Volunteer Name: Gary Ruegsegger
Country: Ethiopia
Country project: Livestock Production
Host: SOS Children Village - Mekelle
Venue: SOS in Mekelle
Audience: SOS dairy employees & staffs
Number of people : 7
Date: January 11 to January 24, 2017

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I'm a semi-retired dairy farmer from Wisconsin who fortunately was able to get out of the cold to come to assist at SOS

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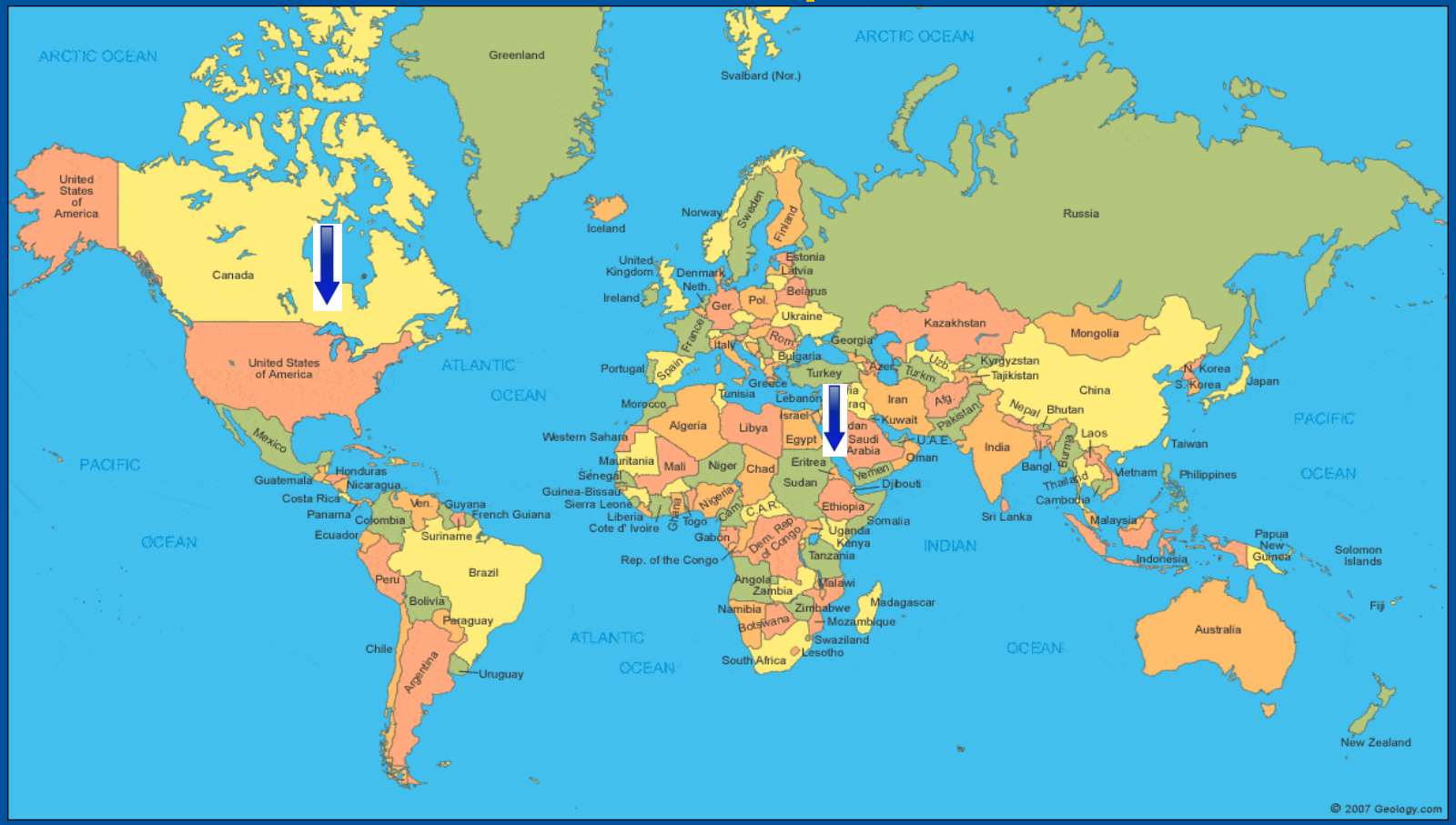
Wisconsin is the dairy state of the USA

