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(54) Titre : ALIMENT POUR OISEAUX ATTIRANT MOINS D'OISEAUX INDESIRABLES
 (54) Title: BIRD FEED THAT ATTRACTS FEWER UNDESIRABLE BIRDS

(57) **Abrégé/Abstract:**

The invention relates to a bird feed mixture that is intrinsically unattractive to undesirable birds such as common grackles, red-winged blackbirds, and brown-headed cowbirds. The bird feed mixture attracts fewer undesirable birds while still attracting larger numbers of desirable birds such as finches. The bird feed mixture contains nyjer (thistle), safflower, black oil sunflower, peanut, white millet, sunflower chips, canary seed, raisin, red millet, and juniper berries.

ABSTRACT OF THE DISCLOSURE

The invention relates to a bird feed mixture that is intrinsically unattractive to undesirable birds such as common grackles, red-winged blackbirds, and brown-headed cowbirds. The bird feed mixture attracts fewer undesirable birds while still attracting larger numbers of desirable birds such as finches. The bird feed mixture contains nyjer (thistle), safflower, black oil sunflower, peanut, white millet, sunflower chips, canary seed, raisin, red millet, and juniper berries.

BIRD FEED THAT ATTRACTS FEWER UNDESIRABLE BIRDS**5 BACKGROUND OF THE INVENTION****(a) Field of the Invention**

The invention relates to bird feed mixtures that attracts fewer common grackles (*Quiscalus quiscula*), brown-headed cowbirds (*Molothrus ater*), and red-winged blackbirds (*Agelaius phoeniceus*).

10 (b) Description of the Related Art

Bird watching enthusiasts seek to provide food to attract bird species that are talented singers, colorful, rare or that possess other desirable characteristics. A common problem is that the food provided to attract desirable bird species may be consumed by non-bird species or undesirable bird species, such as blackbirds. For example, the problem of
15 marauders consuming food intended for desirable bird species is discussed in U.S. Pat. No. 4,144,842. Undesirable birds, such as common grackles, brown-headed cowbirds, and red-winged blackbirds can consume large quantities of bird feed at great expense to the bird watching enthusiast. Additionally, the presence of large, undesirable birds has a tendency to frighten off smaller, more desirable song birds.

20 Devices for discriminating against undesirable birds such as blackbirds and other marauding species are known to the art. U.S. Pat. No. 4,144,842 discloses a bird feeder mechanism that limits access to the feed area by adjusting the distance between a protective hood and the rim of a feed pan of the bird feeder such that only birds below a certain size can

access the feed area. U.S. Pat. No. 5,445,109 discloses a bird feeder employing a spring-based mechanism that denies access to bird feed to undesirable birds and other species that weigh more than a given maximum weight. U.S. Pat. No. 4,996,947 discloses a bird feeder that requires birds to feed while hanging upside down, thereby selecting for goldfinches
5 while excluding other bird species that are not able to feed while upside down.

Bird feeds and other compositions have also been designed to repel particular species. U.S. Patent No. 5,821,269 discloses a bird seed treated with capsaicin, capsaicin derivatives or analogs thereof in an amount sufficient to be unpalatable to animals having capsaicin sensitive receptors. U.S. Patent Application Publication No. 2005/0186237
10 discloses a bird repellent composition.

While these and other methods known in the art to attract fewer undesirable birds, there is still a need for a bird feed mixture that is intrinsically unattractive to undesirable birds. Such a bird feed mixture would decrease the number of undesirable birds attracted to a bird feeder without regard to the type of bird feeder mechanism used to dispense the food.

15 **BRIEF SUMMARY OF THE INVENTION**

In one aspect, the invention provides a defined bird feed mixture that is intrinsically unattractive to undesirable birds such as common grackles (*Quiscalus quiscula*), brown-headed cowbirds (*Molothrus ater*), and red-winged blackbirds (*Agelaius phoeniceus*). In another aspect, the invention provides a defined bird feed mixture that decreases the number
20 of undesirable birds that visit a bird feeder.

