



FEED THE FUTURE
The U.S. Government's Global Hunger & Food Security Initiative



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FROM THE AMERICAN PEOPLE

Nutrition sensitive lessons for indigenous, rural families in Guatemala's Western Highlands 150360

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Feed the Future Innovation
Lab for Collaborative
Research on Grain Legumes



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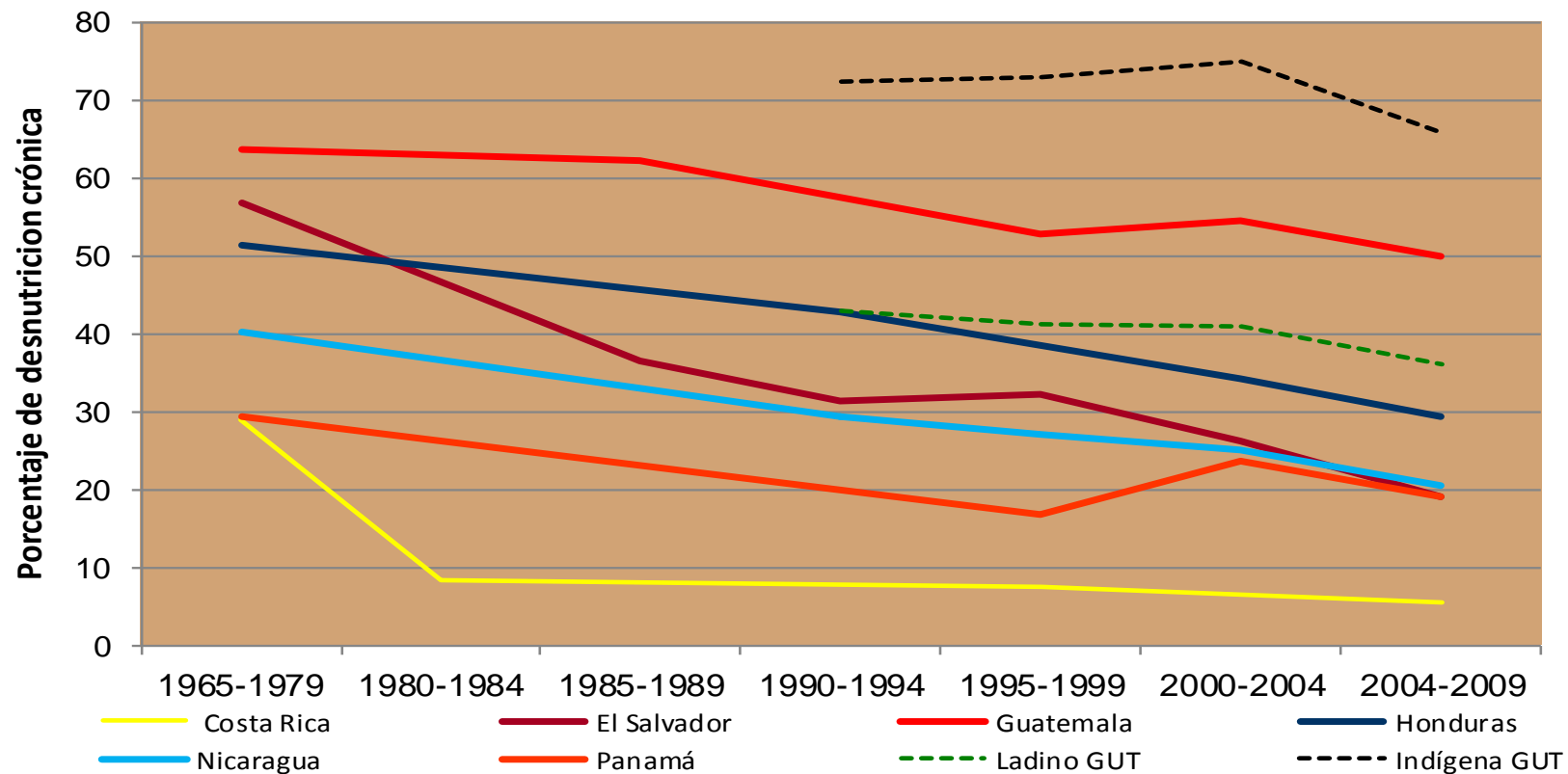
Middle America



