the IMPORTANCE of CANINE CERTIFICATION TESTING

By Master Trainer David Latimer

Editor's note: This is the first in a series of articles planned for publication in NBBA magazine discussing different methods of training, testing and handling bedbug detection canines. Upcoming installments will include problem-solving tips from master trainer David Latimer, who has more than 13 years experience supervising, training and handling working K9 teams in both the public and private sectors. Latimer has worked with hundreds of dogs and handlers during his career. He has trained and supervised teams in the detection of explosives, narcotics, arson and insect pests. These teams included military, police and fire investigators and private individuals who assisted these professions, as well as pest control operators and others. Latimer and his dogs have participated in and assisted state, federal and local agencies in criminal investigations, criminal apprehension, tracking and other public service functions. For the past 10 years, Latimer has served his community as fire marshal, K9 officer, police chief and is currently director of public safety, with administrative responsibility for the police and fire department.

Certification Testing

The proliferating bedbug problem in the United States and worldwide is reaching nearly epidemic proportions, which in turn creates a strong demand for dogs trained intensively in searching for and detecting the insects in locations as diverse as department stores, hotels and resorts and even private homes. In training the dogs to be effective working dogs with strong work ethics and the keen senses necessary to locate bedbugs, several methods are being used by trainers.

According to expert David Latimer, "As with any detection tool, whether electronic, mechanical, chemical or biological, some technically valid method of testing and calibration must be adhered to in order to routinely test and confirm the accuracy and dependability of the instrument. It is widely accepted that well trained dogs are the most portable, economic and versatile tools in use today for odor detection"

While any test instrument requires routine testing and calibration, one notable difference with dogs is that the training and handling methodology can be intentionally or unintentionally modified over time, Latimer explained. Even minor deviations from the proper method of handling can result in a degradation of the team's performance and/or accuracy. In most cases such modifications are unintentional and may even go unnoticed by the human handlers. Most such undesirable changes in technique can of course be avoided with regular training and evaluation by a professional trainer and with a comprehensive annual testing exercise

"It is widely accepted that well trained dogs are the most portable, economic and versatile tools in use today for odor detection."

The methodology used by World Detector Dog Organization (WDDO) is designed to provide a non-arbitrary method of testing for canine teams that is based on professionally conducted animal behavior and veterinary research and on the experience and training of professional canine trainers. WDDO tests bedbug canine detection teams based on "double blind" testing procedures — a tactic in which neither the tested handler nor anyone else is aware of where, or even if, any hides (samples of bedbugs) were placed in a potential test area.

According to Latimer, "One reason for using double blind testing is its acceptance by animal behavior experts and veterinary scientists as a valid method to test the reliability of a canine team as a valid scientific instrument. It also greatly lessens the likelihood of outside influence or assistance, either intentional or inadvertent, from observers."

Latimer says one common misconception among inexperienced handlers and trainers is that simply passing an annual

certification test is sufficient to maintain and prove a canine teams' accuracy and proficiency. Rather, this is accomplished by properly structured, routine training sessions that continually challenge and test the dog and handler and motivate them to improve their skills in searching for their target odor. Another common misconception is that conducting searches is tantamount to and an acceptable substitution for training, which is not the case. The routine training that canine teams need must be conducted in controlled environments and under controlled, supervised and structured circumstances. Specific scenarios should be structured to address any known performance issues with the team.

Another common misconception is that the dog is being tested. While people will frequently ask if a dog is "certified", a proper test will evaluate the team. The human handler plays a major role in how the dog performs in a search scenario. The dog can be influenced and induced to perform poorly or proficiently based on the handler's skills, training, motivation, self-confidence, his confidence in the dog and other factors. Any test must be structured to evaluate both members of the team and the results reflect how well they work together.

Latimer's work with dogs has convinced him they are the most effective means of battling the growing bed bug problem. "I believe properly trained and handled dogs should be considered a technically valid method of detecting pests such as bedbugs, just as any other properly calibrated detection instrument," Latimer said. "WDDO's test strives to emulate as closely as is practicable, what a team will encounter in the field. The respect of the scientific community is crucial to this profession's long-term viability. In order for our profession to earn and keep the respect of the scientific community, we must demonstrate our willingness to subject our detection method to rigorous testing."

Latimer believes his approach, one with which the professionals who participated in writing his two tests concur, is consistent with the existing research on canine behavior and serves as a means to identify teams that may have performance issues and need additional or remedial performance issues and need additional or remedial training as well as identify those that perform at an acceptable level of proficiency. The tests involved in his methodology were reviewed and approved by one of the world's leading experts on canine behavior and canine olfactory research, Dr. Larry Myers, a Professor of Veterinary Medicine at Auburn University.

Testing for Real World Detection

"Handlers do not, under real world conditions, of course always search rooms where bugs or evidence of bugs are found," Latimer said. "We believe that dog teams should demonstrate their ability to reliably search blank areas without false indications, as well as their ability to find bugs when they are present.

"The canine behavioral science behind this is the fact that many dogs are highly motivated to please their handlers. With proper training and conditioning, this is a very desirable and exploitable trait in a work dog. However, a poorly trained and handled dog may, in its desire to make its handler happy, resort to performing a final response (alert) in some area where no bug odor exists or where some odor similar to the target odor exists. Some dogs do this because they have been erroneously taught that they will be enthusiastically praised and rewarded only for performing an alert. Dogs must be taught that the praise and reward are inseparably tied to the act of diligently searching for and finding the odor. Dogs that have been in the field for a while tend to be more susceptible to this issue, because some handlers reward their dogs without verifying that a find exists. The only way to determine if a team is susceptible to such a fault is to have the team search blank areas.

