Why Choose Vita-Bugs?

Current insect grow methods are done using low cost ingredients and rapid grow methods. As a result insect diets do not contain the same ingredient makeup as wild insects would naturally forage for. Vita-Bug insects have had their diet changed to increase their nutritional content to be more in line with wild insects of the same variety.

Insect Dusting vs. Insect Gut-Loading

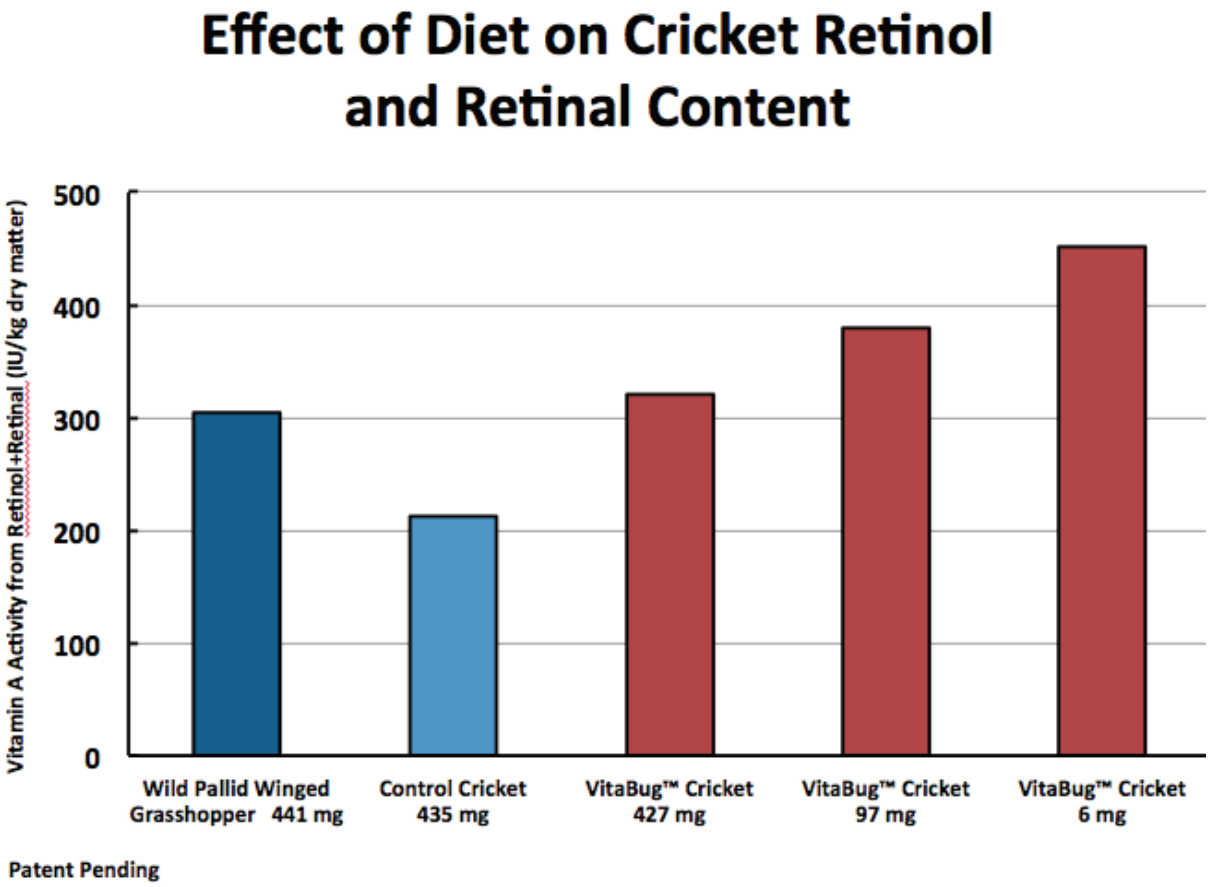
Insect Dusting - A recent study has shown that a cricket will groom off 50% of any dust applied to it within 30 secs. Therefore unless you see the pet animal eat the dusted cricket very quickly you are not delivering the nutrients from the dust.

