

Selection Criteria for Rodent Chow Products

Allan M. Casey, III
WildAgain Wildlife Rehabilitation, Inc.

As printed in *Wildlife Rehabilitation Today*, 2005
Copyright©2005

A critical choice and challenge facing wildlife rehabilitators of small rodents (i.e., tree, ground and flying squirrels, chipmunks, rats and mice) is the selection of a suitable diet for weaning and post-weaned animals. To meet this need, many rehabilitators have turned to one or more of the commercially available rodent chow products. Other rehabilitators have elected not to use these products. For those rehabilitators who have chosen to use a rodent chow product, this article discusses certain criteria that can be helpful in selecting which product or products to use in certain situations.

Types of rodent chow products

Once the decision has been made to use a rodent chow product, it is helpful to understand the different types of products that are available and their intended uses. Many of the larger product lines (e.g., LabDiet, Harlan-Teklad, Mazuri) are formulated for and targeted for two primary purposes - breeders of rodents for a variety of purposes, and research institutions conducting studies involving laboratory rodents. Some of the smaller manufacturers (e.g., Oxbow, Kaytee) target their rodent chow products more for domestic rodents (hamsters, mice, and rats). Accordingly, their products generally fall into one of the following three categories:

- **High performance breeding and reproduction** – these products tend to be higher in energy content, containing relatively higher percentages of fat.
- **Growth or full cycle diets** – these products are generally more balanced, intended for normal growth rates and the ability to use the rodent chow in a wider range of applications.
- **Maintenance** – these products tend to be leaner with a higher ratio of protein to fat, designed for longer-term captive environments, such as laboratory applications.

Many of these products are also available in an autoclavable formulation if microorganism content is an issue (i.e., some are even irradiated, available in a vacuum sealed package). Some products are certified as to not exceeding specified levels of microorganisms and other contaminants (heavy metals, pesticides).

Selection considerations

Since there are many commercially available rodent chow products from which to choose, there are many key factors that should be considered in selecting the preferred product. While not a comprehensive list, the following criteria can be used to assess the suitability of one product versus another:

- **Consider the animal's stage of development.** As discussed earlier, the manufacturer generally recommends the application for which each product is to be used. As such, animals that are in longer-term recovery care or are being "wintered-over" may not be best matched to a high fat rodent chow formulated for breeding colonies. Weaning juvenile animals will likely benefit most from a product that is formulated for growth or full-cycle use, rather than one designed for long-term maintenance.
- **Consider the ratio of protein to fat.** If the manufacturer's recommendation usage is unclear, a quick way to assess suitability is to calculate the ratio of protein to fat as indicated in the guaranteed analysis, or, if available, the typical nutritional analysis. This ratio is easily calculated by taking the percent of protein divided by the percent of fat. For example, if the analysis indicates 20% protein and 5% fat, the ratio is 4:1. A ratio higher than 4:1 generally indicate a product that is intended for full life-cycle growth or maintenance. A lower ratio, indicative of a higher fat content, generally indicates a product intended for breeding or rapid growth.
- **Consider the ingredients and source of nutrients.** A quick review of the ingredients for each rodent chow shows which products are totally free from any animal products. For example, while all of the rodent chows have fats, some are

sourced from animal ingredients and some are sourced from vegetable ingredients. It also shows which have protein derived from only fish meal, or from fish and meat meal. Also shown are which products have artificial flavorings added. This information is available from the various manufacturers.

- Consider the intended application for the product. It is probably best to consider the use of a rodent chow that has been specifically formulated for use with rodents. The Zupreem Primate Diet, although popular with some rehabilitators, is not designed for use with rodents according to discussions with the manufacturer.

- Cost and availability. Cost is generally not an issue, especially when purchased in 30 - 50 pound bags, unless shipping to a very remote area is required. Availability may be an issue, but with appropriate lead-time, a local distributor (i.e. an animal feed store) can often order a specific product. Most of these dealers may also be able to order the more commonly used products fairly quickly. The websites of the larger manufacturers have a user-entered search feature that, when provided with a zipcode and mileage radius, will then list the distributors in the local area.

- Palatability. The rodent chow products offered by the larger manufacturers are used primarily in either laboratory settings or for domestic small rodents. With proper husbandry, these products are palatable to rodents in rehabilitation, especially animals that have come into rehabilitation as pre-weaned juveniles. Adult animals may take longer to begin consumption. (Some rehabilitators have had difficulty with this, and have switched to Zupreem's Primate Diet, as some rodents tend to eat it more readily. This is not surprising, as the fourth most prominent ingredient is sugar, and sixth is animal fat. Other rehabilitators have reported that rodents will not eat the rodent chow, especially when a generous array of "treats" are offered concurrently, such as fruits, hardwood nuts, and seeds.)

- Specific requirements, such as autoclaving prior to use. Some of the products are available in autoclavable form if specific measures of sterilization need to be taken. It should be noted that these products have been manufactured assuming that autoclaving will occur prior to use, such as providing a coating of the chow to accommodate swelling and softening, and the raw composition of the product has been designed to compensate for any nutritional loss that may occur when autoclaved.

Conclusion

The selection of a suitable weaning and post-weaned diet for rodents in rehabilitation is just as critical as the proper selection of a milk-replacer for pre-weaned animals. For juvenile and young adult animals, critical development is still occurring as the animal grows. For incoming injured adults, correct nutrition is critical for steady and complete recovery.

With the availability of over 50 rodent chow products from several manufacturers, the rehabilitator is not forced to "guess at" or conjure up a diet that may or may not produce satisfactory results. But with such a wide array of products from which to choose, the criteria listed above can help narrow the field to just a few "best" choices.

This article is adapted from "Selection and Use of Commercially Available Rodent Chow Products" contained in the Squirrel Rehabilitation Handbook (available at www.ewildagain.org) that provides a detailed analysis of 27 different rodent chow products.