Student's Name _______________________________

Directions: Evaluate the trainee using the rating scale below and check the appropriate number to indicate the degree of competency achieved. The numerical ratings of 3, 2, 1, and 0 are not intended to represent the traditional school grading system of A, B, C, D, and F. The descriptions associated with each of the numbers focus on level of student performance for each of the tasks listed below.

Rating Scale:

0 - No Exposure - no information nor practice provided during training program, complete training required.
1 - Exposure Only - general information provided with no practice time, close supervision needed and additional training required.
2 - Moderately Skilled - has performed independently during training program, limited additional training may be required.
3 - Skilled - can perform independently with no additional training.

01.0 Elementary Study of Soils
The student will be able to:

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<tbody>
<tr>
<td>01.01 List the reasons that soils are important</td>
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<td>01.02 Discuss the functions of soil as related to plant growth, development, and maintenance</td>
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<td>01.03 Select factors that affect sod formation</td>
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<td>01.04 List the four physical properties of soil</td>
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<td>01.05 Identify soil particles according to size, and discuss what methods are used to determine soil texture</td>
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<td>01.06 Identify five kinds of soil structure</td>
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<td>01.07 Match terms indicating soil color and depth with their correct descriptions</td>
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<td>01.08 Label an illustration showing the different layers of a soil profile</td>
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<td>01.09 Discuss how acidity and alkalinity effect the soil and methods of correcting pH problems</td>
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02.0 Organic Matter
The student will be able to:

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<tr>
<td>02.01 Match terms and definitions associated with organic matter</td>
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<td>02.02 List the importance of organic matter to plant production</td>
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<td>02.03 List the factors affecting the rate of organic matter decomposition</td>
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<td>02.04 List the basic ways in which nutrients obtained from organic matter affect the soil</td>
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<td>02.05 Identify the factors that cause the loss of organic matter from soil</td>
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03.0 Potting Soil and Media
The student will be able to:

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<tr>
<td>03.01 List the reasons for variation in types of soils</td>
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<td>03.02 Discuss how root zone affects the availability of plant nutrients</td>
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<td>03.03 Select plants tolerant to various pH ranges</td>
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<td>03.04 Test soils for pH levels</td>
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<td>03.05 Develop a chart of planting media with the characteristics of each media</td>
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<td>03.06 List several soil mixes identifying media data for each soil mix</td>
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<td>03.07 Identify the correct fertilizers to add for various soil mixes</td>
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<td>03.08 Sterilize a potting soil mix</td>
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04.0 Soil Fertility
The student will be able to:

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<tr>
<td>04.01 List the primary and secondary plant nutrients and describe the function of each for plant growth</td>
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<tr>
<td>04.02 Match nutrients to their correct plant deficiency symptoms</td>
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<tr>
<td>04.03 Select from a list factors that influence the use of fertilizers</td>
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</table>
04.0 List four sources of plant nutrients
04.05 Match dry, liquid, and gaseous fertilizers with their correct description and use
04.06 Calculate problems comparing fertilizer cost by comparing cost per pound of nutrients
04.07 Discuss methods and procedures involved in collecting a representative soil sample
04.08 Complete a soils test report form, and make fertilizer recommendations using the test analysis data
04.09 Identify and discuss methods of fertilizer application

05.0 Organic Fertilizers
The student will be able to:

05.01 Match terms and definitions associated with organic fertilizers
05.02 List sources of soil organic matter
05.03 Identify how the soil temperature, aeration, moisture, and reactions affect the rate of decomposition or organic matter
05.04 Discuss the value of humus and an organic fertilizers to soil fertility and plant growth
05.05 Describe how organic matter is produced
05.06 List the functions of growing a crop to produce organic matter
05.07 List the types of manures that can be produced
05.08 Select other sources of organic fertilizers
05.09 List the disadvantages of organic fertilizers
05.10 Demonstrate the ability to construct a compost pile

