

# Pig Environmental Enrichment

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### **TAKE HOME MESSAGE:**

When pig-relevant environmental enrichment is provided, pigs may benefit through improved health, performance, and welfare.

### What is Environmental Enrichment?

Environmental enrichment (EE) is defined as "an improvement in the biological functioning of captive animals resulting from modifications to their environment". The major enrichment goals are to mitigate, reduce or eliminate abnormal behaviors, promote normal species-specific behavior, and enhance the animal's coping ability<sup>2.</sup> Enrichment can be broadly placed into five different categories:

- 1. Social- contact with humans or other animals.
- 2. Occupational- psychological enrichment or enrichment that encourages exercise.
- 3. Physical altering the size and complexity of the environment.
- 4. Sensory stimulates one of the five senses.
- 5. Nutritional presenting novel/and or varied food types and delivery methods. One enrichment device may span multiple categories.<sup>3</sup>

## Swine Biologically Relevant Enrichment

When providing enrichment, it is important that it is biologically relevant to the animal<sup>4</sup>, meaning that it is interesting and will be used. For the pig, enrichment should stimulate exploratory and foraging behaviors, such as rooting and chewing<sup>5</sup>. Nursery and grow-finish pigs are more likely to interact with enrichment that smells, can be chewed and destroyed, and moves about<sup>6</sup>. When hanging enrichment, objects hung at eye level are of increased interest<sup>7</sup> (Figure 1; Figure 2).

### **Enrichment Benefits**

Enrichment can increase natural behaviors such as rooting and chewing, and decrease unwanted behaviors such as aggression, and ear/tail biting<sup>2,8</sup>. Enrichment can also improve the pig's ability to control, make decisions in, and cope with their captive environment<sup>9,10</sup>. All these benefits improve pig welfare. To compliment positive behaviors, improved performance measured by growth rate and feed intake have also been seen<sup>11,12</sup>

Please see a review by Mkwanazi et al., (2019)<sup>13</sup> for a more complete review of EE benefits.

### Pitfalls to Avoid

How enrichment is provided can be just as important as what enrichment is provided. If enrichment is delivered in a manner that is unusable by some animals or does not satisfy animal needs, then it will fail. It is important to remember that pigs are social animals and may desire to utilize enrichment at the same time<sup>14.</sup> Therefore, producers should be mindful of providing enough for all pigs to interact with the EE at the same time. Animals reared in enriched environments may experience frustration and abnormal behaviors when the enrichment is removed<sup>15.</sup>

Decreased enrichment interest over time, known as habituation, must be considered. There are certain management practices that can be implemented to avoid this, such as adding and removing the same enrichment over time on a varying schedule and mixing enrichment "types" 16.



Figure 1. Hanging EE device (biscuit on a cotton rope) in a nursery pen.



Figure 2. Hanging cotton rope EE in a farrowing stall.

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