In another aspect, the invention provides a defined bird feed mixture of Nyjer (thistle), safflower, black oil sunflower, peanut, white millet, sunflower chips, canary seed, raisins, red millet and juniper berries. In another aspect, the invention provides for a container, item or package comprising a defined mixture of Nyjer (thistle), safflower, black

oil sunflower, peanut, white millet, sunflower chips, canary seed, raisins, red millet and juniper berries. In yet another aspect, the invention provides for a method for producing bird seed comprising combining Nyjer (thistle), safflower, black oil sunflower, peanut, white millet, sunflower chips, canary seed, raisins, red millet and juniper berries.

5 BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a diagram of bird feeders at a testing station that have been arranged into two “Homes” for the testing of birds’ preferences for control formula bird feed mixture versus a mixture of 20% nyjer (thistle), 18% safflower, 10% black oil sunflower, 10% peanut, 8% white millet, 8% sunflower chips, 8% canary seed, 8% raisin, 6% red millet and
10 4% juniper berries (hereinafter “MCB mixture”).

FIG. 2 is an exemplary view of different types of bird feeder designs that are available for use.

FIG. 3 is a chart showing the results of a side-by-side survey comparing preferences of undesirable birds and desirable birds for the control formula bird feed versus the MCB
15 mixture.

FIG. 4 is a chart showing the results of sequential surveys comparing the preferences of undesirable birds and desirable birds for the control formula bird feed versus the MCB mixture.

FIG. 5 is a chart showing the amounts of control formula bird feed and MCB
20 mixture bird feed consumed during sequential surveys comparing the preferences of undesirable birds and desirable birds for the two bird feed mixtures.

FIG. 6 is a chart showing the results of a second side-by-side survey comparing preferences of undesirable birds and desirable birds for the control formula bird feed versus the MCB mixture.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

5 The invention relates to a defined bird feed mixture that attracts fewer common grackles, brown-headed cowbirds, and red-winged blackbirds. In particular, the invention relates to a defined bird feed mixture consisting essentially of 20% nyjer (also referred to as “thistle”), 18% safflower, 10% black oil sunflower, 10% peanut, 8% white millet, 8% sunflower chips, 8% canary seed, 8% raisin, 6% red millet, and 4% juniper berry.

10 The bird feed mixture of the invention has the surprising and advantageous property of being unattractive to birds, such as common grackles, brown-headed cowbirds, and red-winged blackbirds, that are undesirable to bird feeding enthusiasts. The bird feed mixture of the invention contains lower percentages by weight of ingredients that are preferred by
15 becomes less favorable to these species, while still attracting colorful birds. As a result, fewer of these undesirable birds and more desirable birds, such as finches, chickadees, titmice, and woodpeckers, visit bird feeders filled with the bird feed mixture of the invention.

 In one aspect, the bird feed mixture consists essentially of 20% nyjer (thistle), 18% safflower, 10% black oil sunflower, 10% peanut, 8% white millet, 8% sunflower chips, 8%
20 canary seed, 8% raisin, 6% red millet, and 4% juniper berry by weight (MCB mixture). In another aspect, the bird feed mixture consists of 20% nyjer (thistle), 18% safflower, 10% black oil sunflower, 10% peanut, 8% white millet, 8% sunflower chips, 8% canary seed, 8% raisin, 6% red millet, and 4% juniper berry by weight.

In another aspect, the bird feed mixture comprises 20% nyjer (thistle), 18% safflower, 10% black oil sunflower, 10% peanut, 8% white millet, 8% sunflower chips, 8% canary seed, 8% raisin, 6% red millet, and 4% juniper berry by weight, wherein the bird feed mixture does not contain any other types of seeds, fruits, or ingredients.

5 Each of the components of the bird feed mixture of the invention is well known and readily available.

The bird feed mixture of the invention may be placed in a container, item or package. For example, the bird feed mixture may be packaged for commercial availability.

10 The bird feed mixture of the invention may be produced in a method comprising combining nyjer, safflower, black oil sunflower, peanut, white millet, sunflower chips, canary seed, raisins, red millet, and juniper berries.

The following examples are not intended to limit the invention in any way.