06.0 Basic Plant Processes
The student will be able to:

06.01 List the important plant processes in food manufacture and growth
06.02 Explain why photosynthesis is an important plant process
06.03 Explain the chemical process of photosynthesis
06.04 List factors that affect photosynthetic rate
06.05 Explain the chemical process of respiration
06.06 Distinguish between photosynthesis and respiration characteristics
06.07 Explain transpiration and fist factors that affect transpiration rate

06.08 Explain osmosis and the process of absorption by plant roots
06.09 Label the parts of a common plant cell and describe the function of each part

07.0 Plant Growth and Development
The student will be able to:

07.01 List the stages of plant growth and development
07.02 List requirements for good seed germination
07.03 List factors that cause poor seed germination
07.04 List the primary parts of and functions of a plant
07.05 Identify two types of root systems
07.06 Label a drawing showing the parts of a plant stem
07.07 Match stem modifications with correct descriptive term
07.08 List conditions affecting the vegetative growth of crop plants
07.09 Discuss asexual and sexual reproduction in plants
07.10 Label a drawing showing the parts of a complete flower
07.11 Match types of flowers to the correct botanical description
07.12 List methods of pollination

08.0 Plant Growth Regulators
The student will be able to:

08.01 Match terms and definitions associated with plant growth regulators
08.02 List the environmental factors that influence plant growth
08.03 List the ways hormones influence plant growth
08.04 Select statements that describe the effects of photoperiod on plant growth
08.05 Name the photoperiod responses
08.06 Explain how plants respond to day length
08.07 Select statements that either describe how to shorten or lengthen the day for plants
08.08 List the techniques for physical control over plant growth
08.09 Identify as either true or false reasons for using chemical growth regulators
08.10 List the biological factors that affect plant growth
08.11 List the controllable plant growth processes
08.12 List the effects of chemicals on plant growth
08.13 Identify the effects of growth regulators on plants
08.14 List the important chemical growth regulators groups
08.15 Describe statements as true or false as they relate to how auxins, gibberellins, kinins, dormins, or ethylenes affect plant growth and development
08.16 Select statements that describe plant responses attributed to auxins
08.17 List the uses of auxins
08.18 List the important commercial uses for plant growth regulators

09.0 Seed Selection
The student will be able to:
09.01 List factors to consider in selecting high quality seed
09.02 Discuss conditions that exist when good seed is not selected
09.03 List and describe the certifiable seed classes
09.04 List information required on certified seed tags
09.05 Discuss types and purposes of seed treatments
09.06 Discuss procedures to follow in handling and storing seed
09.07 Calculate the value of pure live seed

10.0 Seeding in Flats
The student will be able to:
10.01 Match terms and definitions associated with seeding in flats
10.02 List the materials from which flats can be made
10.03 List the advantages and disadvantages of using flats for propagating
10.04 List the advantages and disadvantages of starting seedlings inside flats
10.05 List the steps for seeding in flats
10.06 List the information that should appear on the label of a flat after it has been planted
10.07 Describe the procedure to follow after seeds have germinated in a flat
10.08 Demonstrate the ability to build a flat and plant seeds in it

11.0 Care and Transplanting of Seedlings
The student will be able to:
11.01 Match terms and definitions associated with care and transplanting of seedlings
11.02 Describe how to care for young seedlings
11.03 List the types of transplanting pots that are available
11.04 List the factors to consider when choosing plant containers
11.05 Describe the procedures to follow when transplanting seedlings
11.06 List the steps of transplanting seedlings
11.07 Describe how to harden seedlings
11.08 Demonstrate the ability to transplant seedlings properly

12.0 Introduction to Asexual Plant Propagation
The student will be able to:
12.01 Match terms and definitions relating to asexual plant propagation
12.02 List the methods of asexual plant propagation
12.03 List the reasons for using asexual propagation
12.04 Select cuttings that require leaves and cuttings that do not require leaves
12.05 List the main types of propagating by layering and the requirements for layering
12.06 Describe propagation by division
12.07 List the methods of propagating by budding
12.08 List the methods of grafting

