NOSE IN BOWL

HOW DOGS TELL US WHICH FOODS ARE WORTH THEIR TIME

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How can you tell if your dog enjoys her new food? At AFB International, we develop new tasty flavors for dog enjoyment. We also pioneer new ways to interpret dogs' feeding behavior to tell us about meal enjoyment in addition to how much they ate. One such behavior metric is "nose in bowl" (NIB). NIB is the amount of time a dog spends eating relative to the amount of time her food is available. It gauges the dog's focus on the food. Even if your dog eats all of what you give her, is the food enjoyable enough for her to be "nose in bowl" most of the time?

In two-bowl feeding trials, preference is easy to measure; dogs eat more of the food they prefer. However, in a single-bowl trial, which is desirable because it closely mimics in-home feeding, most dogs will finish all of the food. The NIB metric indicates the level of interest in the food, despite an empty bowl every time.

AFB conducted a 20-day single-bowl trial with 18 mid-sized dogs (ages 2 to 12), where a total of eight dry foods were repeatedly offered using a randomized block design. During the daily trials, foods were offered for a maximum of 20 minutes to each dog. The food types offered, products (A) - (H), were either off-the-shelf dry foods or new AFB formulations. During feedings, we recorded the durations that dogs spent eating relative to time spent doing anything else, such as resting or drinking.

Figure 1 shows the results of the single-bowl trials. Food (C) was consumed most and also had the highest NIB, while food (E) was consumed least and had the lowest NIB. On average, dogs ate 98% of food (C) and, for 77% of the time the food was available, they were focused on eating. In contrast, dogs ate only 77% of

food (E) on average and were focused on eating only 53% of the time the food was in front of them. Diets (E) and (F) resulted in dogs being most distracted by other events relative to Diet (C).

NIB is more interesting when foods perform similarly for amount consumed, as with (G), (B) and (H). Average consumption was 92% to 94% for all, but (H) had the highest NIB value. Even though these were consumed nearly equally, dogs were more focused on eating when offered (H) than when offered (B) or (G).

NIB also provides richer information on dog enjoyment when added to a two-bowl paired preference feeding trial. Figure 2 shows results of two-bowl trials, each offered over two consecutive days (six days total). The gray lines connect paired foods offered. Preference ranking for the three foods was similar to the single-bowl trials; (C) was consumed most and had the highest NIB, while (A) was consumed least and had the lowest NIB. When food (C) was an option, dogs were occupied with eating (C) an average of 53% of the time, compared to just 16% for (A) and 25% for (B).

In addition to NIB, behaviors such as number of visits to the bowl during a feeding session and number of switches between bowls in two-bowl trials further describe dogs' interest in a specific food. Fewer visits indicate the food has an enjoyment level to hold the dog's interest, and fewer switches indicate commitment to one food over the other. Tracking NIB, plus other canine behaviors, helps us understand what dogs will eat and their level of feeding enjoyment. Development of meals can be improved by considering NIB because the dogs are showing us which foods are worth their time.
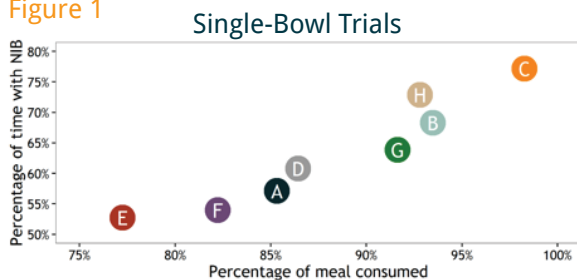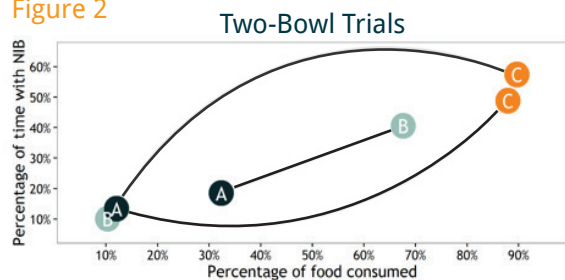
Figure 1

Single-Bowl Trials

Figure 2

Two-Bowl Trials