

Closing the Loops on Toucan Diets

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- **Successful Toucan Breeding Facilities**
 - Dallas World Aquarium – Toco toucans
 - Riverbanks Zoo and Garden – Toco toucans
 - Rotterdam Zoo – Toco toucans
 - Fresno Chaffee Zoo – Keel-billed toucans
 - Denver Zoo – Keel-billed toucans
 - Emerald Forest Bird Gardens
 - Chestnut mandible/Swainson's toucans

THANK YOU for your patience with all of my questions!

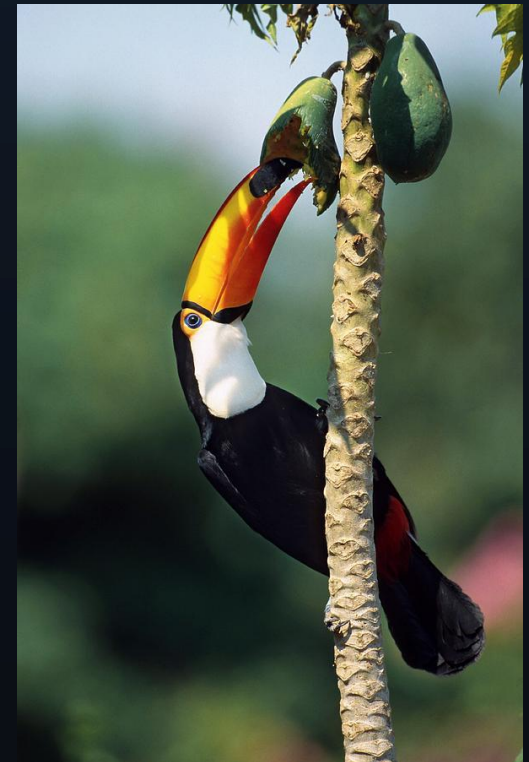
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- **Assumptions**

- Proportions offered = proportions consumed
- Fresh papaya = frozen papaya (nutritionally)

- **Keep in mind**

- Not all diets will work at all facilities



Fruit Mixes / Produce Offered

	1	2	3	4	5	6
papaya	53%	33%	70%	13%	9%	16.7
blueberries	47%	33%	5%	--	--	--
mango	--	33%	--	--	--	--
apple	--	small amt	--	49%	50%	16.7
cantaloupe	--	--	8%	--	--	16.7
figs, soaked	--	--	--	--	--	16.7
bananas	---	---	17%	11%	--	16.7
grapes	--	--	--	11%	1 %	16.7
tomatoes	--	--	--	11%	--	--
oranges	--	--	--	4%	--	--
romaine	--	--	--	1%	--	--
pears	--	--	--	--	8%	--
carrots	--	--	--	--	6%	--
peaches	--	--	--	--	8%	--
zucchini	--	--	--	--	6%	--
corn kernels	--	--	--	--	5%	--
yam	--	--	--	--	6%	--
mixed veggies	--	--	--	--	2%	--
kale	--	--	--	--	<1%	--

Standard Diet Proportions (as fed)

	1	2	3	4	5	6
Fruit Mix	94%	40%	71%	71%	65%	62%
Mazuri ZuLife Softbill	6%	--	29%	--	35%	38%
Scenic Apple Jungle	--	--	--	15%	--	--
Scenic Hot & Healthy Cockatiel	--	--	--	9%	--	--
Science Diet Canine Maintenance, soaked	--	--	--	5%	--	--
Versele Laga T16	--	60%	--	--	--	--

Standard Diet Analyses

	Rec	1	2	3	4	5	6
Protein, %	12 - 15	9.1	16.4	17.2	18.3	17.7	16.5
Fat, %	1 - 4	5.1	5.3	7.0	7.3	7.1	6.6
Calcium, %	0.5 - 3	0.5	0.9	1.2	0.9	1.2	1.1
Phosphorus, %	0.25–0.5	0.3	0.6	0.7	0.6	0.7	0.7
Iron, ppm	60 - 80	40.8	86.5	74.9	77.1	77.0	73.4
Vitamin E, ppm	7 - 50	84.1	89.5	158.4	148.5	163.8	147.9



Breeding Diet Proportions (as fed)

	1	2	3	4	5	6
Fruit Mix	92%	37%	71%	71%	59%	62%
Mazuri ZuLife Softbill	5%	--	29%	--	32%	38%
Scenic Apple Jungle	--	--	--	15%	--	--
Scenic Hot & Healthy Cockatiel	--	--	--	9%	--	--
Science Diet Canine Maintenance, soaked	--	--	--	5%	--	--
Versele Laga T16	--	55%	--	--	--	--
tofu	--	8%	--	--	--	--
pinkies	1%	--	--	--	2%	--
crickets	1%	--	--	--	--	--
mealworms	1%	--	--	--	6%	--

Breeding Diet Analyses

	1	2	3	4	5	6
Protein, %	9.1 / 11.7	16.4 / 17.1	17.2	18.3	17.7 / 19.7	16.5
Fat, %	5.1 / 6.0	5.3 / 5.6	7.0	7.3	7.1 / 9.2	6.6
Calcium, %	0.5 / 0.5	0.9 / 0.9	1.2	0.9	1.2 / 1.1	1.1
Phosphorus, %	0.3 / 0.4	0.6 / 0.6	0.7	0.6	0.7 / 0.7	0.7
Iron, ppm	40.8 / 42.6	86.5 / 86.8	74.9	77.1	77.0 / 76.4	73.4
Vitamin E, ppm	84.1 / 80.1	89.5 / 88.1	158.4	148.5	163.8 / 154.4	147.9



Breeding Diet Analyses

	Saint Louis Zoo Maintenance	Successful Breeding Diet Ranges
Protein, %	21.3	11.7 – 19.7
Fat, %	7.1	5.6 – 9.2
Calcium, %	1.2	0.5 – 1.2
Phosphorus, %	0.7	0.4 – 0.7
Iron, ppm	82.6	42.6 – 86.8
Vitamin E, ppm	181	80 – 158



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Anecdotal Findings

- All successful institutions surveyed feed papaya

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Questions?