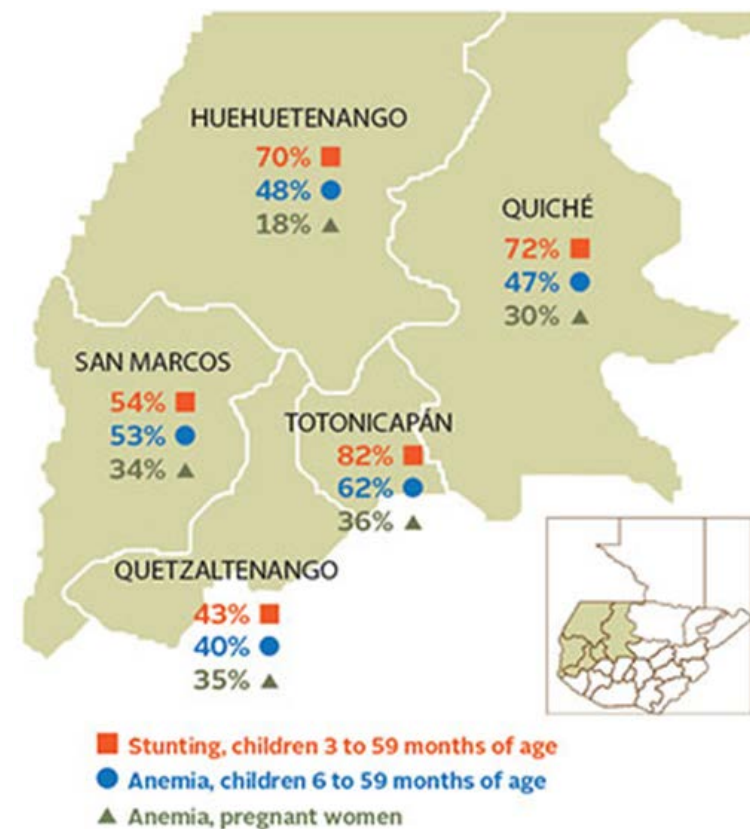
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Feed the Future Innovation Lab for Collaborative Research on Grain Legumes

I. The problem



Source: PRESANCA, 2009; FESAL El Salvador 2008; Ministerio de Salud de Costa Rica 2006; ENSMI Guatemala 2008/2009; MEF/INEC Panamá 2008.



II. MASFRIJOL Objectives

2.1 Increase bean productivity in highland cropping systems



ICTA Hunapú
ICTA Superchiva ^{ACM}
ICTA Altense
ICTA Ligero

Bush beans

a) Provide high quality bean seed to smallholder farmers



b) Provide education on sustainable yield-enhancing practices

MASFRIJOL Objectives *cont.*

2.2 Enhance nutritional quality of diets

a) Increase HouseHold (HH) food security via use of improved postharvest 3-ply bean storage bags



c) Increase HH's nutritional knowledge of importance of beans in daily diets



b) Increase HH bean intake by demonstrating preparation methods bean-based recipes



III. Lessons Development

- A. Began with 24 community assessments of +80 men and women (personal interviews) in terms of
- ✓ foods available
 - ✓ foods cooked and consumed
 - ✓ foods planted, planting dates, harvest yields, etc.

Nutritional value of beans	<ul style="list-style-type: none">• Most of them could not say anything about the nutritional value:<ul style="list-style-type: none">✓ “Beans are good for children”✓ “Eating beans is good for all the family”✓ “Beans have vitamins”✓ “Beans can cure the lungs”
Food most commonly bought in the local market	<ul style="list-style-type: none">• Sugar• Rice• Salt• Onions• Tomatoes



Lessons Development cont.

B. Reviewed national nutrition, health and agronomy reports and talked with in-country experts regarding needs of rural Mayan farm families



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IV. Nutrition Lessons

1. Chronic malnutrition
 2. Enhancing protein quality with beans
 3. Complementary feeding the 6-11 month child
 4. Feeding the 1-2 year old child
 5. Diet during pregnancy and lactation
- ☐ Nutritious and economical recipes
 - ☐ Eating more local green and yellow vegetables



4.1 Chronic malnutrition Lesson

Key Messages

1. Having poor nutrition and low protein affects how tall and smart your child will be.
2. Babies should be at least 70 cms long by 1 Yr of age.
3. Babies should be at least 80 cms long by 2 Yr of age.



