease carrier Thoroughbred stallions in late August and early September '77, the disease was not identified in these stallions or any mares they covered until March 9, 1978. Diagnostic methods for CEM, that is, bacteriological culturing systems had failed by giving false negative results during the period from November '77 until March 9, 1978. Pioneering is often difficult and problems presented in diagnostic procedures in the United States were different from those experienced in England and Ireland. Collection and shipment of bacteriological specimens from horses to distant laboratory, that is, our Plum Island Laboratory, created unforeseen problems in diagnostic confirmation. We also found that, in addition to the shipping distance, one strain of the organism was sensitive to the antibiotic streptomycin, which defeated our culturing system approach. USDA for security purposes is required to carry out diagnostic confirmatory tests on foreign animal diseases at the Plum Island Laboratory. During late February and early March '77, these false negative cultures allowed CEM to become established within the Thoroughbred breeding population in central Kentucky, as exemplified by Dr. Bryans slides that he showed here. When the disease was confirmed on the 9th of March, 1978, the Kentucky Department of Agriculture initiated immediate action. The following measures were taken: 1) CEM was classified as a reportable disease and would mandatorily be reported to regulatory officials; 2) Thoroughbred breeding animals were prohibited from leaving Kentucky — this was a very important feature that the Kentucky Department of Agriculture carried out with great promptness; 3) a moratorium was placed on interfarm Thoroughbred breeding activities as described earlier. Improved laboratory diagnostic procedures were being developed and worked on each day. Quarantines were placed on affected animals. These actions, coupled with the unison support — I want to emphasize this — the unison support of the Thoroughbred Breeders of Kentucky, and veterinarians, were instrumental in stopping the spread of CEM in Kentucky and preventing its spread to other states. I think it should be recognized now that no government on earth can take care of a venereal disease unless the industry is right in there pitching.

On April 3, 1978, USDA placed a quarantine on Thoroughbred breeding animals in Kentucky, to prevent the spread of CEM to other states. This quarantine replaced the state prohibition on the shipment of CEM affected animals and exposed horses. These bold restrictive actions, we believe were extremely helpful in convincing other states not to embargo Kentucky. Some of you may remember back in the VEE days of 1971, certain states took actions on their own, and if you want a mess, you want to have 48 different rules in which to move horses, or 50 different rules. So we endeavored, and the State of Kentucky endeavored to preclude independent state actions and to this point in time, only one state embargoed Kentucky horses, that being California, and a conversation two days ago and a meeting a week ago with the officials in California indicates that they're ready, once they receive the list of the affected and exposed animals, as Dr. Bryans described, they're ready to soften and modify their restrictions to accept breeding animals (excluding affected and exposed animals) from Kentucky into California.

In addition to solidifying and not having interstate embargoes, we feel that the definitive action in Kentucky helped to give confidence to foreign countries to accept our exports, exclusive of, of course, CEM affected and exposed animals. This has already been

reaffirmed by the Canadian government. Their officials came down to Kentucky and looked at the actions and the situations that have taken place in Kentucky and are accepting horses so certified to Canada that are not affected or exposed.

Now, one of the points Dr. McGee asked me to discuss was — what about horses that came in or were imported prior to the ban of September 9, 1977? We've endeavored to go back in a survey, a culture and breeding history survey of some 512 animals that entered from Britain, Australia, France and Ireland prior to the ban. We have cultured most of these animals and been found to be culturally negative. We're in the completion phase of this — some mares were pregnant; no one wanted to culture them at this time. We found a little bit of apathy but no resistance to culturing these animals. You see, we're in a rather difficult position — an owner can say let them through your quarantine station and unequivocally release them now; why do you want to look at them. But we've not had anyone take this posture with us . . . which is very helpful. In other words, I would say this — the cognizance for CEM, the respect for CEM on the part of the horse industry has been a tremendous aid and very important to coming to grips with CEM. Now I'm advised that CEM not only affects Thoroughbreds but has been reported from standardbreds and saddlebreds, and ponies, unofficially from France. In addition, we infected Shetland ponies at Plum Island and reproduced the disease and I think this has been done also in England. So this, of course, makes the problem compounded. Let me just summarize.

