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NATIONAL BEEKEEPERS' ASSOCIATION of NEW ZEALAND (INC.)

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NICK WALLINGFORD
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Memo

To Keith Herron
From Nick Wallingford
Date 15 June 1996
RE: **Use of sniffer dogs for AFB**

A few comments from the Internet to help you with your report on the use of dogs for sniffing out AFB:

From: Self <Single-user mode>
To: Bee-L
Subject: Sniffer dogs for AFB...
Reply-to: nickw@wave.co.nz
Date: Fri, 7 Jun 1996 08:00:58 +1100

There was an article (at least one) on the use of dogs to assist in AFB identification. Can anyone lay their hands on a reference(s) for me?

Better yet, anyone with personal information or anecdotes?

From: WGMiller@aol.com
Date: Fri, 7 Jun 1996 22:07:47 -0400
Subject: Re: Sniffer dogs for AFB...

In the U.S., the State of Maryland has Bino, a Golden Labrador that is trained to sniff out American Foulbrood. I have seen Bino go through his paces at the Maryland Dept. of Agriculture open house, and he is quite good.

The State likes him because he can go through a large apiary in a matter of minutes, and do a better job than human inspectors could.

Bino was trained by Maryland State Police using the same technique they use to train drug-sniffing dogs: if he sits down when the target smell is present, he gets a reward.

Regrettably, Bino's handler is not on the Internet to my knowledge, but I will tell him (the handler) about your inquiry.

W. G. Miller
Gaithersburg, MD

From: David Bernard <dbernard@nchgr.nih.gov>
Subject: Dogs and AFB

I believe that one of the articles you may remember was in ABJ in 1991 or so. However, the person who trained and used the dogs is Jerry Fischer, a bee inspector here in the state of Maryland, USA. Jerry is a retired fire fighter and had connections in the Baltimore (MD) city police department. It was through the police department that he trained the dog to detect AFB and sit down directly in front of the infected hive. According to Jerry, the dog is highly accurate in his diagnosis of an AFB infected hive.

The original dog (a black lab) is now retired as he has hip trouble and Jerry has trained a new dog (a yellow lab). I think the idea of a lighter colored dog may be a good idea in the bee yard!

Jerry does not have e-mail but I can get his address and telephone number for you if you wish. Please respond to me directly if you're interested.

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From: pjwilson@freenet.edmonton.ab.ca
Date: Fri, 7 Jun 1996 07:52:49 -0600 (MDT)
Subject: Sniffer Dogs

Hi Nick,
Interesting concept.
Funnily enough I heard an article on the Canadian Broadcasting Corporation's program "AS IT HAPPENS", about the successful training of dogs to sniff out cancers. The person interviewed was in Florida, I believe. An expert with the US military (of course!) and after he retired from the military ran a K9 unit for a Florida police department. He would be the person to contact for training ideas and methods. Perhaps Michael Sanford would know of him since he is in Florida.
Good luck
Peter Wilson

Date: Thu, 06 Jun 1996 14:59:17 -0700 (PDT)
From: "Kerry Clark of AGF 784-2225 fax (604) 784 2299" <KCLARK@galaxy.gov.bc.ca>
Subject: foul brute

Hi Nick

(someone suggested the "Foul Brute" as a name for an AFB dog.. not my choice..

I also remember the ABJ article, but don't know when it was published. The Maryland State inspector Bart Smith would have more complete information. I only have a phone # for him 410 841 5920.

In 1982, I happened to be visiting USDA at Beltsville MD regarding my thesis project on parasitic bee mites, (a concern for the future in North America).

By coincidence, the Maryland inspector at the time (I've forgotten her name) was practicing with the AFB dog (Max, I think), at the USDA hives. Apparently the ability to recognize AFB had been relatively easy. The harder part was to keep the dog motivated, and not to get into bad habits like snapping at bees, as he was working live colonies.

The project had been undertaken jointly with the police dog squad (drug and explosive sniffers). I had a good talk with the police dog trainer. This was the second dog they trained. The first was quite capable (apparently any dog is far more capable than the best human nose) but was unmotivated and would refuse to concentrate.

Max was a golden lab 2 or 3 years old, donated by owners leaving on a multi year sailing trip. He was very keen. The kind of dog that

constantly brings the ball back to be thrown again, until you're sick of it.

The training consisted of putting AFB scent on the dog's favorite ball, and having the dog become accustomed to it (over a week or so). Next the ball was placed under several coffee cans, and the dog had to find it, by scent (wasn't allowed to just knock over each one). When the ball was found, the dog was rewarded by praise and a quick play with the ball (which is what he was after).

Next the scent was separated from the ball: the ball was kept by the trainer, but the dog had to find the scent (a chunk of AFB comb, wrapped in aluminum foil.. it could be ETO or gamma sterilized to avoid any suggestion of the project spreading AFB). When the dog found the target, he sat down and looked up expectantly to get his reward, a chew on the tennis ball, then it was back to work.

Next the target was placed in a dummy bee hive.

Next the dummy hive was placed among active hives. The dog didn't actively search the hives, just walked along behind them. It would be tough to get a dog to work active flight paths without getting stung, so they just stayed away from the entrances..not always easy in practice.

I watched as the dog came to the dummy hive and gave the sign without any real examination, hesitation, confirmation or excitement. No accomplishment or showmanship, just matter of fact THIS ONE.

They said that in another session, the dog had signaled positive on one of the research hives, and they just accepted the diagnosis and gave the reward. Later they went through the hive and found a few cells of AFB on one frame.

It's certainly an impressive technique, but its applicability is quite limited by the opportunity to have a full time dog and handler occupied with just this task. The police trainer said one of their other dogs can signal to 13 different kinds of explosives (doesn't distinguish..so they don't need the 13 codes I was imagining.... raise left paw and bark while wagging.. Anyway the point is that a dog might be a part time AFB dog, if there were other tasks that could be handled under a charge-out structure. I've seen advertisements for a company that checks for natural gas leaks with dogs, it's apparently enough work to keep them going.

I understand AFB the training has been duplicated a few times: once was done by a contractor, but I'm not aware of any programs that lasted very long or are current.

I'd be interested to know how far you go with it.
regards

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