

2020 CS 415 Exam 3 (271 points) Name _____

Open book – do not discuss the exam with anyone else

Return to David Jordan (david_jordan@ncsu.edu) no later than midnight, Sunday, April 26

1. You find yourself as a PhD graduate teaching assistant for the Integrated Pest Management course at a prestigious land grant university. The instructor (your major professor) decides that you need experience in the classroom and asks you to contrast what you have been hearing about managing COVID-19 and managing pests in crops. You only have one lecture to accomplish this. With your knowledge of pest management in multiple crop settings (agronomic and horticultural crops) and pest disciplines (entomology, plant pathology, nematology, weed science) from your undergraduate days at NC State in CS 415, you decide to use the definition of IPM and the PAMS approach to contrast COVID-19 with one pest in one crop. You also decide to discuss this from a regulatory standpoint (perhaps as the commissioner of agriculture), the research community (as both public and private sector employees), and practitioners (people who grow plants in some setting, commercially, and the people who advise them). The instructor (your major professor) asks you to prepare a two page summary of what you presented to the class [This is what you are required to do for Exam 3, question 1 – 100 points total. You do not need to be an expert on COVID-19 but you need some knowledge.]

Consider the following sources:

Johns Hopkins

<https://www.hopkinsmedicine.org/health/conditions-and-diseases/coronavirus>

<https://www.google.com/amp/s/www.hopkinsmedicine.org/health/conditions-and-diseases/coronavirus%3famp=true>

WHO

<https://www.who.int/westernpacific/health-topics/coronavirus>

https://www.who.int/health-topics/coronavirus#tab=tab_1

Web Med

<https://www.webmd.com/lung/coronavirus>

2. How do you define IPM? What are the components of PAMS including a brief description of each? If pesticides are used to suppress pests, what six criteria should be considered when deciding what to use and how to use it? [75 total points - 5 points for each answer]

3. For each of the following settings and pests, is the economic threshold 0 or a number greater than 0? What is your reasoning? [96 total points – 3 points for both the economic threshold answer and the reasoning behind the answer]
- A. Camden Yards (Baltimore Orioles professional baseball park) and large crabgrass
 - B. Grain sorghum and large crabgrass
 - C. Little League field and large crabgrass
 - D. Fescue pasture and large crabgrass
 - E. 18th hole of Augusta for the Masters and large crabgrass
 - F. German cockroach at Angus Barn restaurant
 - G. Soybean and corn earworm
 - H. Sweetpotato and Guava Root Knot Nematode
 - I. Thrips and peanuts
 - J. Whiteflies in commercial greenhouse growing ornamental plants
 - K. Spider mites and cotton
 - L. Boll weevil and cotton
 - M. Screwworm in north Texas
 - N. Witchweed in Johnston county
 - O. Red imported fire Ant in fescue pasture
 - P. Red Imported fire ant in a Raleigh playground