Lots of Good Cheese produced in Wisconsin

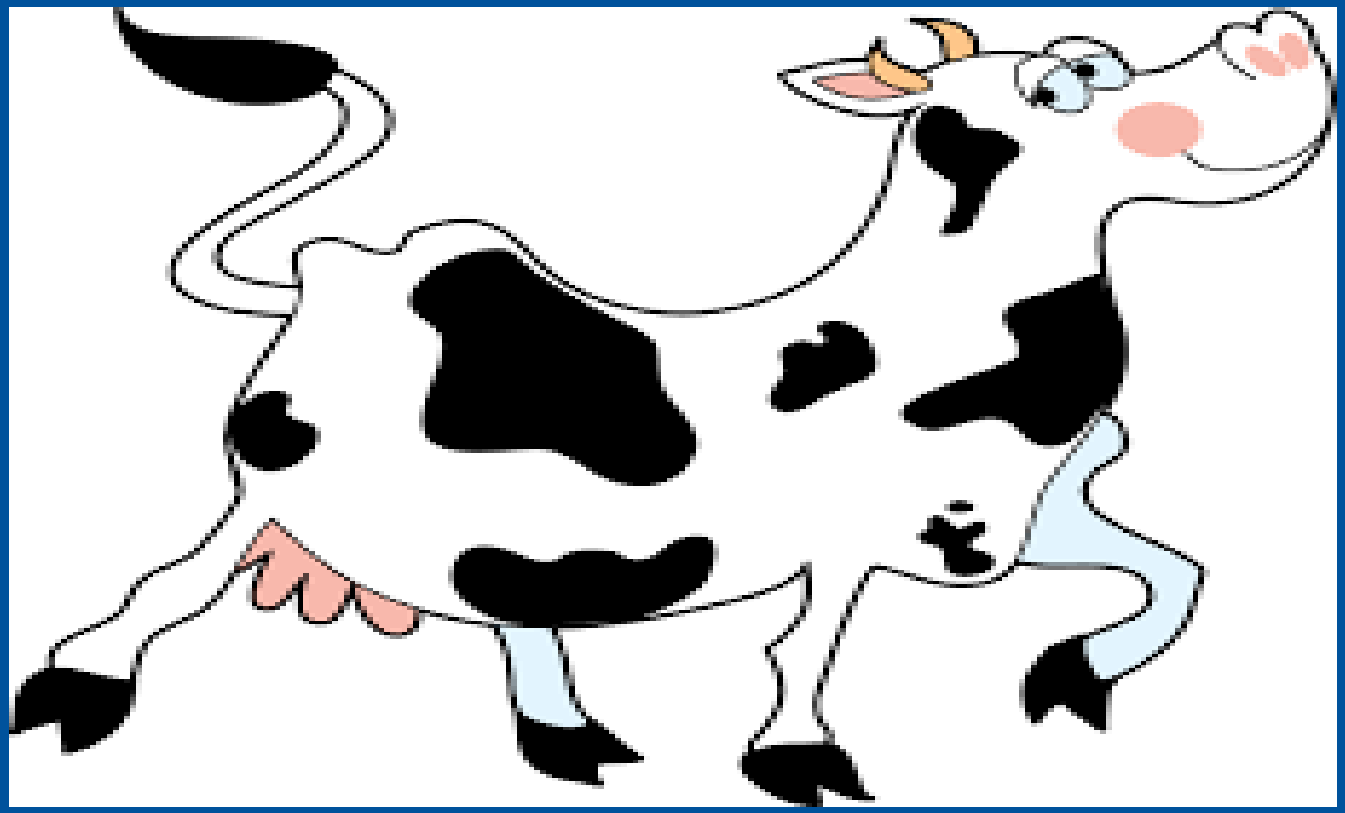


1. Assignment Objectives

1. Dairy farm management training
2. Feed selection, preparation, management and feeding practices
3. Identifying areas to improve in order to increase future milk production per cow
4. Dry season feeding

Main objective is to have "HAPPY COWS"

Happy cows, like happy people are more productive.



