**STUDY GUID FOR THE EXAM II**

**FALL 2022**

Nutrition and Feeding Management, Dry cow Management, and Metabolic disorders

1. Study what effective fiber is. What is NDF and ADF? How is it measured? What the proper level for the lactating cow ration? What is the effect of low effective fiber diets? How can you detect it? What problems does it cause?

2. You should know about the basic principles related to protein nutrition. What are the components of protein nutrition (RDP, RUM, SP, etc.)? How would you know if the diet has too low or too high amount of protein? Approximately, what amounts should be fed to the lactating cow?

3. Understand and be able to explain is the net energy system? What losses of energy does it take into account? What are the energy level requirements for lactating and dry cows, as well as heifers? What is energy balance, how is it measured, what factors contribute the most to energy balance….? How much energy should be in the ration in DM basis?

4. Energy is a key factor for the lactating cow. What nutrients provide energy to the cow? What are advantages and disadvantage of some the sources of energy (e.g. fat) when are used in the ration? What are the possible effects of too low- and too high energy diets in lactating cows?

5. Understand about the strategies of feeding supplemental fat, advantages and disadvantages, sources of fat, factor to consider when one wants too feed supplement fat.

6. Understand all the issues that related to feeding TMR (read the TMR lecture, rule 1-2-3),

7. The transition period has a couple of main purposes. Understand the changes that the cow must undergo during this period and how one can nutritionally assist in those changes.

8. Understand some practical aspects of feeding management at the dairy. What areas needs to be evaluated (feed, labor, cows, milk responses and components), what practical questions need to be asked?

9. Understand the dry cow management strategies, two-tier-system, nutritional requirements of dry cows, both far-off and close-up, dry cow therapy, advantages and disadvantages of short dry period ….

10. Comprehend, metabolic disorders, causes, symptoms, treatment, management, and prevention, and how they are tied to the transition period.