EXAMPLES

Example 1: Side-by-Side Comparison of MCB Mixture and Control

15 At multiple testing stations within a two mile radius in Marysville, Ohio, sets of 4 bird feeders were established. The stations corresponded to a wide range of environmental habitats including riparian woodland edge, open landscaped areas, pond-side habitats, and woodland/agricultural habitats. The environmental habitats of the testing stations possessed varying vegetation, sound, topography, human presence, water access, animal disturbance
20 and natural predators. At each station, two “homes” consisting of two bird feeders each were established. The arrangement of a station is illustrated in FIG. 1.

Each station had two different types of bird feeder (e.g., platform and tube feeders), but each home had matching types of birdfeeders. For example, Home A might have a

platform bird feeder and a plastic tube feeder, in which case Home B would also have a platform bird feeder and a plastic tube feeder. Examples of some of the general types of bird feeders that could be used are shown in FIG. 2.

At each station, the two bird feeders at one of the Homes were filled with the MCB mixture composed of 20% nyjer (thistle), 18% safflower, 10% black oil sunflower, 10% peanut, 8% white millet, 8% sunflower chips, 8% canary seed, 8% raisin, 6% red millet, and 4% juniper berry by weight. The two bird feeders at the station's other Home were filled with a control bird feed mixture, Scotts® Ultimate Songbird Blend.

A side-by-side comparison test of the MCB mixture and the control mixture was conducted over the course of approximately two weeks. Over the course of the survey, 1,200 undesirable birds such as common grackles, red-winged blackbirds, and brown-headed cowbirds were observed visiting bird feeders containing the control bird feed mixture. 400 visits by birds other than common grackles, red-winged blackbirds, and brown-headed cowbirds, were also made to bird feeders containing the control bird feed mixture. In contrast, only 446 undesirable species such as common grackles, red-winged blackbirds, and brown-headed cowbirds were observed visiting the bird feeders containing the MCB mixture. A total of 456 bird visits other than common grackles, red-winged blackbirds, and brown-headed cowbirds were made to bird feeders containing the MCB mixture. Additionally, 19 bird species were observed visiting the bird feeders containing the MCB mixture, while 16 bird species were observed visiting the bird feeders containing the control bird feed mixture. The results of this survey are shown in FIG. 3.

Example 2: Comparison of MCB Mixture and Control

At each of five testing stations arranged as shown in FIG. 1, all of the bird feeders in both "Homes" were filled with control formula bird feed. For a two-day period, the number

of bird visits to the bird feeders by common grackles, red-winged blackbirds, and brown-headed cowbirds and by other species were recorded. After a three-day break, all of the feeders were again filled, this time with the MCB mixture. For a two-day period the number of bird visits to the bird feeders by common grackles, red-winged blackbirds, and brown-headed cowbirds and by other species were recorded. During both of the testing time periods, the number of pounds of bird feed consumed was monitored.

During the initial two-day testing period for the control formula bird feed, 140 bird visits other than common grackles, red-winged blackbirds, and brown-headed cowbirds were observed at the feeders. For the same time period, 255 visits from undesirable birds species such as common grackles, red-winged blackbirds, and brown-headed cowbirds were observed at the bird feeders. During the final two-day testing period for the MCB mixture, 168 bird visits other than common grackles, red-winged blackbirds, and brown-headed cowbirds were observed at feeders. For the same time period, 206 visits from undesirable birds species such as common grackles, red-winged blackbirds, and brown-headed cowbirds were observed at the feeders. Thus, approximately 19% fewer undesirable common grackles, red-winged blackbirds, and brown-headed cowbirds visited bird feeders containing the MCB mixture than visited bird feeders containing the control formula bird feed. Approximately 20% more desirable birds (i.e., birds other than common grackles, red-winged blackbirds, and brown-headed cowbirds) visited bird feeders containing the MCB mixture than visited bird feeders containing the control formula bird feed. These results are shown in FIG. 4.

During the two testing time periods, the number of pounds of bird feed consumed was monitored. For the first testing period, in which the control formula bird feed was tested, there were 53 hours and 25 minutes of testing, during which time 55.75 pounds of control formula bird feed was consumed. This yields a consumption rate of 1.04 pounds of bird seed

per hour. For the second testing period, in which the MCB mixture was tested, there were 50 hours and 45 minutes of testing, during which time 29.75 pounds of the MCB mixture bird feed was consumed. This yields a consumption rate of 0.58 pounds of bird seed per hour. These results are tabulated in FIG. 5.

