Honey Bee Nutrition
And Feeding

Montgomery County Beekeepers Association
Michelle Gasaway
Honey Bee Diet

- Pollen
- Nectar
- Water
Water Is A Vital Component In The Honey Bee Diet
Water

- Carrying Dissolved Food Materials To All Parts Of The Body
- Assists In The Removal Of Waste Products
- Involved In Digesting And Metabolizing Food
Nectar

Carbohydrate Source

“Energy Source”
Pollen

- Protein
- Amino Acids
- Minerals
- Vitamins
- Fats
- Sterols
Protein Content Of Pollens Varies From 10-36%

- Not All Pollens Are Nutritionally Alike
- Bees Generally Collect And Utilize A Mixture Of Pollens
- Many Individual Pollens Are Nutritionally Inadequate, Lacking In Certain Amino Acids Required By Bees
A Total Of 10 Amino Acids Must Be Present In The Diet Of Honey Bees For Maximum Development
Ten Essential Amino Acids

- Threonine
- Valine
- Methionine
- Leucine
- Iso-leucine
- Phenylalanine
- Lysine
- Histidine
- Arginine
- Tryptophan
Nectar And Pollen Not Available

- Sweet-Tasting Juices From Overripe Fruit And Plant Exudates
- Collect Honeydew And Store It As Honey
- Rob Birdfeeders
- Collect Grain From Animal Feeders
Extended Brood Rearing Is Not Possible Unless Pollen Or An Appropriate Source Of Protein And Vitamins Are Available
Honey Bees Can Live On A Pure Carbohydrate Diet For Extended Periods Of Time

Bees Are Unable To Use Pollen As An Energy Source
An Average Hive of Honey Bees Can Collect 100 lbs. of Pollen in a Season
Adult Queens Obtain Protein From Royal Jelly
Adult Workers (1-14 Days Old) Obtain Dietary Protein From Pollen
Adult Drones (1-8 Days Old) Obtain Dietary Protein From Food Supplied By Young Workers
If Young Workers Do Not Consume Needed Proteins

- Brood Food Glands Will Not Develop Completely
- Their Royal Jelly Will Not Support Normal Growth And Development Of Larvae
- Will Not Support Egg Production In The Queen
When Nurse Bees Begin Producing Royal Jelly For Young Larvae And The Queen, They Need A Diet High In Vitamins
Vitellogenin Is The Main Storage Protein In Honey Bee Hemolymph (bee blood)
Food Of Larval Bees Is Entirely Different From That Of Adult Bees
Larval Honey Bees

- Worker and drone larvae receive royal jelly for first two days, then worker and drone jelly + (bee bread)
- Queen larvae receive royal jelly throughout their larval period
Pollen Is Essential For The Growth Of Emerging Young Bees And For The Development Of The Brood Food Glands
Anytime Less Than Three Full Frames Of Honey, The Colony Should Be Fed

Do Not Feed Brown Sugar Or Molasses
Pollen Supplement
Pollen Substitute
1 Pollen Cake

2 oz. Pollen
5.5 oz. Water
10.5 oz. Sugar
6 oz. Soybean Flour
32 Pollen Cakes

4 lbs. Pollen
11 lbs. Water
21 lbs. Sugar
12 lbs. Soybean Flour
Pollen Substitutes

- Bee Pro® Is A Soy Meal Based Diet
- Feed Bee® Is A Non-Soy Based Diet
- MegaBee™ The Tucson Bee Diet
MegaBee™ May Be Used As A Liquid, Patty Or As Dry Feed
MegaBee™
MegaBee™

Tripled Brood Production And Increased Adult Population By 30% Over Controls

In stock now at:
Bluebonnet Beekeeping Supplies!
What's Blooming?

- Wild Onions
- Almond Verbena
- Mist Flower
- Grancy Graybeard
- Abelia
- Ragweed
- Goldenrod
- Texas Sage
Any Questions