Insect Gut Loading - After determining the size of a crickets' stomach it has been discovered that the amount of dust needed for the pet animal can not be passed by a gut-loading method. The insects stomach is not large enough. Also important to know is that crickets will expel the contents of their stomachs rapidly. Think White Castle hamburgers.

The bigger picture is that there have not been any studies done to substantiate that dust and gut-loads actually contain the nutrients they claim to have.

The Solution...Vita-Bugs

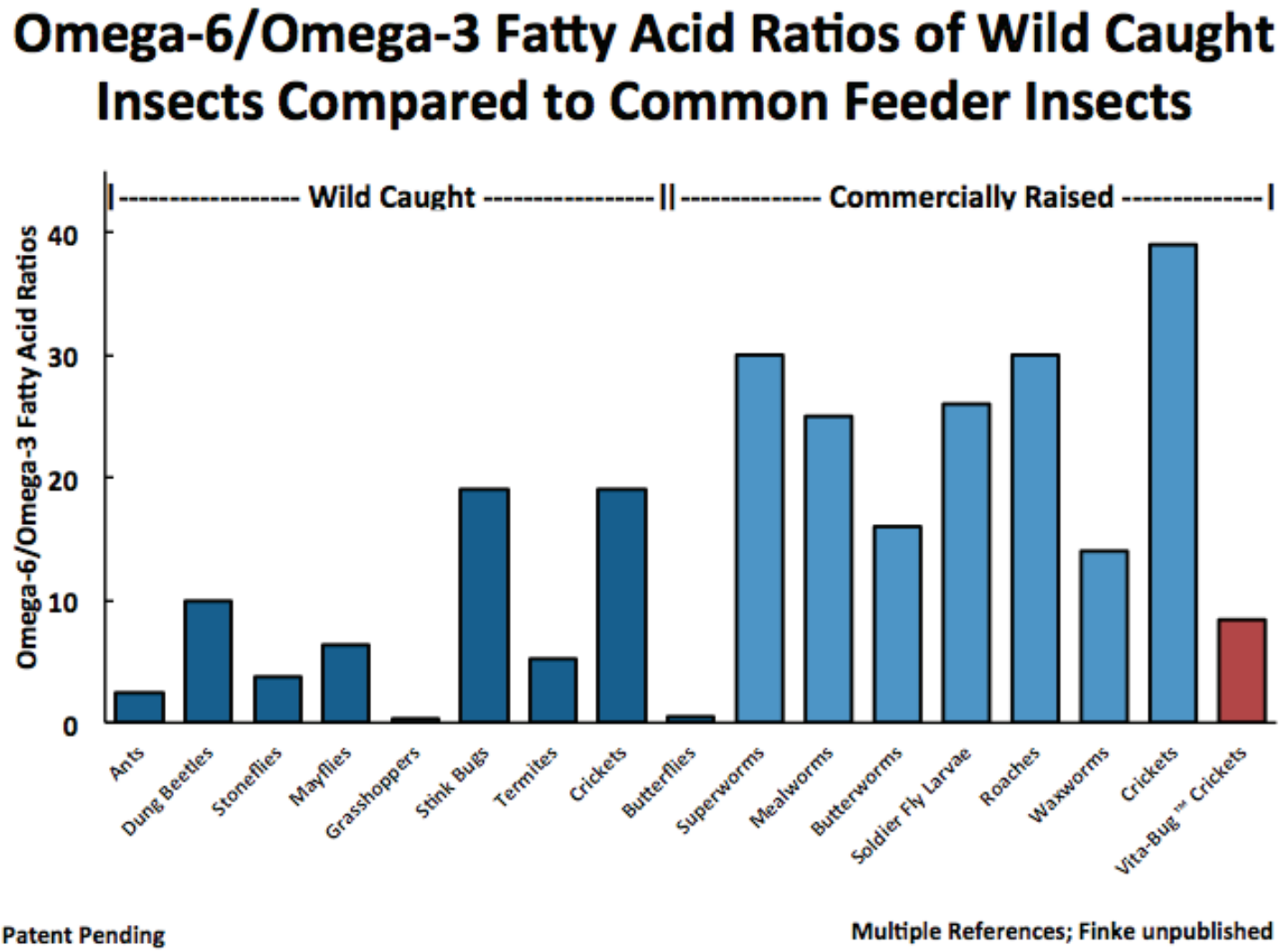
After 7 years of research and development the Vita-Bug process has been created. Vita-Bugs are created using a scientifically proven feeder insect process that reduces dusting and gut-loading complexity. Vita-Bugs contain insect nutrition more a kin to wild insects at a molecular level, it ***IS NOT*** *an applied process*.



