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RESEARCH UPDATE
SPRING 2024

Capsaicin Repellent Trial



BACKGROUND

Successfully trapping wild pigs depends on catching the target species and avoiding non-target species that could adversely affect the trap site.

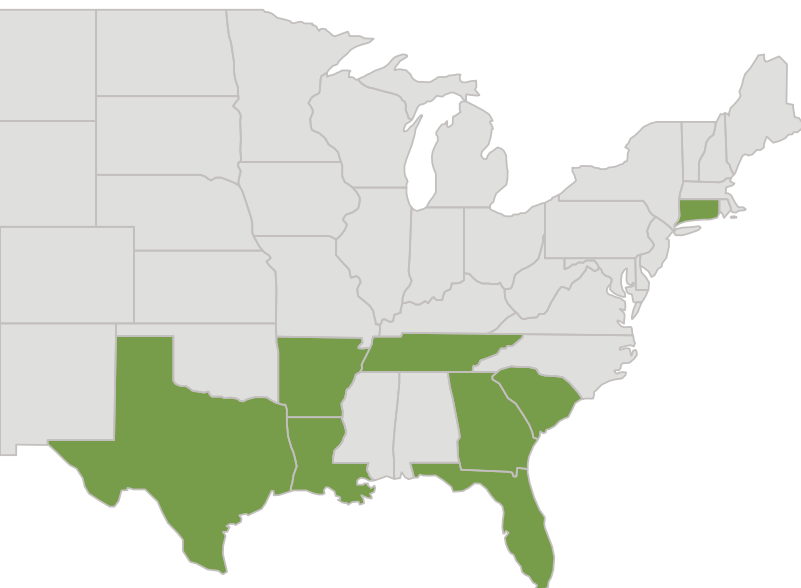
Non-target species (e.g., bears, deer, raccoons) often eat bait meant for wild pigs, increasing overall bait costs. Furthermore, trap visitation by bears can slow or prevent wild pigs from feeding at the trap site. To increase trapping efficiency, it is critical to decrease the number of non-target species visiting your trap site and consuming bait, particularly bears.

Pig Brig® Trap Systems collaborated with biologists, universities, and private land managers in Texas, Florida, Tennessee, Louisiana, Arkansas, South Carolina, Georgia, and Connecticut to evaluate the effectiveness of powdered capsaicin as a repellent for bears, deer, and raccoons. Capsaicin is a common aversion product often used to repel rodents from electrical wires and larger vertebrate mammals from desirable vegetation. The capsaicin product applied during the evaluation was Carolina Reaper Powder, distributed by Sonora Spice. The Scoville heat unit (SHU) rating of the capsaicin powder used ranged from ~1.6M - 2.2M SHU.



RESEARCH LOCATIONS

Texas, Florida, Tennessee, Louisiana, Arkansas, South Carolina, Georgia, and Connecticut





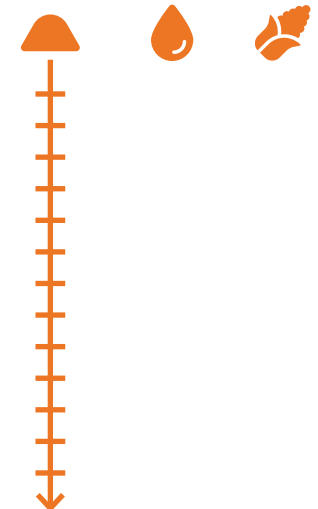
METHODS

Bait stations using dried-shelled corn were established at research sites. We used trail cameras to check for species of interest—raccoons, bears, and deer. Once we determined they were in the area and interested in our bait sites, we applied a capsaicin solution to each bait pile. Each 25-lb bag of bait was spread in a ~3-foot-diameter circle and treated with one gallon of the solution. We applied it slowly to allow for soaking. The solution concentration began at 10 g/gallon of capsaicin/water and increased in 5 g increments. We monitored the sites using cameras and evaluated each application for a period of time to determine site visitation and feeding habits. Feeding events were determined by 2 consecutive photos of the same animal at a bait pile. Cameras were set to take a picture at 60-second intervals based on movement.

RESULTS

We did not predictably see reductions in non-target consumption of bait until we reached 80 g/gallon. We used 24 oz. of solution to treat 25 lb. corn completely (approximately a 5-gallon bucket). Wild pigs reliably continued to feed at this concentration.

10g Capsaicin
1 Gallon Water
25 lbs Corn



80g Capsaicin
1 Gallon Water
25 lbs Corn



RECOMMENDATIONS

The solution proved effective at repelling deer, bears, and raccoons without adverse effects baiting and catching wild pigs. The recommended concentration is 80 g of capsaicin/gallon of water. We recommend applying 24 oz of solution to 25 lbs of dried shelled corn. This concentration can be adjusted based on the tolerance of non-targets. If you see non-target feeding occurring, we recommend increasing the capsaicin in the solution in 10 g increments. We recommend using a pump sprayer to apply the solution. It is critical to shake the solution well and ensure the capsaicin is in suspension before applying. Please remember to use safety glasses and rubber gloves when mixing and handling the solution.



THE RECOMMENDED SOLUTION IS:

80g Capsaicin per 1 gallon of Water

Apply 24oz of solution to 25 lbs. of dried shelled corn



CONSIDERATIONS

Though the data indicated capsaicin was effective as a repellent in this study, there are some considerations to keep in mind for a given location:

1. Human actions can impact your ability to repel non-target species. Trappers should establish a regular baiting schedule. Animals, particularly pigs, learn from human behavior and can be easier to catch if they are patterned with consistent baiting timing and methods. This can mitigate the impact of other non-target species. To repel non-target animals effectively, use feeders that allow you to set specific baiting times. Review camera photos to see if pigs are following a pattern of arrival at the trap site. If they are, schedule bait dispersion less than an hour before the anticipated arrival of wild pigs.
2. We recommend using enough bait based on the number of pigs observed during the conditioning period, typically 4-5 pounds of bait per pig. This quantity is only necessary when setting the Pig Brig Trap System. This quantity ensures sufficient bait for wild pigs to feed throughout the night before you check the trap at first light.
3. Different tolerances do exist. It is common for animals to respond differently in different seasons or situations. If the recommended rate is not producing the desired results, adjust the rate of capsaicin in the 1-gallon solution in increments of 10 g. Do not change the volume applied to the 25 lbs of dry-shelled corn (24 oz). You can adjust the concentration of capsaicin up or down depending on the desired behavior.
4. Seasonal food availability can influence bait consumption. With ample food availability, animals (including wild pigs) could become less tolerant of capsaicin-treated bait. Continuously monitor the willingness of animals to consume the bait provided and reduce capsaicin concentration accordingly in increments as described above.

Call us at (833) 744-2744 if you have any questions, concerns, or observations that we can discuss to assist in your wild pig management success.

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