

Crop Science Assessment Plan Rev. 4/4/2018

| Crop Science | 14-15 | 15-16 | 16-17 | 17-18 | 18-19 | 19-20 |
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CRPSB1 - Principles of Crop Production

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|---|--|--|--|---|--|--|
| • Upon completion the student will be able to; The student will be able to compare and contrast the physical and biochemical attributes of grasses and broadleaf plants that are important to agriculture. | | | | X | | |
| • Upon completion the student will be able to; The student will be able to list the order of operations in land preparation for planting. | | | | X | | |
| • Upon completion the student will be able to; The student will be able to compare and contrast the different fertilizers used in grass, legume, and broadleaf crops. | | | | X | | |
| • Upon completion the student will be able to; The student will be able to correctly select and outline planting procedures for the major crop species grown in the Bakersfield area. | | | | X | | |
| • Upon completion the student will be able to; The student will be able to analyze a field situation and determine the most efficient irrigation method; machinery, timing, rate. | | | | X | | |
| • Upon completion the student will be able to; The student will be able to visually identify pests commonly found on the major crops in the Bakersfield area and list possible methods of control. | | | | X | | |
| • Upon completion the student will be able to; Given common crops in the Bakersfield area, the student will be able to list possible methods of harvest, including necessary machinery, timing, and curing processes. | | | | X | | |
| • Upon completion the student will be able to; Properly design a field experiment using standard scientific methodology to answer a single hypothesis regarding one aspect of crop production. | | | | X | | |

CRPSB2 - Forage Crops

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| • Upon completion the student will be able to; The student will be able to compare and contrast the physical and biochemical attributes of grasses and legume plants that are important to forage production. | X | | | | | X |
| • Upon completion the student will be able to; The student will be able to list the order of operations involved in land preparation for planting, and describe timing and machinery used for the common forage crops grown in California. | X | | | | | X |
| • Upon completion the student will be able to; The student will be able to compare and contrast the different fertilizers used in forage crops regarding content, timing of application, and methods of application and identify fertilizer deficiencies for the main forages grown in California. | X | | | | | X |
| • Upon completion the student will be able to; The student will be able to determine the variety, seeding time, seed placement, and equipment necessary to plant the major forage crops grown in California. | X | | | | | X |
| • Upon completion the student will be able to; The student will be able to analyze a field situation and determine the most efficient irrigation method (machinery, timing, and amount) for the main forage crops grown in California. | X | | | | | X |
| • Upon completion the student will be able to; The student will be able to visually identify major pests and diseases commonly found on major forage crops in California and list possible methods of control. | X | | | | | X |
| • Upon completion the student will be able to; Given common forage crops in California, the student will be able to list possible methods of harvest, including necessary machinery, timing, and curing processes. | X | | | | | X |
| • Upon completion the student will be able to; The student will be able to determine the forage best suited for feeding different classes of livestock at different stages of production. | X | | | | | X |

CRPSB3 - Integrated Pest Management

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|--|---|--|--|--|--|---|
| • Upon completion the student will be able to; Name and describe the main management agencies governing pesticide use in the U.S., the categories of pest control licenses in California, and the responsibilities of the Pest Control Advisor and Qualified Applicator in California. | X | | | | | X |
| • Upon completion the student will be able to; Name and describe the levels of ecological organization within a biome, compare and contrast different population dynamic strategies, and outline basic ecological cycles and food webs that pertain to pests and pest control. | X | | | | | X |
| • Upon completion the student will be able to; Name and describe the major pest groups affecting plants and recommend proper methods of control based on current guidelines and procedures. | X | | | | | X |
| • Upon completion the student will be able to; List and describe the major advantages of IPM over conventional pest control theory. | X | | | | | X |
| • Upon completion the student will be able to; Identify common plant pests using dichotomous keys. | X | | | | | X |
| • Upon completion the student will be able to; Analyze pest monitoring programs, including data collection methods, sample numbers, sample timing, data recording methods, and data analysis methods and calculate action thresholds for common insect pests. | X | | | | | X |
| • Upon completion the student will be able to; Construct basic field trials to test the efficacy of pesticides. | X | | | | | X |
| • Upon completion the student will be able to; Examine the hazards associated with application of any pesticide from information printed on the label. | X | | | | | X |
| • Upon completion the student will be able to; Distinguish the most commonly used pesticides in major crops of the southern San Joaquin Valley and the pests they control. | X | | | | | X |

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| CRPSB4 - Vegetable Production | | | | | | |
| • Upon completion the student will be able to; List the major component parts of the vegetable industry and the latest challenges facing the industry. | | | | X | | |
| • Upon completion the student will be able to; Describe the main methods of improving vegetable production. | | | | X | | |
| • Upon completion the student will be able to; Label the parts of a plant cell, germinating seed, and mature dicot plant. | | | | X | | |
| • Upon completion the student will be able to; Identify the major pests of vegetable crops in California and major methods of control. | | | | X | | |
| • Upon completion the student will be able to; Identify the major California vegetable crops as to plant family, edible parts, use, life cycle, and season of growth. | | | | X | | |
| • Upon completion the student will be able to; Outline the steps involved in establishment, fertility management, irrigation, pest control, harvest, and processing of major California vegetable crops. | | | | X | | |
| CRPSB5 - Plant Science | | | | | | |
| • Upon completion of the course, the student will be able to Categorize the roles of higher plants in the living world. | | | X | | | |
| • 2. Describe the structural components of higher plants. | | | X | | | |
| • 3. Explain the standard plant propagation methods. | | | X | | | |
| • 4. Describe sexual and asexual reproduction in higher plants. | | | X | | | |
| • 5. Explain photosynthesis, respiration, and translocation in higher plants. | | | X | | | |
| • 6. Describe the physical and chemical properties of soils and soil erosion problems. | | | X | | | |
| • 7. Describe the climatic influences on plant growth and development. | | | X | | | |
| • 8. Categorize the biological competitors of higher plants. | | | X | | | |
| • Describe the scientific method and explain its application in solving problems in plant and soil science. | | | X | | | |