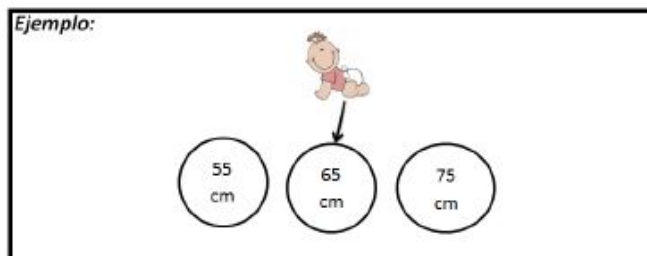
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INSTRUCCIONES: Estimado Señor o Señora, a continuación hay un ejercicio que debe de contestar de acuerdo a lo que usted crea correcto, puede guiarse por el ejemplo.

¿CUÁNTOS CENTÍMETROS DEBEN DE MEDIR ÉSTOS NIÑOS?

Una con líneas a los niños con la estatura que deberían de medir

Ejemplo:



Ejercicio:



1 año



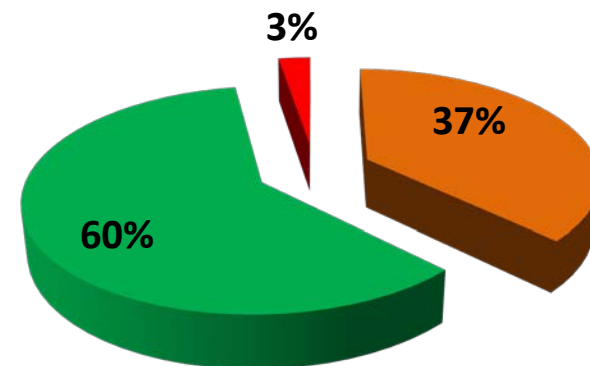
2 años



Nutritional Lesson # 1 "Chronic Malnutrition", Question No. 1: How many centimeters should measure the children at 1 year old?

Answer: 70cms N=2488

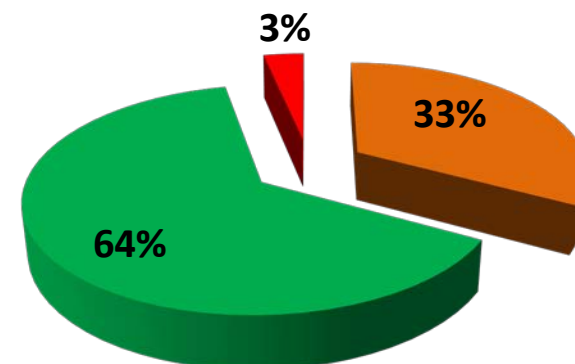
- Correct Answer in Pre Test - Correct Answer in Post Test
- Incorrect Answer in Pre Test- Correct Answer in Post Test
- Correct Answer in Pre Test - Incorrect Answer in Post Test



Nutritional Lesson #1 "Chronic Malnutrition", Question No. 2: How many centimeters should measure the children at 2 years old?