5 Example 3: Side-by-Side Comparison of MCB Mixture and Control

During a two-week testing period, two testing stations as shown in FIG. 1 were established. At each station, two bird feeders in one Home were filled with the MCB mixture, while two bird feeders in the other Home were filled with the control formula bird feed mixture. The number of undesirable birds species such as common grackles, red-
10 winged blackbirds, and brown-headed cowbirds visits to feeders containing the MCB mixture and the number of undesirable birds species such common grackles, red-winged blackbirds, and brown-headed cowbirds visits to feeders containing the control formula bird feed were observed. Over the course of the two-week testing period, 757 undesirable birds species such as common grackles, red-winged blackbirds, and brown-headed cowbirds visits to bird
15 feeders containing the control formula bird feed were observed. During the same period, 431 undesirable birds species such as common grackles, red-winged blackbirds, and brown-headed cowbirds visits to bird feeders containing the MCB mixture were observed. Thus, some 43% fewer undesirable birds species such as common grackles, red-winged blackbirds, and brown-headed cowbirds visits to feeders containing the MCB mixture were observed.
20 These results are shown in FIG. 6.

Although the foregoing invention has been described in some detail by way of illustration and example for purposes of clarity of understanding, it will be obvious that certain changes and modifications may be practiced within the scope of the appended claims.

Modifications of the above-described modes for carrying out the invention that are obvious to persons of skill in art are intended to be within the scope of the following claims.

CLAIMS

1. A bird feed mixture comprising 20% nyjer, 18% safflower, 10% black oil sunflower, 10% peanut, 8% white millet, 8% sunflower chips, 8% canary seed, 8% raisin, 6% red millet, and 4% juniper berry by weight.
2. A container, item or package comprising the bird feed mixture of claim 1.

