Casa abierta al tiempo

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FOOD ALTERNATIVES FOR A SUSTAINABLE PRODUCTION OF RUMIANTS IN ARID AND SEMI-ARID ZONES IN MEXICO

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Mixtec region of Mexico

During the rainy months and until January, due to residual humidity, there is an abundance of forage plants in the arid and semi-arid zones.

Whereas, from February to June there is an intense dry season that limits the good development of the animals.

1.- Multinutritional blocks

Cactus fruits (*Stenocereus griseus* L. and *Escontria chiotilla* L)

Mezquite pods (*Prosopis laevigata*)

	Treatments (%)			
Ingredients	**T1**	**T2**	**T3**	**T4**
Cement	**7.5**	**7.5**	**7.5**	**7.5**
Calcium oxide	**7.5**	**7.5**	**7.5**	**7.5**
Salt	**5**	**5**	**5**	**5**
Urea	**10**	**10**	**10**	**10**
Molasses	**0**	**10**	**20**	**30**
Corn stubble	**28**	**28**	**28**	**28**
Pitahaya	**40**	**30**	**20**	**10**
Mineral salt	**2**	**2**	**2**	**2**
Total	**100**	**100**	**100**	**100**

Results

- The results indicate that the greater consumption of BMN and the weight gain were attributable to the treatment (T3), with an amount of 0.350 ± Kg per day for consumption of MNB and with a weight gain of 0.267 ± 0.024 Kg per day.
- Costs of the total blocks consumed, the highest was $ 2.5 USD.
- Body condition was better reflected in all treatments compared to the control.

2.- Establishment of an experimental plot in the form of a protein bank with three species.

- Prosopis laevigata (mezquite)
- Acasia farnesiana (huizache)
- Acasia cochliacanta (cubata)