2. Achievement of the assignment objectives

1. Provided training in the classroom and practical training at the SOS dairy.
   Identified 4 areas to focus on:
   1. Water management - more access to water

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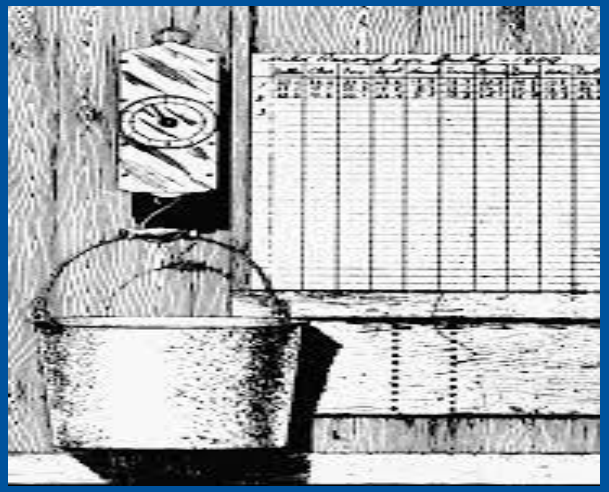
2. A) Nutrition, feed and forage management –ie., feeding according to milk production



2. Achievement of the assignment objectives

B) Evaluated reproduction and artificial insemination (AI) program and set new goals for improvement.

One calf per year goal

2. Achievement of the assignment objectives

C) Discussed the need to have good records in order to make profitable management decisions.

D) Recommend to reduce dairy cow numbers by 2, and add goats or sheep to the farm enterprise.

2. Achievement of the assignment objectives

3. Dry season feeding

Discussed the planting of corn to harvest as corn silage for a dry season feeding forage.

4. Cow comfort

Ideal cow comfort

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Classroom training

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On-hands training

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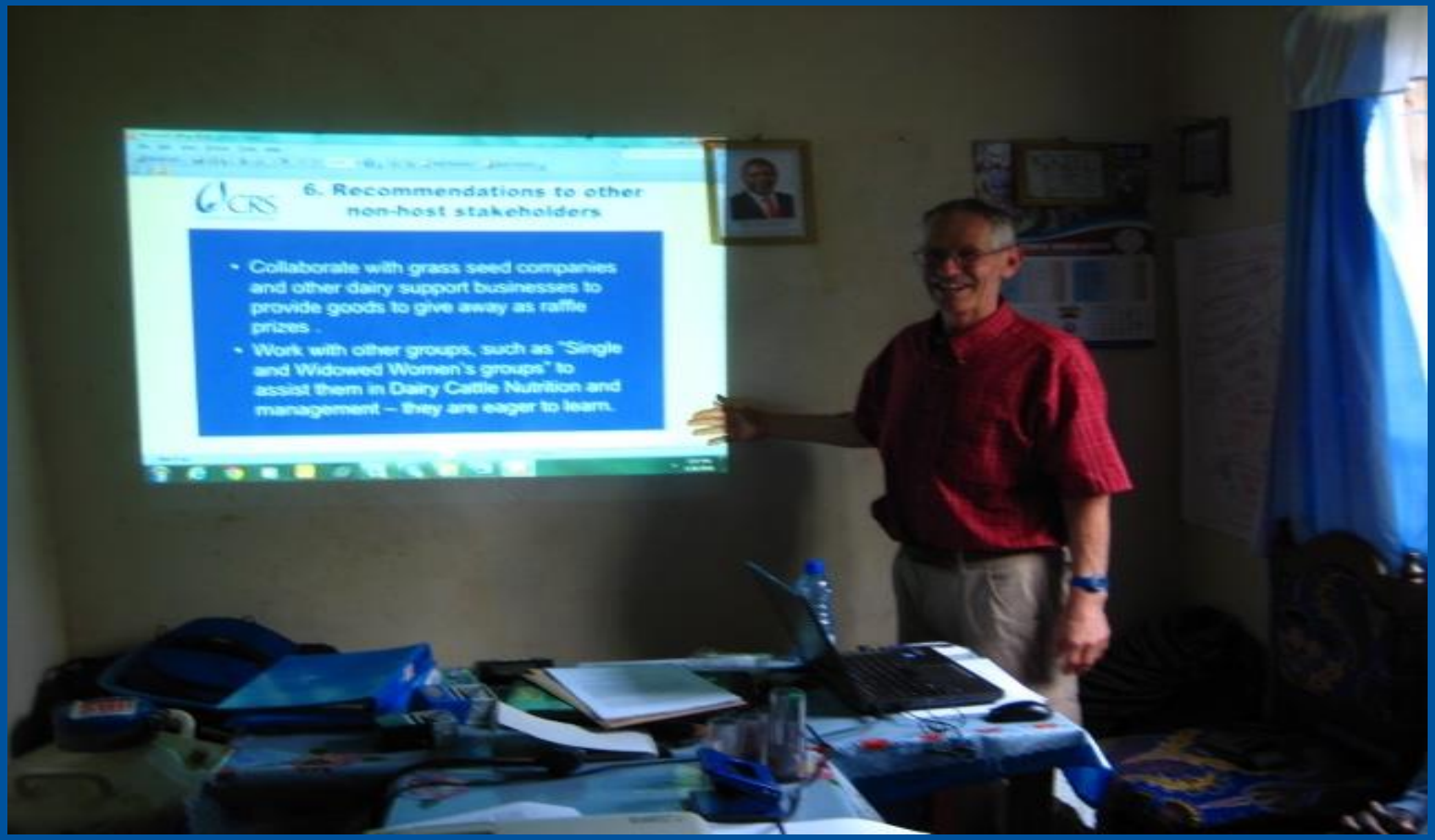
Recommendations



