EXAMS

- IBT - update
- New information services
- Future – faster turnaround of results
- Iowa Suggestions
Data by Exam
The Exams represent people that registered for the August exam. The number of registrations was 993 but some were no-shows.

- AR-LA-MS (23)
- CP (21)
- CO (4)
- ICCA (449)
- IA (32)
- MI (15)
- Mid Atlantic (9)
- Minnesota (9)
- Missouri (5)
- NE (8)
- NC (2)
- ND (13)
- NE (7)
- NW (14)

- ON (25)
- PA (4)
- PP (46)
- Rocky Mtn (5)
- SD (6)
- SE (26)
- TN (3)
- Tri State (89)
- Western (89)
- WI (26)
- Specialties (48)
CCA Exams
IBT/Remote
Proctor
Survey

Survey sent out to all that participated in the August Exams.

Survey was available for 10 days, reminder sent during the second week.

243 respondents (25% response rate)

127 comments
1. How important is the convenience of testing at your home or office at a time of your choice?

- Percent = Feb/Aug
- Positive (7-10) = 63% / 72%
- Neutral (5-6) = 17% / 15%
- Negative (1-4) = 20% / 13%
2. How important is it to you to be able to have a one-week window to take your exam?

<table>
<thead>
<tr>
<th>Percent = Feb/Aug</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive (7-10) = 80%/ 85%</td>
</tr>
<tr>
<td>Neutral (5-6) = 10%/ 11%</td>
</tr>
<tr>
<td>Negative (1-4) = 10%/ 4%</td>
</tr>
</tbody>
</table>

August Average of Responses = 8.76
3/4/5. How would you rate the information and communication from the CCA office, the scheduling process, and the check-in process? **August**

<table>
<thead>
<tr>
<th>Category</th>
<th>Score</th>
<th>Positive (7-10)</th>
<th>Neutral (5-6)</th>
<th>Negative (1-4)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CCA Info</strong></td>
<td>8.10</td>
<td>70% (79%)</td>
<td>19% (14%)</td>
<td>11% (7%)</td>
</tr>
<tr>
<td><strong>Scheduling</strong></td>
<td>8.33</td>
<td>84% (86%)</td>
<td>11% (11%)</td>
<td>5% (3%)</td>
</tr>
<tr>
<td><strong>Check-in</strong></td>
<td>6.13</td>
<td>47% (48%)</td>
<td>21% (27%)</td>
<td>32% (25%)</td>
</tr>
</tbody>
</table>

**CCA Info (ave = 8.10) Feb/Aug**
Positive (7-10) = 70% (79%)
Neutral (5-6) = 19% (14%)
Negative (1-4) = 11% (7%)

**Scheduling (ave = 8.33) Feb/Aug**
Positive (7-10) = 84% (86%)
Neutral (5-6) = 11% (11%)
Negative (1-4) = 5% (3%)

**Check-in (ave = 6.13) Feb/Aug**
Positive (7-10) = 47% (48%)
Neutral (5-6) = 21% (27%)
Negative (1-4) = 32% (25%)
6. How would you rate your testing experience once the exam began?

**Percent = Feb/Aug**
- Positive (7-10) = 68%/ 72%
- Neutral (5-6) = 16%/ 13%
- Negative (1-4) = 16%/ 15%
7. How would you rate the competency of the proctor? (was the proctor on time, helpful, professional?)

Percent = Feb/Aug
• Positive (7-10) = 59%/60%
• Neutral (5-6) = 17%/15%
• Negative (1-4) = 24%/25%

August Average of Responses = 6.53
8. How would you rate your overall satisfaction taking the exam online?

Percent = Feb/Aug
Positive (7-10) = 67%/70%
Neutral (5-6) = 15%/18%
Negative (1-4) = 18%/12%
9. Are there any other comments you would like to share?

127 left comments

116 did not leave comments

Several people wanted to be contacted and left their name and email.

Comments summarized by category.
9. Are there any other comments you would like to share?

127 Total Comments*

<table>
<thead>
<tr>
<th>Subject</th>
<th># of Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proctor</td>
<td>78</td>
</tr>
<tr>
<td>Exam Delivery</td>
<td>33</td>
</tr>
<tr>
<td>Positive</td>
<td>20</td>
</tr>
<tr>
<td>Calculator</td>
<td>8</td>
</tr>
<tr>
<td>Issues with Exam</td>
<td>8</td>
</tr>
<tr>
<td>Want P/P Back</td>
<td>7</td>
</tr>
<tr>
<td>Results Reporting</td>
<td>7</td>
</tr>
<tr>
<td>Want Breaks</td>
<td>4</td>
</tr>
<tr>
<td>Scheduling</td>
<td>4</td>
</tr>
<tr>
<td>Security</td>
<td>1</td>
</tr>
</tbody>
</table>

*Total IBT/Remote Survey respondents = 243
Many comments were across several categories.
20 respondents indicated they had no comments.
New Information Services

Started with the February Exam Administration
International Certified Crop Adviser Exam

2020 Certified Crop Adviser Exam
General Statistics by Area
Summary Demographics
International Certified Crop Adviser Exam

• Data not reported this year by local board.
  • IBT – Data doesn’t easily provide where/what local board an examinee is testing for.
  • Data for ICCA is generalized across all examinees.
• For February 2020:
  • 919 took the ICCA Exam
  • 507 passed (55%)
  • 412 failed (45%)
Nutrient Management Distribution

- # of Examinees = 918
- # of NM Questions = 42
- Average % correct = 71.99
- Median = 74
- Standard Deviation = 14.38
- Average Correct raw score = 30.24
Soil and Water Management Distribution

# of Examinees = 918
# of SW Questions = 35
Average % correct = 69.76
Median = 71
Standard Deviation = 15.04
Average Correct raw score = 24.42
Pest Management Distribution