Answer: 80 cm N=2488

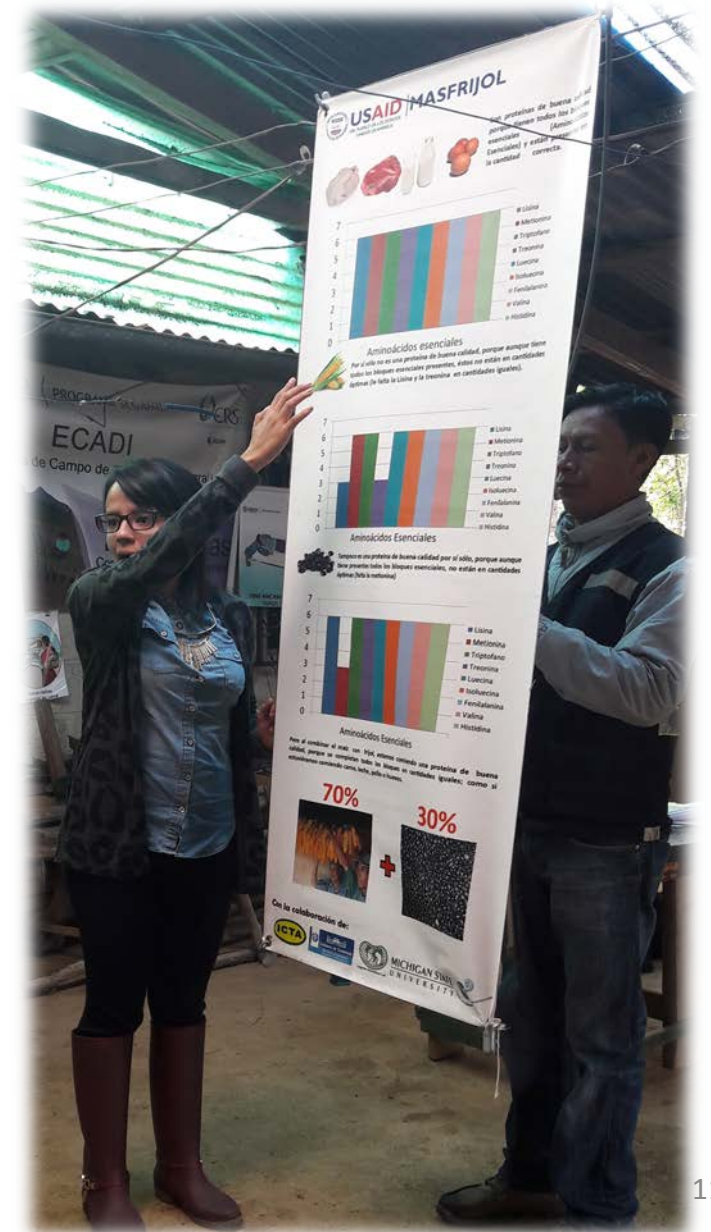
- Correct Answer in Pre Test - Correct Answer in Post Test
- Incorrect Answer in Pre Test- Correct Answer in Post Test
- Correct Answer in Pre Test - Incorrect Answer in Post Test



4.2 Protein Quality Lesson

Key Messages

1. Protein is needed for muscles, bones, blood, good health and avoiding sickness.
2. Corn, rice or potatoes alone do not have good protein.
3. Eat beans with corn to make a good protein like that in meat or eggs.
4. Eat beans every day or at least three times a week.
5. Mix 1 part beans to 2 parts corn for good health.

