

Guidelines for Interpreting CNCPS 6.5 Outputs for Lactating Dairy Cows

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There are a number of reports that can be viewed and printed when evaluating the results of CNCPS 6.5. Most key information is located on the “One Page Summary” report. The following steps are suggested in examining the data contained in this report.

1. Dry matter intake –
 - a. Is actual DMI within 4% of predicted DMI?
 - b. If Yes, then continue to step 2
 - c. If No, then verify or adjust the actual (reported) DMI
 - d. If the DMI values (predicted versus actual) don't agree, then all other comparisons are limited in terms of reliability.

2. ME and MP allowable milk –
 - a. Are these close to the targeted (input) milk production?
 - b. Which is 1st limiting? (ME or MP)
 - c. Are ME and MP milk within 5 lbs (2.25 kg). of each other?
 - d. Are the actual MP and ME balances 0 or positive? (ME balance will often be negative in early lactation cows)
 - e. Do the predicted days to change 1 BCS match farm observations?

3. Physically Effective NDF and rumen pH –
 - a. Is enough fiber being fed? Does peNDF required and supplied match?
 - b. If the peNDF is less than required, are the peNDF values of the feeds correct?
 - c. Minimum peNDF should be at least 100% of predicted requirements (21-22% of total ration DM). Many nutritionists are targeting 23% peNDF or higher in rations.
 - d. Rumen pH should be > 6.2
 - e. Forage NDF intake should be 0.9 to 1.0% of FBW

4. Metabolizable protein –
 - a. MP from bacteria should be > 45% of the total MP
 - b. If MP from bacteria is < 45%, you may be overfeeding RUP or not providing enough carbohydrates to optimize rumen fermentation.

5. Rumen N balance and urea cost –
 - a. Targets for Rumen NH₃-N is 110 to 150% of requirements
 - b. Goal for urea cost is < 0.5 Mcal/day.

- c. Higher values for these indicate opportunities to improve the efficiency of N use
6. Total NFC –
- a. A reasonable range is 37-42% of total ration DM
 - b. Higher values may indicate overfeeding of grain or starch
 - c. Lower values may indicate that rumen function and microbial growth is depressed due to a shortage of carbohydrates.
7. Revise and rerun the ration –
- a. Double check that all animal, environmental, management and feed inputs are correct!! Frequently, a mistake is made in entering these and it can cause problems in trying to evaluate or formulate rations.
 - b. The items listed above will provide clues relative to adjustments that need to be made
 - c. Additional feeds may need to be added to assist in meeting ration target goals
 - d. Repeat this process until the above items are within the target ranges
8. Evaluate the amino acids –
- a. What are the MET and LYS values?
 - b. Goals for these ratios are 2.6 to 2.7% of MP for Met and 7.0 to 7.2% of MP for Lys
 - c. Additional feed sources may be needed to balance amino acid requirements
 - d. **Key point:** Maximizing microbial protein production in the rumen is the first and most economical step in balancing amino acids
9. Examine the final ration –
- a. Does it make sense?
 - b. Are the quantities of each feed realistic?
 - c. Do premixes need to be made to increase the quantity of feed added to the batch mix and increase mixing accuracy
 - d. Use your experience to determine the “practicality” of the final ration before recommending its use on the farm.