Retinol and Retinal are fancy terms for Vitamin A, and as you can see the effect of the Vita-Bug process begins very quickly. The reason the smaller cricket contains more Vitamin is because insects store Vitamin A in their eyes and smaller crickets have a disproportional body mass size to the size of their eyes.

Zoos often report that the biggest deficiency that they experience is a Vitamin A deficiency. So as you can see Vita-Bugs have a comparable amount of Vitamin A to wild caught insects.

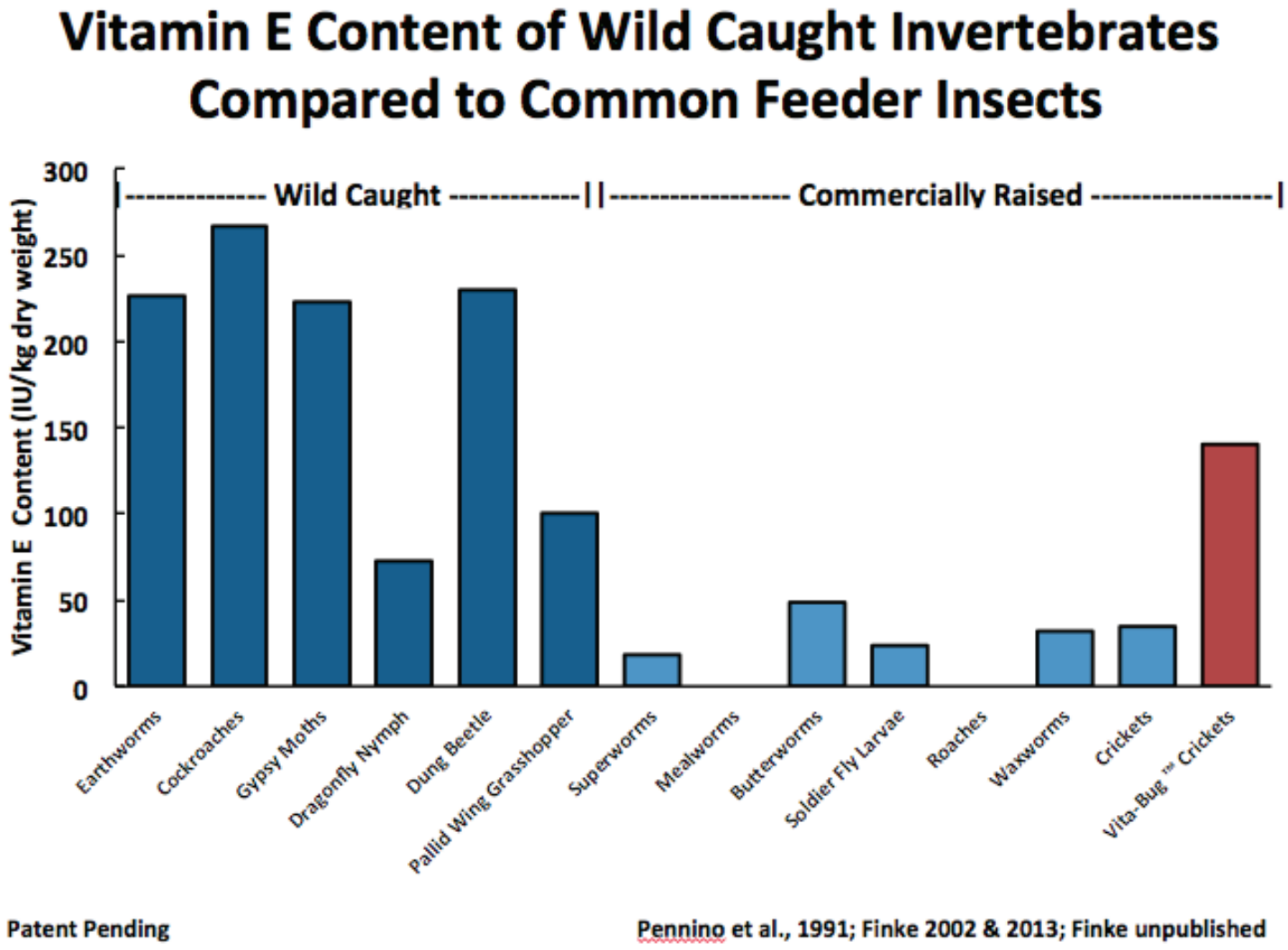
The below image displays the Omega 6 / Omega 3 fatty acid ratios. In this image less is better. Lower ratios result in many attributes including better heart health and overall better health of the insects. As you can see Vita-Bug crickets are in line with wild caught insects. Again the theme is we are nutritionally enhancing Vita-Bugs to equal, or at times be better than wild caught insects.