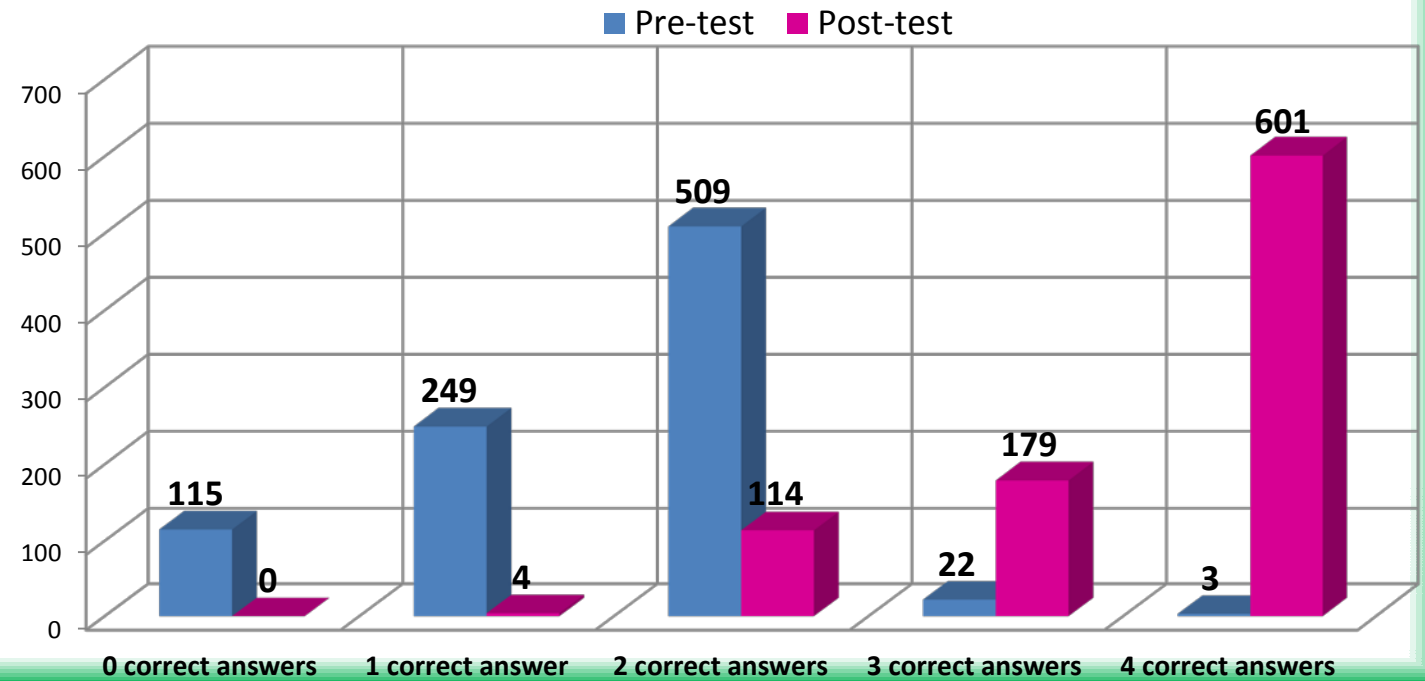


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De tres ejemplos de alimentos que puede mezclar con el frijol para comer una proteína de buena calidad uniéndolos con el frijol



Nutritional Lesson #2 "High Quality Protein", Directions: Match the beans with other foods to make a high quality protein. Answers to four items N=898



4.3 Complementary feeding 6-11 months

Key Messages

1. Measure the number of tablespoons of mashed potatoes or thick porridge onto a separate dish (baby dish).

When babies are 6-8 months old:

2. Feed them with 3 tablespoons thick porridge.

3. Feed them 3 times per day.


When babies are 9-11 mo old:

4. Feed them with 4 tablespoons thick porridge

5. Feed them 4 times a day

6. Children 6-11 months should eat 2 tablespoons full of cooked mashed beans 3 times a week.






Alimentación Complementaria 18-08-2015

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INSTRUCCIONES: Estimado Señor o Señora, por favor conteste el siguiente ejercicio.





Juanita tiene 6 meses

Marcar con una "X" al menos cuántas veces a la semana Juanita debe de comer frijol?

Lunes	Martes	Miércoles	Jueves	Viernes	Sábado	Domingo

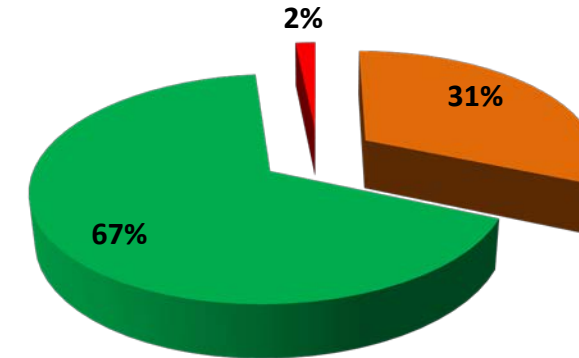
Marcar con una "X" cuántas cucharadas de frijol debe de comer cada vez que le dan frijol?





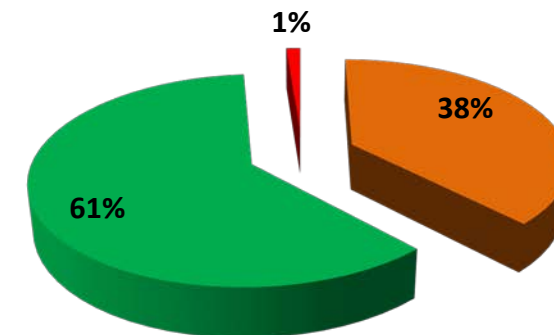
Nutritional Lesson #3 "Complementary Feeding the 6-11 month child", Question No. 1: How many times/week the children 6-11 should eat beans? Answer : 3 times/week , N=486

- Correct Answer in Pre Test - Correct Answer in Post Test
- Incorrect Answer in Pre Test- Correct Answer in Post Test
- Correct Answer in Pre Test - Incorrect Answer in Post Test



Nutritional Lesson #3 "Complementary Feeding the 6-11 month child", Question No. 2: How many spoons of beans the children 6-11 should eat each time they eat beans? Answer : 2 spoons/each time, N=486

- Correct Answer in Pre Test - Correct Answer in Post Test
- Incorrect Answer in Pre Test- Correct Answer in Post Test
- Correct Answer in Pre Test - Incorrect Answer in Post Test



4.4 Diet During Pregnancy and Lactation

Key Messages	1. Growing a new life takes lots of energy, protein, vitamins and minerals—most of which are not in corn.
	2. Eat 1 cup of thick porridge each day. (maiz-frijole-pumpkin seed mixture, Vitacereal, or oatmeal fortified).
	3. Eat 4 serv. vegetables each day. (Serv= tomato, carrot, 1 cup green leafy vegetables.)
	4. Eat a large potato each day.
	5. Eat 2 eggs, 3 oz liver, meat or chicken once a week or more.
	6. Eat an orange with powdered pumpkin seed three times a week.