# of Examinees = 918
# of PM Questions = 36
Average % correct = 70.63
Median = 72
Standard Deviation = 13.88
Average Correct raw score = 25.43

Number of People and Percent Correct Scores

<table>
<thead>
<tr>
<th>Percent Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 23 26 29 32 35 38 41 44 47 50 53 56 59 62 65 68 71 74 77 80 83 86 89 92 95 98</td>
</tr>
</tbody>
</table>

0 10 20 30 40 50 60 70 80

Percent Correct

0 10 20 30 40 50 60 70 80
Crop Management Distribution

# of Examinees = 918
# of CM Questions = 37
Average % correct = 71.61
Median = 73
Standard Deviation = 14.13
Average Correct raw score = 26.51
ICCA Demographics

Work Sector of Examinees

- Not Applicable: 60%
- Academia: 10%
- Agribusiness – Retail: 3%
- Agribusiness – Wholesale or Manufacturer: 2%
- Government: 9%
- Industry: 14%
- Private Consulting: 2%
<table>
<thead>
<tr>
<th># Years of Work Experience</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 year</td>
<td>5%</td>
</tr>
<tr>
<td>1 - 5 years</td>
<td>13%</td>
</tr>
<tr>
<td>6 - 10 years</td>
<td>20%</td>
</tr>
<tr>
<td>10 – 20 years</td>
<td>7%</td>
</tr>
<tr>
<td>20+ years</td>
<td>55%</td>
</tr>
</tbody>
</table>
ICCA
Demographics

Highest Degree of Examinees

- High School: 11%
- Associates: 9%
- Diploma: 1%
- BS: 60%
- MS: 10%
- PhD: 9%
ICCA Demographics

Pie chart showing age distribution of examinees:
- 18-25: 42%
- 26-30: 24%
- 31-35: 14%
- 36-40: 8%
- 41-50: 8%
- 51-55: 2%
- 56-60: 1.2%
- 61-65: 0.6%
- Over 65: 0.3%
Future – Faster Turnaround of Results

Considerations Moving Forward
Statistics and Equating

- Generally the statistical item analysis is completed with the February exams.
  - Largest number of Examinees provides the best statistical analysis.
  - Review of poor performing questions that “hurt” the exam.
  - Removal of poorly performing questions from scoring improves exam performance and is a better indicator of pass/fail.
- Equating of cut scores takes place to account for changes in exam questions and/or any poor questions that are removed.
Faster Turnaround of Results

- Psychometrician and Assessment Specialist make decisions on poor performing items to increase the reliability of the exams.
- Equating done as needed.
- Will cut time trying to contact each exam committee and wait for an agreement on the suggested decision(s).
“On Demand Testing”

• Suggest starting with the ICCA exam after Feb. 2021 statistical analysis.
  • Performing well.
  • Could give a pass/fail as soon as finish the exam (doing this with Soils Exams Fall 2020).
  • Audit of exam is caveat.
  • If fail, must wait 2-3 weeks to retest.
  • CCA Office would still need to send area(s) of weakness to people who fail.

• Local Board/Specialty exams can follow after the ICCA.

• Order of certification process.
Iowa Suggestions
Iowa Suggestion #1

• To bring to the International CCA Board the following proposal for providing each person with an indication of their individual CCA exam results.
• One of the following statements will be provided to an examinee for each of the content areas on the international and local CCA exams based on the examinee’s results and cut scores for each of the statements based on the overall exam metrics.
  • Advanced
  • Proficient
  • Below Proficient
  • Deficient
• These four statements will also be provided for specialty exams.
Iowa Suggestion #2

- To bring to the International CCA Board the following proposal for providing local boards with an indication of overall exam results by content area.
- Local boards will be provided with a report classifying content areas on the international and local CCA exams based on the overall results and cut scores for each of the categories based on the overall exam metrics.
  - Advanced
  - Proficient
  - Below Proficient
  - Deficient
- These four statements will also be provided for specialty exams.
Justification

• Justification: CCA examinees and boards need a better indication of the content areas where examinees are not demonstrating proficiency on the exams. Providing the metrics described will help in the following ways:
  • 1) Examinees that do not pass an exam will have an indication of the areas they should focus on for improvement.
  • 2) Examinees that pass an exam will have an indication of the areas where they need more knowledge. They can target these areas when earning continuing education units (CEUs).
  • 3) CCA boards can use the overall summary of the data to improve training materials and the exams.
Academic Testing

Know Nothing → D → C → B → A → Know Everything
Academic Testing

Distribution of questions

D C B A

Know Nothing

Know Everything
Academic vs. Certification Testing

- **Know Nothing**
- **Know Everything**

**Certification Single Decision-Making Point**

**Required Competency**
Academic vs. Certification Testing

- **Distribution of questions**
- **Certification Single Decision-Making Point**
- **Required Competency**

Know Nothing: D, C, B, A - Know Everything
Academic vs. Certification Testing

- **Realistic Distribution of questions**
- **Certification Single Decision-Making Point**

**Know Nothing** → **D** → **C** → **B** → **A** → **Know Everything**

**Required Competency**
Academic vs. Certification Testing

Area under the curve is Information regarding a person’s ability.
Our Psychometrician recommends against these suggestions.

- We have no statistical basis in which to provide metrics on Advanced, Proficient, Below Proficient, or Deficient.
  - This is not how certification exams are designed.
- We do not release cut scores – this was decided in 2015 with Pass/Fail.
- We do not have cut scores for each section since there are not enough questions in each section to validate a cut score.
- Specialty Exams do not have sections.
Questions, Comments, Concerns?

Please contact:
Dr. Dawn Gibas
Assessment Specialist
CCA Program
dgibas@sciencesocieties.org