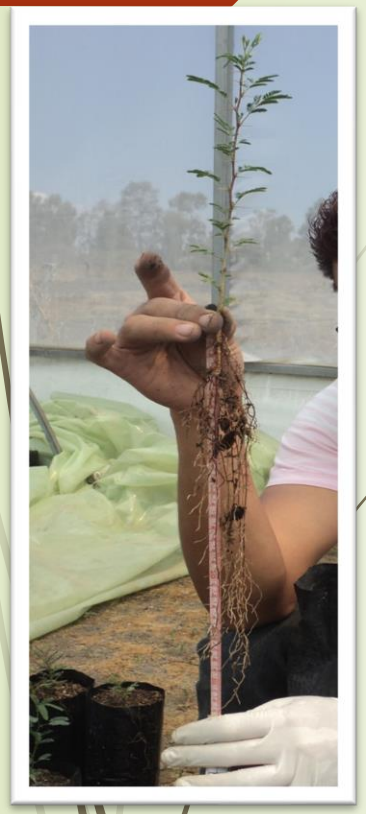
Stage 1 Germination

Stage 2: Green house

Stage 3: nursery

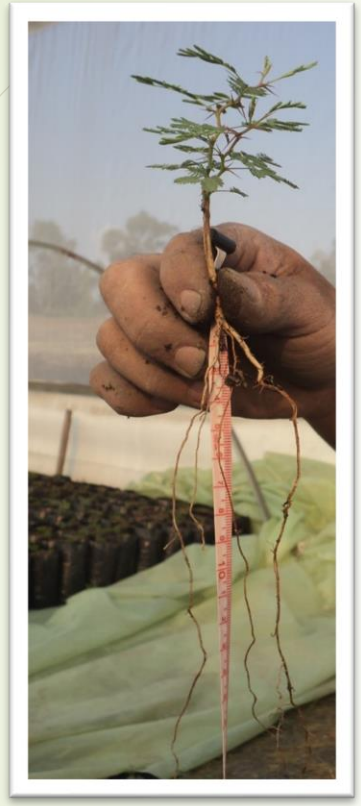
Stage 4 transplantation to the field

DESARROLLO DE LAS ESPECIES



Huizache

root 33.80 cm
stalk 19.50 cm
branches 19



Cubata

root 25.80 cm
stalk 7.60 cm
branches 12

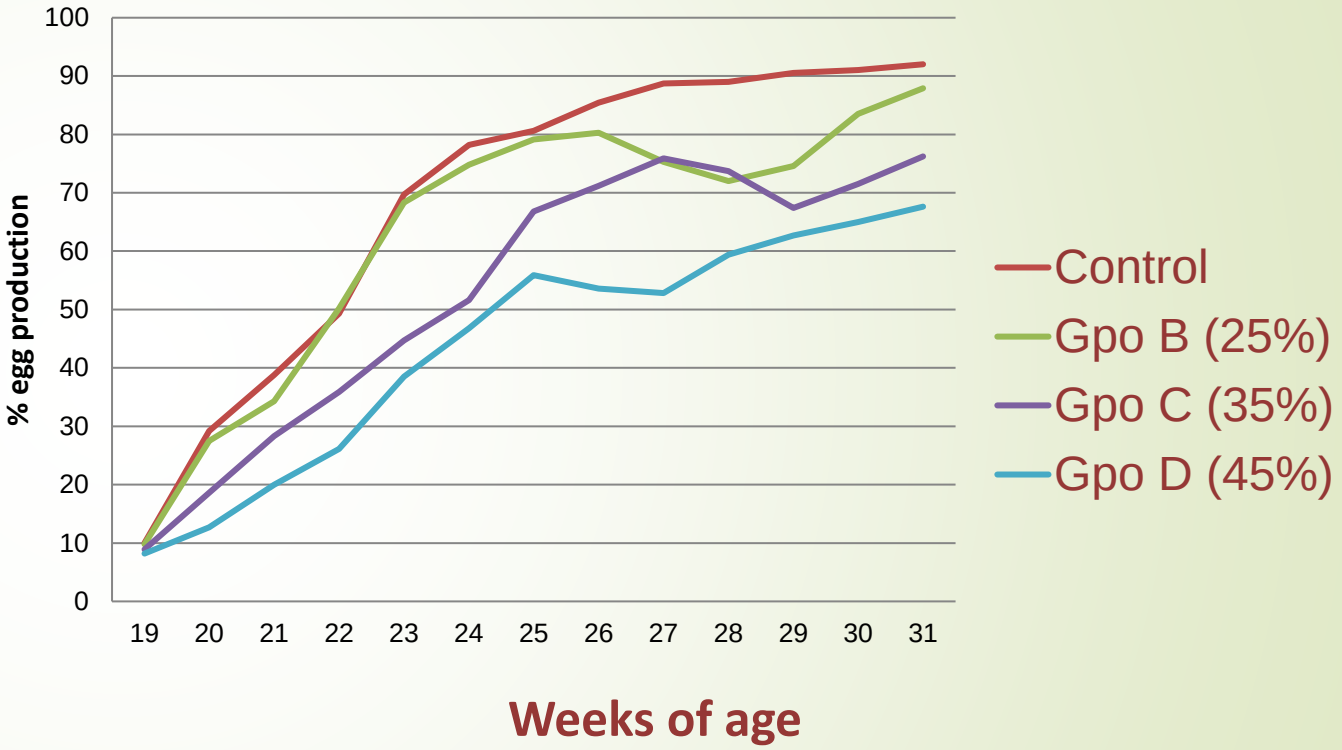
Mezquite

root 29.60 cm
stalk 15.50 cm
branches 14

At 344 days of growth crecimiento

Huizache registered the longest stalks length (60,97 cm) root (60,63 cm) and the number of sprouts (221,89) in comparisson with cubata (58,16 cm, 43,7 cm y 181,78 respectively.

3.- Hydroponic green forage



- Additionally, a hydroponic green forage (HGF) production was obtained and used with laying hens.
- 90% of egg laying was achieved in the 31st weeek using 25% of HGF in substitution of concentrate.

Conclusion

- These three strategies can be of complementary use for a strategic and sustainable production that improves ruminant production in arid and semi-arid zones of Mexico.

Thanks