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Water – a forgotten nutrient

Milk is 87% water, you need to supply sufficient water for health and production

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Offer water at least 4 times a day – more often is better

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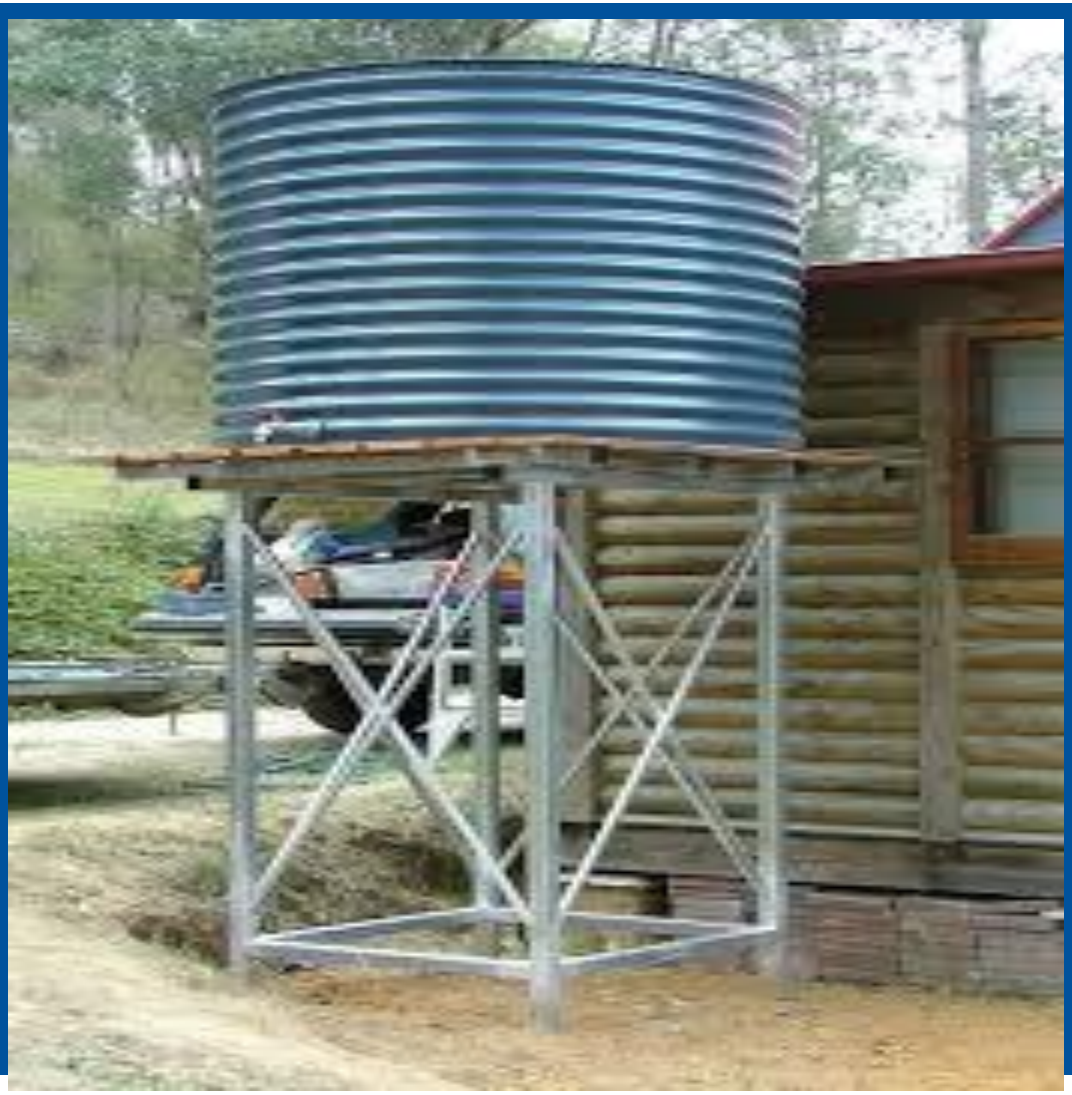
Install awater storage tank to ensure water availability



