

NM Public Education Department

AGRICULTURAL POWER AND MACHINERY

END-OF-COURSE EXAM | GRADE 9-12 | YEAR 17-18

ASSESSMENT BLUEPRINT

Purpose Statement

Agricultural Power and Machinery

The Agricultural Power and Machinery End-of-Course Exam is designed to measure student proficiency of the standards and performance elements aligned to the Common Career Technical Core Standards (https://cte.careertech.org/sites/default/files/CCTC_Standards_Formatted_2014.pdf).

This course-level exam is provided to all students who have completed Agricultural Power and Machinery.

This exam can be given for the following STARS course code:

0154 - Agricultural Power and Machinery

Intended as a final exam for the course, this is a summative exam covering a wide range of content, skills, and applications. Scores are reported to the teacher, school, district, and state levels for the purposes of student grades, curriculum review, and NMTeach summative reports.

New Mexico State University College of Agriculture, Consumer and Environmental Sciences

This blueprint was developed and piloted in 2016 by the New Mexico State University's (NMSU) Secondary Agriculture Education Office (<http://aces.nmsu.edu/>) in partnership with New Mexico agriculture educators. NMSU uses test items with consent from MYCaert, Inc. (<http://www.mycaert.com>). MyCaert has given copyright permissions to the New Mexico Public Education Department (NMPED).

Sample Questions

The NMPED has released sample items (prior test exam questions in the test bank) for each performance element. Due to a limited item bank, only five, EOC specific, sample questions have been provided on the blueprint. The depth of knowledge (DOK) level has also been identified for each sample question.

Blueprint Table—Agricultural Power and Machinery

| REPORTING CATEGORY | STANDARD | PERFORMANCE ELEMENT |
|--|-----------------|---|
| Power, Structural and Technical Systems | AG-PST.1 | <p>Performance Element: Apply physical science principles and engineering applications to solve problems and improve performance in AFNR power, structural and technical systems.</p> <p>Sample Question: Select the term that best describes the making of two or more organisms out of one tissue.</p> <p>A. cloning * B. copying of DNA C. hormone transfer D. genetically modified DOK 1</p> |
| | AG-PST.2 | <p>Performance Element: Operate and maintain AFNR mechanical equipment and power systems.</p> <p>Sample Question: Which method of herbicide/pesticide application would require the least pump generated pressure?</p> <p>A. rope-wick applicator B. foggers * C. control droplet D. air-blast DOK 1</p> |
| | AG-PST.4 | <p>Performance Element: Plan, build and maintain AFNR structures.</p> |
| | AG-PST.5 | <p>Performance Element: Use control, monitoring, geospatial and other technologies in AFNR power, structural and technical</p> |

| REPORTING CATEGORY | STANDARD | PERFORMANCE ELEMENT |
|------------------------------------|------------------------|---|
| | | <p>systems.</p> <p>Sample Question:</p> <p>Regardless of design, all manure disposal systems should place manure into which of the following locations?</p> <p>A. free-flowing water B. soil * C. digesters D. water table</p> <p>DOK 1</p> |
| <p>Agribusiness Systems</p> | <p>AG-BIZ.1</p> | <p>Performance Element: Apply management planning principles in AFNR businesses.</p> |
| | <p>AG-BIZ.3</p> | <p>Performance Element: Manage cash budgets, credit budgets and credit for an AFNR business using generally accepted accounting principles.</p> <p>Sample Question:</p> <p>During a drought, Caleb is unable to pay his tractor loan. In response, the bank repossesses Caleb’s pickup. What was the pickup used for as far as the bank is concerned?</p> <p>A. debt B. credit C. cosign D. collateral *</p> <p>DOK 1</p> |
| | <p>AG-BIZ.4</p> | <p>Performance Element: Develop a business plan for an AFNR business.</p> <p>Sample Question:</p> |

| REPORTING CATEGORY | STANDARD | PERFORMANCE ELEMENT |
|-----------------------|----------|--|
| | | <p>Which statement best explains the concept of a mutual fund?</p> <ul style="list-style-type: none">A. when a stock broker invests several clients in the same companyB. a collection of many individual's investments managed by a professional broker *C. when insurance premiums from many individuals pay for emergencies to a few of its investorsD. when a group of investors meet to decide upon the expenditure of their investments <p>DOK 1</p> |

| Agricultural Power and Machinery EoC Reporting Category Alignment Framework | | | | | |
|--|-----------------|-------------------------------|-----------|----------|--------------------|
| Reporting Category | Standard | DOK (Count by DOK) | | | Grand Total |
| | | 1 | 2 | 3 | |
| | | | | | |
| Power, Structural and Technical Systems | AG-PST.1 | | 3 | | 3 |
| | AG-PST.2 | | 20 | | 20 |
| | AG-PST.4 | | 1 | | 1 |
| | AG-PST.5 | | 8 | | 8 |
| Agribusiness Systems | AG-BIZ.1 | 2 | 16 | | 18 |
| | AG-BIZ.3 | | 2 | | 2 |
| | AG-BIZ.4 | | | 3 | 3 |
| Total | | 2 | 50 | 3 | 55 |