Latimer said another advantage in WDDO's method is that it offers two different tests, allowing handlers to choose an option. In the "Infestation Evidence Detection Dog Test," handlers can prove to clients who want live insects as well as evidence of an infestation found in their home or business that their dogs can be relied upon to find any residual evidence left by insects. In the other version, the "Live Only Detection Dog Test," handlers can demonstrate to clients who only want a dog to find live insects that they can do so and will reliably ignore any other evidence of an infestation.

"The tests reflect market influences in that many clients make it clear that they want to know if any evidence of an infestation such as shed skins, feces and dead bugs are in their home or business," Latimer said. "For these clients, the "Live and Evidence" trained dogs are coupled with a competent inspector/technician with a thorough visual follow-up examination. This follow-up allows the professional inspector to advise the client on a proper course of action based on what is found — whether a treatment or a second follow-up canine inspection of the area at a later date that would closely monitor any possible activity or the appearance of live insects. Properly trained and handled "Live Only" dogs can be effective measures of treatment methodologies, but any alert must still be accompanied by a visual inspection by a properly trained and competent technician. The fact is testing and training procedures are nothing more than academic exercises unless the dogs produced can perform the services demanded by customers."

In the test for dogs that are trained to only alert to live bedbugs, various stages of the insect, including instars, eggs and live adults are placed in scenarios along with hides of verifiably dead insects, shed exoskeletons and fecal matter as distractors. In at least one room, only distractor hides are placed.

"The Live Only Detection Dog Test, is set up to allow teams that wish to do so to demonstrate that their dogs only alert to live insects and will ignore anything else besides live bugs," Latimer explained. "In order for a dog team to demonstrate that he or she can be relied upon to alert only on live insects, the team should show that they will not alert to an odor similar to a live bug such as shed exoskeletons, feces or dead insects. If the distractors are always placed in the same room as live insects, it can be assumed that the dog is choosing the live odor as a preference, because live insects would, of course, produce more odor than the distractors. In a treated area, there may be nothing available for the dog to smell besides the dead evidence, and some dogs may revert to alerting to the odor of distractors because it is similar and is all they can find in the room. This would defeat the purpose of a dog being used to verify the effectiveness of a treatment plan."

In the other test dead insects, shed exoskeletons and fecal matter hides are incorporated into the test along with live insects. The Master Trainer administering the test verifies the hides as containing live insects. This allows teams wishing to do so to demonstrate that they are capable of detecting any evidence of the presence of a bedbug infestation.

In both tests, four rooms or areas are used, at least one of which is always blank. Deciding how many hides are placed in a scenario is randomized with the possibility of one hide in only one room or one in each of three of the rooms.

While the handler searches with the dog, a test proctor, who has no knowledge of the hides or their placement, is assigned to record in writing each alert as communicated by the tested handler. It is the responsibility of the handler to clearly communicate each area identified by the dog as having a hide. The test proctor, who does not aid the handler or attempt to interpret the dog's reactions or the handler's skills, will record the start and stop times of each test, reporting only the information provided by the handler.

"I believe properly trained and handled dogs should be considered a technically valid method of detecting pests such as bedbugs"

During testing, handlers are not allowed to open doors, move articles or inspect inside any furniture or container in a searched area. When the handler indicates to the test proctor that he has completed his search, the test proctor records the finish timed and reports to the Master Trainer each area indicated by the handler as either being blank or containing a hide. The Master Trainer reviews the results with the tested team and the test proctor and determines whether the team has achieved a passing score. In keeping with the blind study technique, tested teams do not know how many hides or if any hides will be present in a search area.

Latimer says having these variables in the tests is an ideal way to make sure dogs are accurately detecting and alerting to insect finds rather than simply trying to please a handler or reflecting a sort of "burn-out" from being in the field for many years.

"Dogs that lack self-confidence or that have been over-corrected for "making a mistake" may resort to alerting as their "safe place" during a session or deployment — this is similar to avoidance behavior sometimes seen in weak personal protection and police dogs," Latimer said. "If the dog becomes frustrated or upset, especially when the handler grows frustrated because the dog isn't finding anything when he believes the dog should, the dog may see an alert as a safe place or a way to end the consternation it is experiencing because it can't find the odor. The reliable way to determine if a dog is properly proofed against false alerts based on this is to have the team search blank areas and be

sure they search without prior knowledge as to whether hides are present or not."

> ***"The fact is testing and training procedures are nothing more than academic exercises unless the dogs produced can perform the services demanded by customers."***

One common mistake made by inexperienced handlers and trainers is to set up every training scenario so that the dog always finds something or always find one or two hides, Latimer said.

"Dogs who are accustomed to always finding a hide, getting a reward and being praised enthusiastically can become frustrated, nervous or confused when subjected to searching an area where no odor is available," he explained. "Dogs should be routinely worked in areas where no odor exists and should be praised enthusiastically for conducting a diligent search of a blank area without false alerting."

Latimer says he believes one of the best ways to improve the detection dog profession is through cooperation, which begins with effective communication. Regardless of who has trained the canine, any dog handler may join the WDDO. Those who have trained their dogs themselves and can pass the tests will be awarded a certificate of competency by WDDO, leading to full membership in a progressive, supportive organization that supports handlers aiming to demonstrate to clients that their dogs can find the evidence of insects they specifically want determined — whether live or simply proof that the bugs have been there – and can reliably determine if no such evidence is present.

Latimer believes the most critical factor in furthering the use of successful bedbug detection teams is ensuring that each is properly validated through rigorous testing and continual training.

"I believe that if this business is to survive, it will require a concerted effort by all of us to police ourselves and stick to accepted animal behavior and veterinary science based principles with respect to validating teams," Latimer said. "If we can all work together, this business can continue to provide a valuable service to the public and do so in a manner that we can all be proud of."