13.0 Propagation by Cuttings
The student will be able to:
13.01 Match terms and definitions associated with propagation by cuttings
13.02 List treatments made to cuttings before placing them in rooting media
13.03 List the basic kinds of plant wounding
13.04 Explain the use of hormone treatment on cuttings
13.05 Describe why storage and callusing are used with hardwood cuttings
13.06 Demonstrate the ability to make various types of wounds on cuttings
13.07 Demonstrate how to treat a cutting with hormone
13.08 Demonstrate the ability to store and callus plant cuttings
13.09 Demonstrate the propagation of a coleus stem cutting
13.10 Demonstrate a leaf bud cutting
13.11 Demonstrate a root cutting

13.08 Demonstrate the ability to store and callus plant cuttings
13.09 Demonstrate the propagation of a coleus stem cutting
13.10 Demonstrate a leaf bud cutting
13.11 Demonstrate a root cutting

14.0 Propagation by Layering and Division
The student will be able to:

14.01 List the advantages and disadvantages of propagation by layering
14.02 List the types of layering
14.03 Identify the steps in transplanting layering plants
14.04 Demonstrate how to propagate by tip, simple, and air layering
14.05 Name the types of plants propagated by division
14.06 List the steps in divisional propagation
14.07 Demonstrate propagation by division of perennial and bulbous plants

15.0 Propagation by Budding
The student will be able to:

15.01 Match terms and definitions associated with propagation by budding
15.02 List the types of budding
15.03 List the techniques used when propagating by budding
15.04 List the precautions to be used with T-budding
15.05 Describe patch budding and list the variations of patch budding
15.06 Demonstrate the ability to T-bud and patch bud

16.0 Propagation by Grafting
The student will be able to:

16.01 Match terms and definitions associated with propagation by grafting
16.02 List the reasons for using grafting
16.03 Discuss the limitations of using grafting
16.04 List the sequence of making a union graft
16.05 List the functions of the callus tissue
16.06 List the types of grafting that are used when the diameter of the stock and scion are similar, and when the diameter of the stock is greater than the scion
16.07 Describe the qualities of a grafting wax
16.08 List the basic functions of grafting wax
16.09 List the basic kinds of grafting waxes
16.10 Demonstrate the ability to perform the basic types of plant grafts

17.0 Plant Identification
The student will be able to:

17.01 Discuss the system of plant classification
17.02 Identify the parts of simple and compound leaves
17.03 Name the types of leaf arrangement, venation and margins
17.04 Identify the types of leaf attachment to the stem
17.05 Identify the parts of a stem
17.06 Match stem modifications with their correct description
17.07 Identify the parts of a perfect flower
17.08 Identify the types of inflorescence
17.09 Identify common plants of economic impact to Idaho

18.0 Plant Pests
The student will be able to:

18.01 Match terms and definitions associated with plant pests
18.02 List the basic methods of weed control
18.03 Discuss weed competition and losses caused by weeds
18.04 Discuss how weeds spread
18.05 Discuss methods of cultural, mechanical, chemical and biological weed control
18.06 Identify the factors of a weed control program
18.07 Select statements as they apply to non-selective and selective herbicide compounds
18.08 Identify as true or false statements relating to pre-emergence and post-emergence weed control treatments
18.09 List ways that insects cause losses in plants
18.10 List beneficial effects of insects
18.11 Identify the three regions of an insect body
18.12 Match the way an insect feeds on plants with the correct description
18.13 Label drawings showing the life cycles of various insects
18.14 Discuss the importance of economics in relation to plant insect control
18.15 Select from a list cultural, biological, and chemical control practices for insects

18.16 Match classifications of insecticides to their correct description

18.17 Identify the insects having an economic impact on Idaho agriculture

19.0 Plant Disease Identification and Control

The student will be able to:

19.01 Identify by name, symptoms, and causal agents of diseases of that have economic impact on Idaho crops

19.02 Describe the life cycles of diseases

19.03 Describe the ways and means diseases are spread

19.04 Describe growing conditions and cultural practices favorable to common diseases

19.05 Describe preventative measures for diseases

19.06 Describe cultural and chemical control measures for diseases