I would say this — number one, CEM is a new, highly transmissible venereal disease of horses. Two, since 1976 it has been reported in five nations, that is, France, Ireland, England, Australia and the United States. Three, CEM was recently reported in breeds other than Thoroughbreds. Research work is needed to provide better diagnostic procedures, therapeutic agents and possibly a vaccine. Finally, CEM definitely presents a challenge to everyone concerned with the horse industry, and my appraisal of CEM in the U.S. at this point in time is — we've put out the fire of CEM, I think Dr. Bryans reiterated this. This is not to say we might not find "some sparks in the grass," as it were, as the English and Irish have found; that is, residues of inapparent carrier mares that must be identified promptly and dealt with to preclude any resurgence of CEM. And of course, this brings us to the final and most important and difficult problem of how do we continue international commerce in view of what we know about CEM? The answer in terms of mares, breeding mares, is very difficult. We need more precision in answers from science before we can say. We know how to safely move mares internationally. I think with a bit more investigation we can unfold all of the facts and possibly move stallions in the future. I think we know how to clean up stallions, but we need to reaffirm and study this and make sure of our ground in terms of stallions. I would say at this point in time, Bill, this concludes my part of it . . . the CEM panel. (Applause)

DR. MCGEE: And finally, and perhaps, as more or less a summary. I think we can say that the night and the nightmare is over and doesn't it look so much better in the daylight. I think it's impossible at this time to get a reasonable estimate as to the actual impact of this particular outbreak on the industry. Perhaps it will be after next foaling and breeding season before we have an opportunity to statistically weigh the thing, not so much as a dollar value — God knows how you place a dollar value on a horse anymore — but as a percentage of the foal crop. Of course, you can appreciate the added expense of the control measures, the switching around of stallion services for the year, the retention of your mares in Kentucky where we won't let them come home and you pay tremendous board bills on them. But I think while it is significant, that it will prove to be almost negligible when compared to the alternative of not controlling this disease. And I think regardless of the cost, we've seen an industry survive a potentially disastrous blow. Not that we have seen the last of this disease by any means, but after a few days of shock and what amounted to near-panic, the responsible people teamed up, made the sacrifices that were not pleasant but in the common interest, and we were able to finish that first round with a few bruises but certainly confident and determined for the next round. The experience has shown us the value of cooperation and preparation and organization. We have

a lot to learn about this disease but what we do know will make future efforts, if needed, much more effective. I think we have the machinery developed, as Ralph and John have both indicated. This has brought together all segments of the industry and it's been a pleasure to work with people, the Horse Council, the USDA, the veterinary profession and to get the input of all these very serious and responsible organizations. While this is not official and not really an estimate, the impression that I get after the figures come in, that most of our farms in the area are reporting as good or sometimes better foaling percentages of mares in foal than last year or the year before. I think something . . . in a way it was a blessing in disguise that it happened when it did happen, early in the year, because Lord knows, we weren't breeding many mares in March with the winter we had in Lexington last year. Very few mares would have been bred anyway, had there not been a breeding ban. The fact that the ban was on stimulated people to take a little closer look at their barren mares so that a few of the other infectious conditions were rooted out in the process. Maybe we got more barren mares in foal than we would have under normal circumstances. But I think it'll take a statistician and someone very competent in this area to evolve an answer, maybe in another year, as to actual cost. Certainly I would feel that it is not nearly what the estimates were at the beginning of this outbreak. I believe that concludes our panel and we are pretty much on time so the rest of the day is yours. (Applause)

MR. BRADY: We have time for one or two questions if there are any in the house. Yes sir, in the back.

MR. FREEARK: At least one state took the position through its state veterinary department that they did not want to accept mares from Kentucky on the basis that the blood test developed there . . . wasn't valid . . . or that it's simply too soon to determine its real validity. Has the validity of the blood test been checked against, for example, the mares in England, to establish its validity? Or . . . what other methods for identifying the disease have been developed?