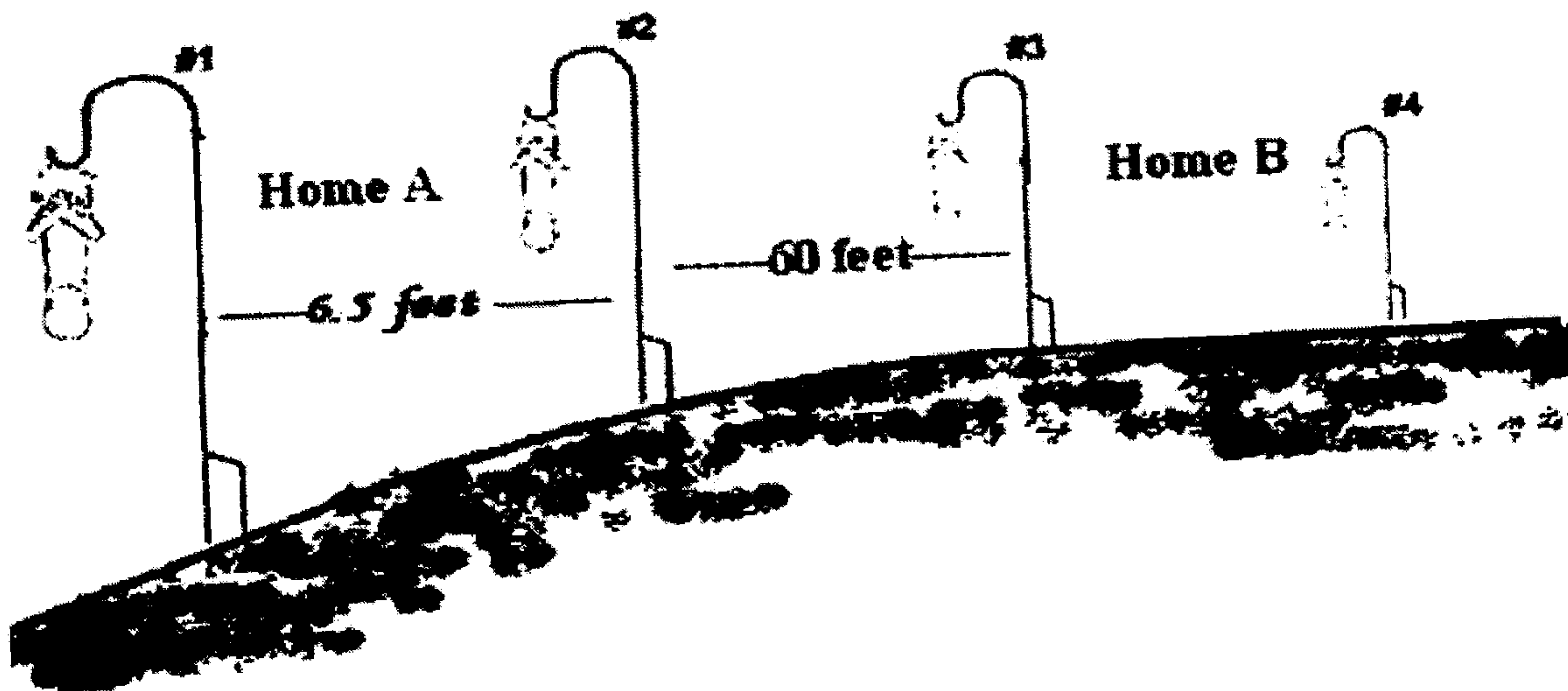


Figure 1

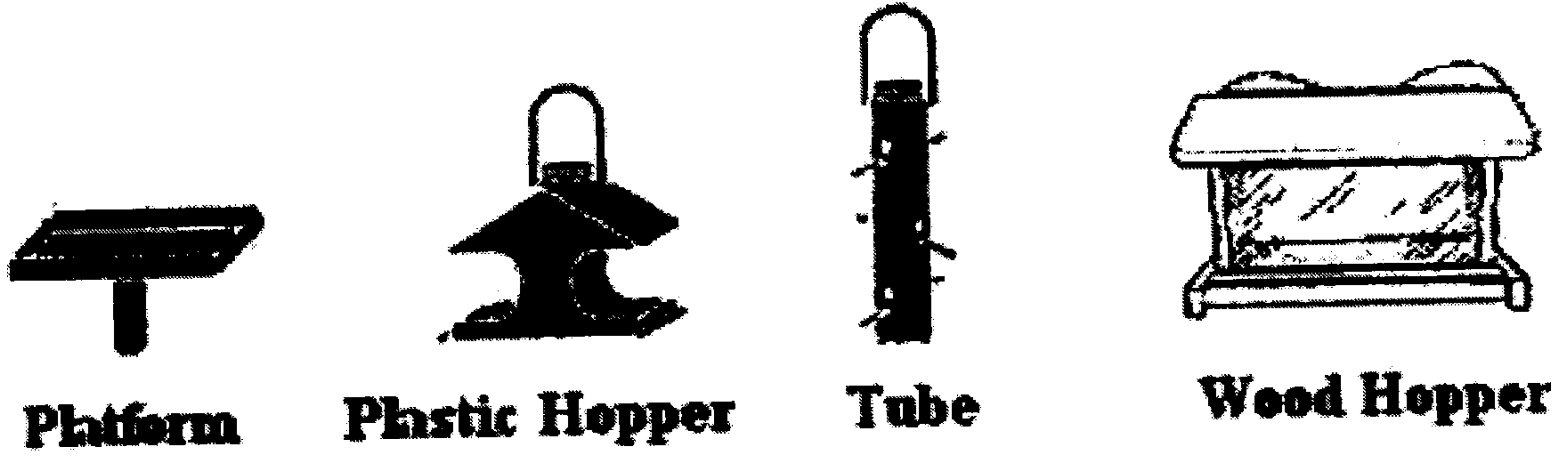


Figure 2

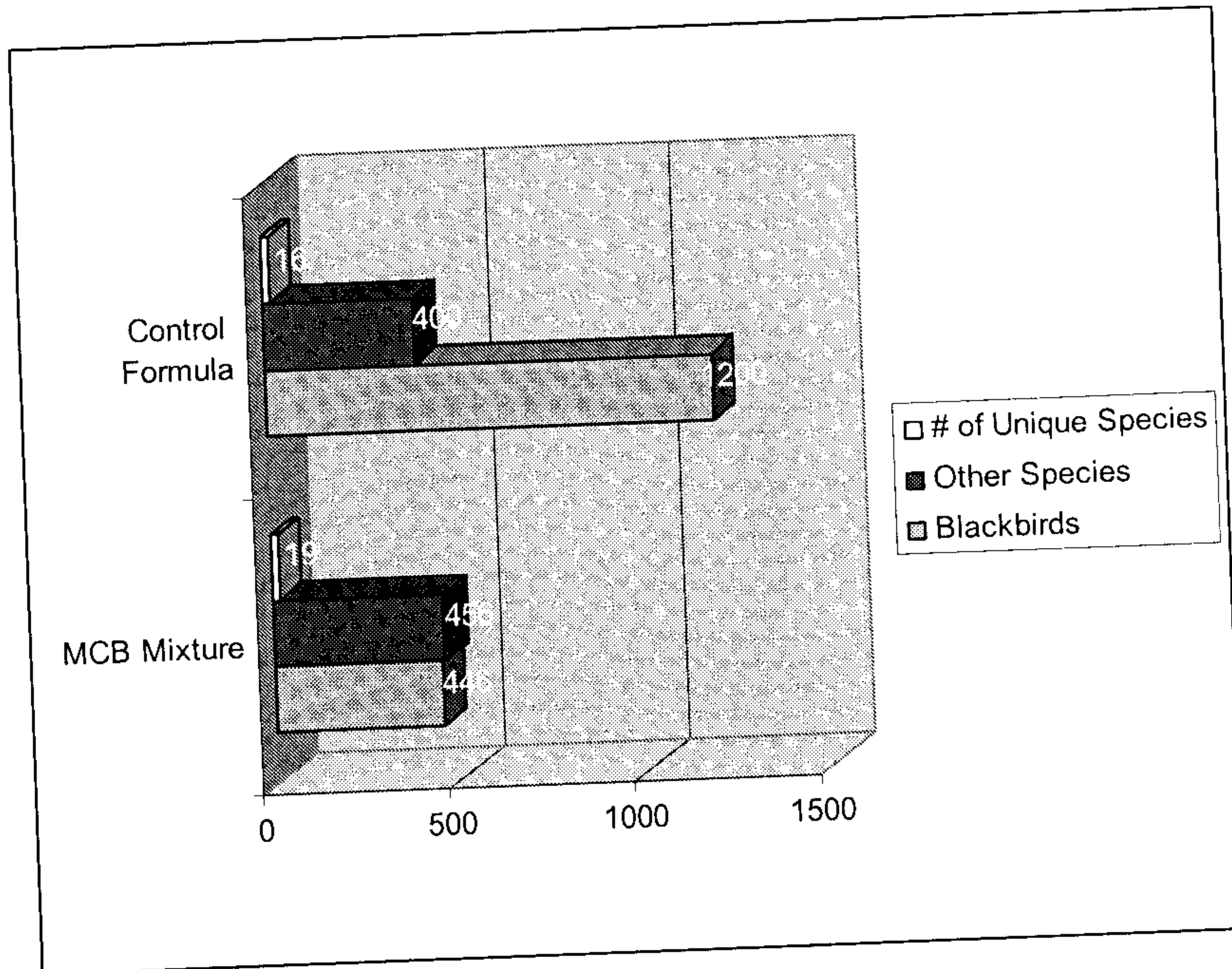


Figure 3

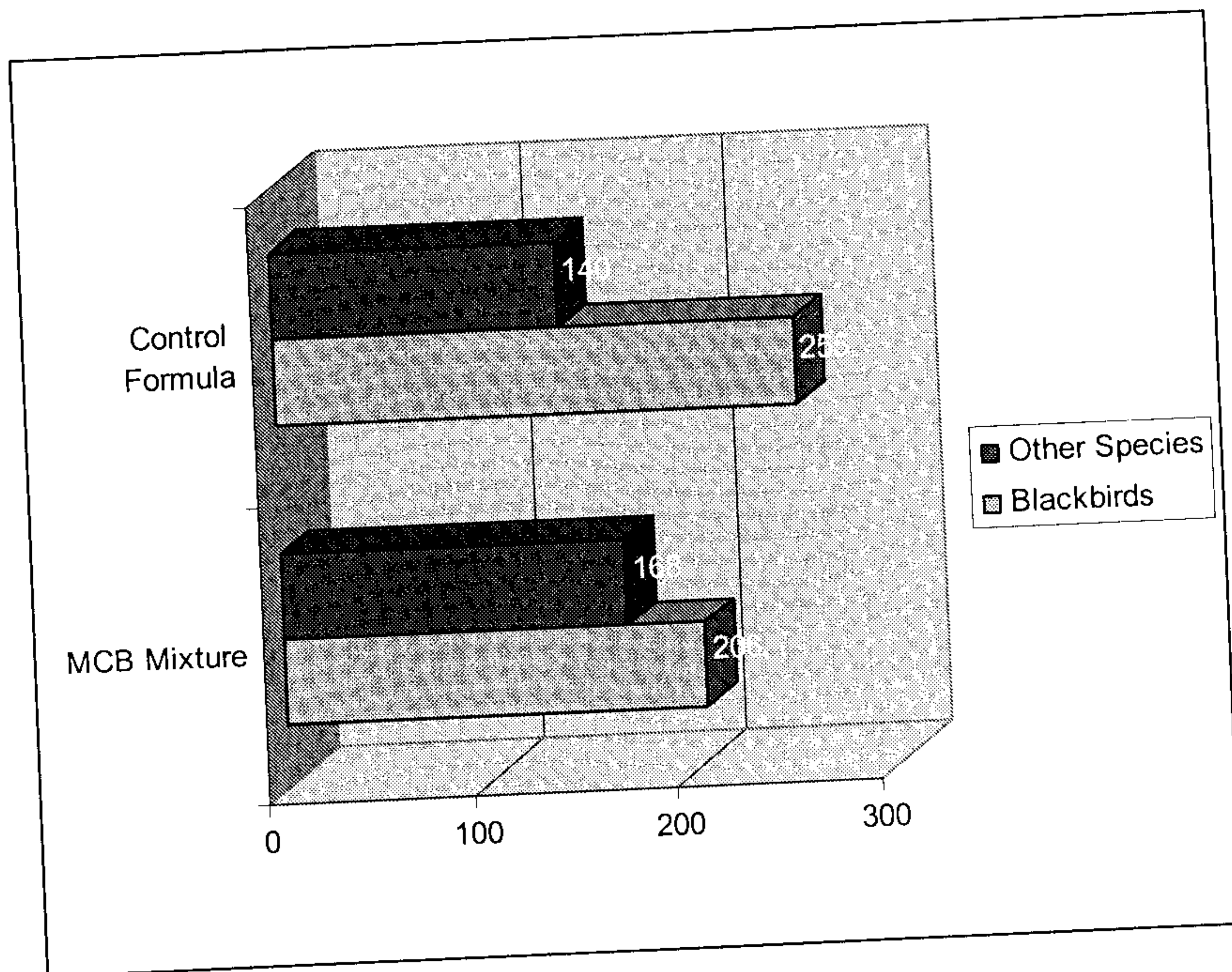


Figure 4

CONTROL Formula	Elapsed Time	Total Pounds of Food Consumed				Total Pounds Consumed
		Feeder 1	Feeder 2	Feeder 3	Feeder 4	
June 20	33:05	9	8	7.5	7.25	31.75
June 21	20:20	5.75	6	7	5.25	24
Grand Totals	53:25	14.75	14	14.5	12.5	55.75
Consumption: 1.04 lbs of bird seed per hour						
MCB Formula	Elapsed Time	Total Pounds of Food Consumed				Total Pounds Consumed
		Feeder 1	Feeder 2	Feeder 3	Feeder 4	
June 25	30:45	4.25	4.5	3.75	3.5	16
June 26	20:00	3.25	3.75	4	2.75	13.75
Grand Totals	50:45	7.5	8.25	7.75	6.25	29.75
Consumption: 0.58 lbs of bird seed per hour						