3. Recommendations to the host with regards to the assignment

-Located a source of used rubber belts from Messebo Cement Factory that can be used for installation on top of the concrete floor in the dairy barn as animal mats to provide better animal comfort.

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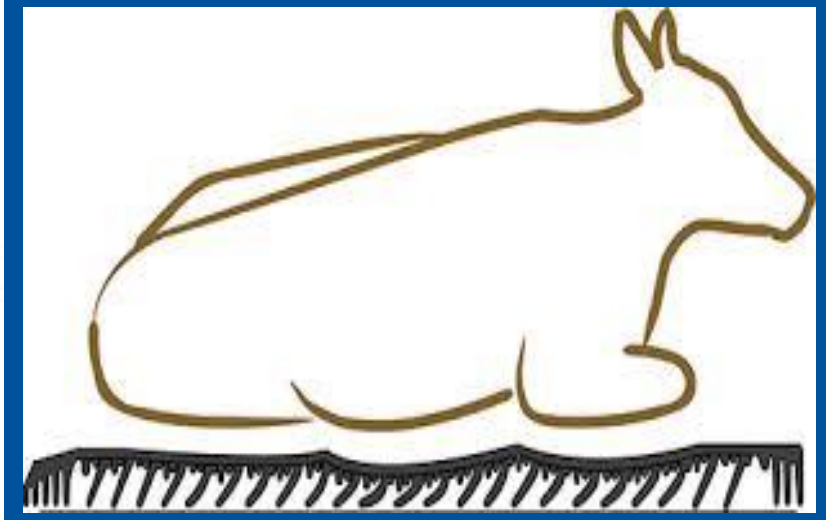
The belts would provide a comfortable resting area - some cushion



3. Recommendations to the host with regards to the assignment

-Evaluated current feeding routine and set up a feeding program for the dairy cows based on milk production.

The wheat straw currently fed would benefit from a better quality concentrate

- Endeta Multipurpose Farmers Coop Union sells a higher quality concentrate for the dairy cows with 40% flaxseed meal in it. When fed, it will improve overall feed quality and forage digestion..

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Flaxseed meal – good source of protein & energy

- The concentrate mixture also contains
  salt calcium

- – they are important nutrients in cattle's diets, and not currently fed on the dairy.

Feed according to milk production

- below 4 liters milk – base ration fed
- 4-5 liters
- 6-7 liters
- 8-10 liters
- Above 10 liters

increase **quantity**

and **quality** of

ration fed with more milk

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Reproduction goals -start 1st inseminating heifers at 18 months of age and cows 50 days after birthing

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Reproduction goals -start 1st inseminating heifers at 18 months of age and cows 50 days after birthing

Ensure that the heifer size at 18 months of age is at least the same size or bigger than the heifer size under the current feeding program. If the calf and heifer nutrition is not improved, you can not breed at 18 months because they will be too small for breeding.

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Goal is to have Cows to calf every 12 months

Calf born 1X/year-cow needs to be pregnant by 100days

(good estrous detection)

AI service

Dry Off

Birth----------pregnant----------Birth again

(day 0) (100 days) (310 days) (370 days)

3. Recommendations to the host with regards to the assignment

- Discussed the importance of keeping good dairy management records to assist in making daily, monthly and yearly decisions.
- Are you profitable?

Types of records to have

305 day milk production records and estrous watch lists

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Dairy Cattle Nutrition – Feeding good quality forage is the key to profitable milk production

4. Dry season feeding…..plant corn to chop (the whole plant) for ensiling to feed during the dry season to maintain forage quality during this time of forage shortage.

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Plant .25 t0 .5 hectare of corn to make corn silage

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Manually chop

Chop with hand turning knives

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You need to compact very firmly the chopped material

Silage compacted in air tight bags

Finished ensiled product in a bag

Advantages of Silage:

Helps ease feed shortages during dry seasons.