DR. BRYANS: In order to appreciate the significance of the blood test we developed in Kentucky you need to understand, as David has pointed out, that this sort of test has a very high degree of sensitivity and diagnostic reliability when it can be applied in acute cases of the disease. We were in a unique situation in Kentucky, we recognized the existence of the disease within a few weeks of the covering of the first mare by a contaminated stallion. We were able to obtain blood samples from all of the exposed mares during the period when a blood test could be expected to be most sensitive and reliable. That is why the blood test was so extremely valuable during our epidemic. It should be noted that we did not fail to diagnose CEM by the blood test in any mare proven to be infected by culture and that the majority of mares found positive to the blood test without culture have since been found to be infected by bacteriological culture which is unequivocal evidence for the disease. It should also be appreciated that the blood test will not identify either contaminated stallions or potential carrier mares that have not experienced endometritis. Such animals produce no immune response because they are not diseased, merely contaminated by the organism.

DR. POWELL: The question was have we evaluated the blood test in England? We have utilized various blood tests to determine their reliability and sensitivity. With acute cases a very high degree of sensitivity and reliability has been obtained. When we examined the carrier mares the tests were only able to identify 40-50 percent of cases although I would like to emphasize that we can improve the sensitivity of the tests by further research work.

MR. BRADY: Any other questions?

DR. McGEE: Dr. Bryans would like to add to that.

DR. BRYANS: I think it's important for you to realize in interpreting the application of a blood test of this disease that in Kentucky we were in a very unique situation. As I mentioned, we had the benefit of the advice given to us by the investigators overseas and we were in a position where we had a brand new disease in our Thoroughbred population; we had the ability to take blood samples during the acute stage of the disease and the complement fixation test which we have applied has been almost unbelievably . . . about almost 100% effective in picking up every case of CEM that was proven to be CEM by culture. And the majority of the mares that were picked up by the blood test have now been found to be positive by culture. And as I say again, our situation is unique and our blood test is being interpreted in the most conservative fashion possible. We are limiting the application of the blood test, for example, to a very short period of time after a mare has been covered, so that we don't make any mistakes. That's the situation, and we've tested, by the way, over 8,000 horses for this and the experience we've had since we started has been very, very good. And one other thing should be said about blood tests. Blood tests do not work in stallions and blood tests do not work most of the time in chronic carrier mares because they have been over the disease for quite a long period of time and are just mechanically carrying the organism.

MR. BRADY: Aaron Jones in the back.

MR. JONES: Well, I'm a little confused by Dr. Knowles' and Dr. Bryans' remarks, but I would like to pose an actual case. I've been offered a very good mare from France, and she's in foal. Can I bring her into the United States and then to Kentucky with a hundred percent guarantee that she does not have CEM?

DR. McGEE: Well, first, let's take the first part of that. Dr. Knowles, can he bring it into the United States?

DR. KNOWLES: The first part of it is, you can't bring her into the United States with safety. We don't know how to let her in with safety. What was the second part of the question? (Laughter)

DR. McGEE: Irrelevant, immaterial and beside the point.

MR. BRADY: I think the second part of the question is, if you change your mind, can he get 100% guarantee that she doesn't have the disease.

MR. JONES: Well, I didn't understand. Are you saying that at this point she cannot be brought into the United States, if she's . . . you think she's clean in France.

DR. KNOWLES: I thought I made this clear — science hasn't given us the adequate tools to move such mares. When we are satisfied that we can screen them and be able to test them, then we'll be able to move them. But until such time, we have to say no.

MR. BRADY: Ken Cox has a question here.

MR. COX: I have a two part question. Dr. Powell, in your resume this morning, regarding the so recent developments in England, in the detection of CEM in broodmares; would you agree that few, if any, Northern Hemisphere breeders, have so far swabbed their mares in accordance with the Code of Practice, that will be written for the 1979 Season, and which would naturally incorporate these developments?

DR. POWELL: Certainly as far as the code of practices is concerned for next year I

think a swab from the clitoral area will be recommended. It is the most reliable site to examine especially in those mares with a previous history of infection. If we had recognized the importance of swabbing the clitoral area I think we would have prevented a number of carrier mares from slipping through our screening program.

MR. BRADY: Any other questions? Thank you very much Dr. McGee, and thank you very much panelists. Before we close up, I want to point out that we have The Jockey Club Gold Cup booklet at your tables and, as a memento, of probably more lasting importance, a Julep Cup which we wish you'd take with you. I want to thank Vice Chairman, Paul Mellon and all of the Stewards for all the hard work they put into this meeting, but particularly, my thanks go to Cal Rainey, Bob Melican and Mickey Smithers. These conferences don't just happen — they put a lot of hard work in it. Again, we want to remind you that Dinny Phipps and Jim Heffernan have invited you all for lunch at the track. Thanks for coming.