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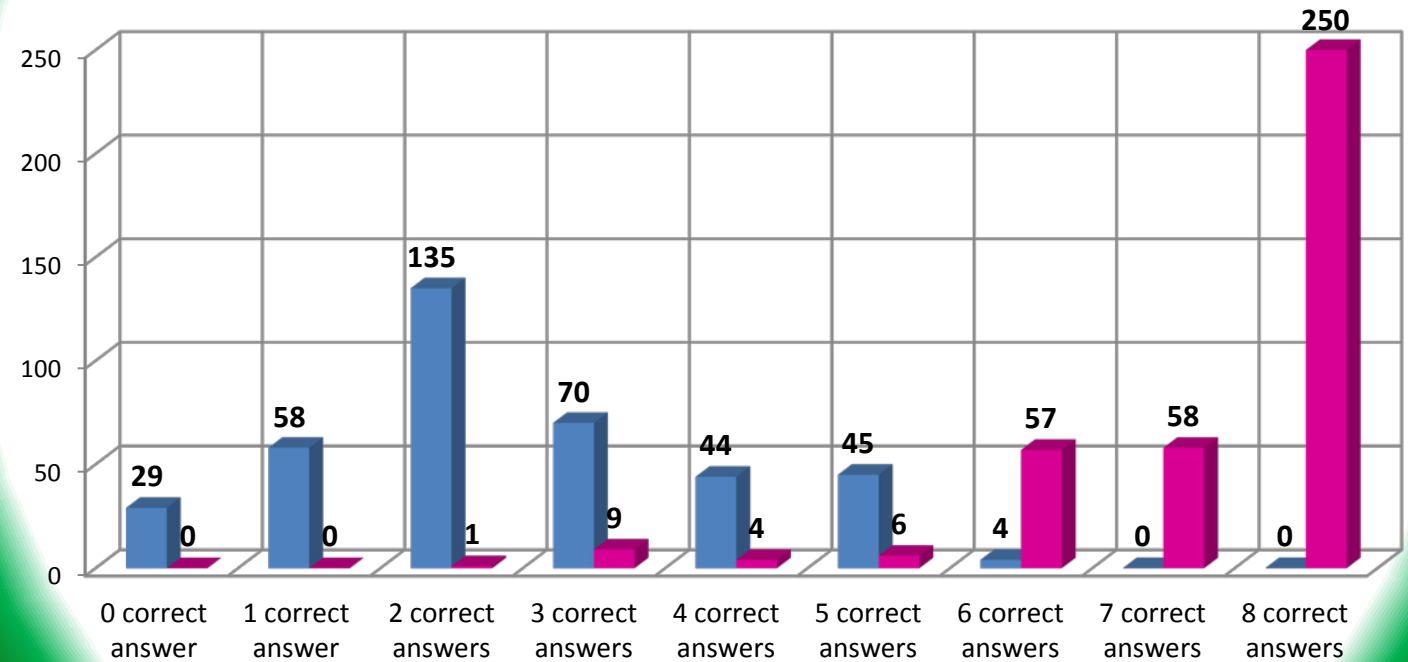
Poner en círculo los alimentos que las embarazadas o madres lactantes deben de poner especial atención para que estén en su alimentación



Nutrition Lesson #5 "Diet during pregnancy and lactation", Question: Circle the type of food that the preg and lacting women should pay attention. Answers: 8 type of food.

N=385

■ Pre-test ■ Post-test



V. Conclusions

- The lessons and support materials were interactive, culturally appropriate and well received by the rural mayan families.
- Participants improved their nutrition knowledge (short-term) relating to key points important for reducing growth stunting and bean consumption.



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**Thank You
Merci
Gracias
Maltiox**

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