Adequate feed could be available all year round; hence animals remain in good health and will maintain higher milk production.

3. Recommendations to the host with regards to the assignment

-Reduce the herd milking size from 13 down to 11 cows in order to put more financial resources towards a consistent supply of a quality feed for the 11 cows and young stock.

(sell 2 non profitable cows who are not pregnant)

- -Raise 20 to 25 goats or sheep per year (house in old swine unit at night) to provide a non perishable protein source for the SOS families.

3. Recommendations to the host with regards to the assignment

IN SUMMARY

Focus on 4 main areas: 1) Increasing water consumption; 2) Feeding a better quality concentrate, feed according to milk production & planting corn for ensiling; 3) Having cows pregnant by 100 days after birthing; 4) Providing cow comfort with rubber belting installed over concrete.

4. Anticipated Impact

- The goal in one year's time is to increase daily production from 4 to 8 liters per day "**the animals have the genetics to accomplish this**".
- This will increase dairy profitability and continue providing milk to the SOS families.

5. Recommended future volunteer Assistance

- Assistance in the area of proper corn silage making steps and procedures.

6. Recommendations to other non-host stakeholders

- Collaborate with and seek assistance from the Mekelle Regional AI Center in the areas of record keeping and dairy reproduction and AI.

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Action plan for host recommendations

Recommendation	Specific Action	Responsible person	By when
1. Increase water availability	Water all cattle no less than 4 times per day (every 6 hours)	The 4 farmers working at the dairy	Start February 1st
2. Feed the concentrate from the Endeta Farmers Coop	Purchase the concentrate with flaxseed and feed to livestock according to recommendations	Abraha Memu (lead farmer) & management	Start February 1st
3.Install used rubber belting from Messebo Cement Company	Purchase used belting and have it installed over the concrete in dairy	Management, maintenance and repair department	March 1st
4. Estrous watch lists	Monitor estrous cycles of all cows and develop estrous watch lists on a calendar	Abraha Memu	January 30th
5. Feed cows according to milk production level	A feed chart has been developed for feeding according to how many liters of milk are produced per day	Abraha Memu	Start February 1st
6.Plant and ensile corn	Plant .25 to .5 hectare of corn in vacant areas by dairy and ensile the whole plant corn in bags	New Farm Manager	Mid-June for planting and approximately 90 days later to chop for ensiling

Action plan continued for host recommendations

- Sell 2 of the lowest producing non-pregnant cows.
- Purchase 20 to 25 goats or sheep to raise for meat.

Management to work with farm division on making these changes. To be done by March 1st.

7. How can CRS improve future volunteer experience

- Ensure that a person who can translate is more available “time wise” from the host.

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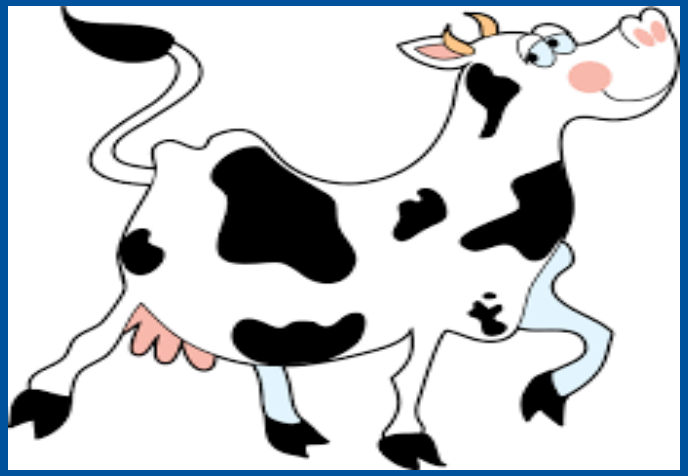
Yegeniyeley!



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Thank You!

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2. Achievement of the assignment objectives

4. Dry season feeding

Discussed the planting of corn to harvest as corn silage for a dry season feeding forage.

- -Provide water to all animals more times during the day (more than 2X/day), and install a 1,200 liter water storage tank.

-Set reproduction and artificial insemination goals: 1)1st service for AI for heifers at 18 months of age; 2) Focus on having 1st AI service for milking animals to start 50 days after giving birth; 3) Reviewed estrous detection and set goal to have the estrous animal inseminated as close to 8 hours after detection.

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