A view of the Conference in session.



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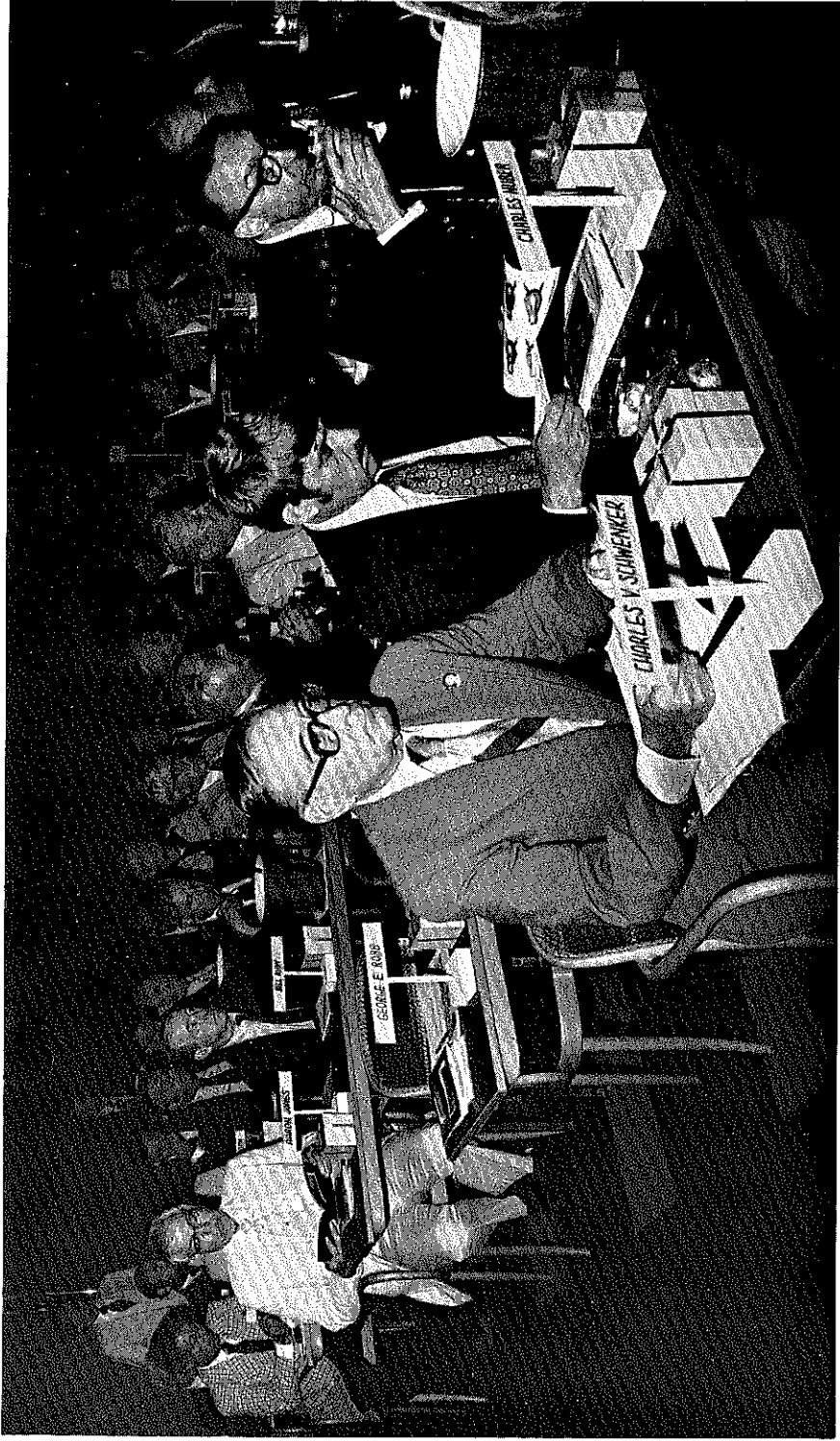
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