Figure 5

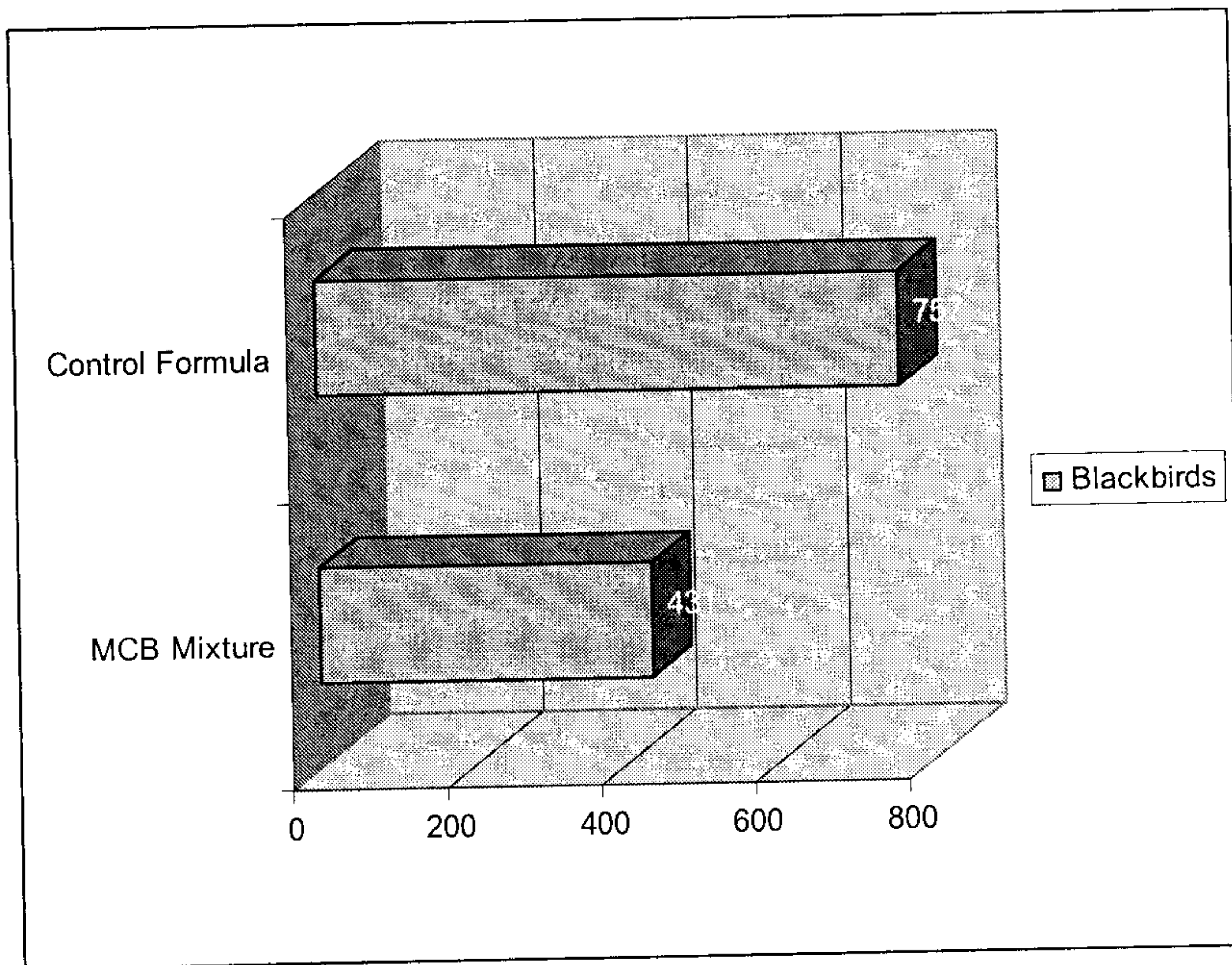


Figure 6