Patent Pending

Multiple References; Finke unpublished

The below image displays the amount of Vitamin E in wild caught, commercially raised and Vita-Bug crickets. As you can see commercially raised insects are very low. This is because Vitamin E is a very expensive component to add to a diet, therefore just enough is added for the insect to grow correctly but not enough for additional storage. However as you can see the Vita-Bug cricket has roughly an equal amount of what would be an average amount for wild caught insects. Again carrying on the theme of bringing nutrition back to a wild caught or natural amount.



Patent Pending

Pennino et al., 1991; Finke 2002 & 2013; Finke unpublished

Results you can see.

The below image is probably the most perfect example of why proper insect nutrition is so important. These are red-eye tree frogs from a study conducted in England. The frog on the left was feed from a tadpole a diet supplemented with carotenoids and the frog on the right was not. What are carotenoids? Well they do many things that are yet still undetermined, but what we know so far is they are directly responsible for overall immune health and specifically can be linked to coloration in animals:

> The red in tomato's is the result of a carotenoid called Lycopene, the yellow in corn is Lutein and the orange in carrots is Beta-Carotene. These are all very important to proper coloration in pet animals.

The results of this study were far more important than just color. The frogs raised on a diet supplemented with carotenoids were far more healthy with increased immune response and successfully reproduced in captivity were as the frogs on the right did not.

Red-eye frog fed as a tadpole a diet with supplemental carotenoids.

Red-eye frog fed as a tadpole a diet without supplemental carotenoids.

What does all this mean?

For a long time now we have all heard about premium food choices for dogs and cats, now its time for reptiles and amphibians to have the same options.

Its still important to stress properly supplemented diets. For example we can supplement an insectivores diet for fat by adding waxworms.

Most importantly customers must understand that we still must supplement calcium. Crickets can not take on pet animals needed amounts of calcium because they have no receptors for it. Essentially if we load them up with the needed amount of calcium they will die. So how do we solve this? We simply push CalciWorms. CalciWorms have a naturally occurring high level of calcium which is still needed in the Vita-Bug diet program. So a staple diet of Vita-Bug crickets or Vita-Bug mealworms can be rounded out for fat with waxworms and calcium with CalciWorms. So this means that using a correct combination of live food will allow for **no need for dust or gut-loading!**

Most importantly Vita-Bugs are not a gimmick or that the nutrition will "wear" off. The nutrition is part of the insects makeup. Think of it as a femur in your leg versus a hat on your head. Vita-Bugs are a nutritionally enhanced feeder insect not genetically altered in any way.