Comprehensive Program Review Report

Program Review - Animal Science

Program Summary

2021-2022

Prepared by: Allison Vander Plaats and Russell McKeith

What are the strengths of your area?: 1. Continued improvements to animal facilities and equipment. COVID funding allowed us to purchase an ultrasound that connects to an iPad, allowing students to watch the image as we scan animals for pregnancy. VTEA funding allowed us to purchase a new dog skeleton model, germ models to improve student handwashing techniques & awareness of sterility, fabric to make a true-to-size rumen model, suture pads for students to practice basic suture patterns, and a new & improved livestock trailer to enhance both student & animal safety. Above Base funding allowed us to purchase & install pasture shades in each of our large pastures, which the cattle & sheep are using enthusiastically. Hard work from our Instructional Specialist Matt Prater has translated into improved grazing within our livestock & equine pastures, re-leveled barns that eliminate potholes & potential areas of animal injury, & improved gates & fencing that reduce the chance of animal escape or injury. The Equine Arena also had footing added & leveled, improving animal comfort & student safety.

2. The Veterinary Assisting Certificate continued to gain traction, with one completer in 2020-2021, quite a feat considering this program launched during the COVID year. Courses remain full, with high student interest. This program is geared towards preparing students for assistant roles in the veterinary practice by providing them with crucial background information and a set of basic laboratory and animal handling skills.

3. Despite the continuation of COVID, students remain excited about Animal Science courses, and course enrollment and participation has remained high. All ASCI courses were taught as hybrid courses in both Fall & Spring of 2020-2021, and courses are either meeting face to face or remain hybrid at least through Fall 2021. Students are excited to be on campus & the opportunity to participate in labs, while faculty is happy to have students back on campus at least part time. Due to the prolonged nature of COVID, faculty have continued to embrace technologies that allow improved student engagement.

4. Review of animal health and handling protocols for our livestock units & development of a more official student training program via Canvas. Dr. Vander Plaats reviewed protocols put into place last year, updated them based on the needs of our units, & reorganized information so that it is more accessible to student workers. These protocols continue to be an excellent source of information for both students & faculty. The initial outlining of a formal student training program is shaping up on Canvas, with Dr. Vander Plaats planning to create short videos for each of the common procedures that students could readily access. This ongoing training will improve animal care, handling, & medication administration, establish clear expectations for student workers, & improve overall functioning of the livestock units.

5. Review of livestock unit budgets. Dr. Vander Plaats collected all receipts & invoices from 2019-2020 & itemized everything to create an accurate reflection of how & where money was being spent. This budgeting helped guide budget modifications for 2020-2021, determine that certain items were miscoded, & provide the most accurate representation of money flow for the livestock units. Continued monitoring & monthly meetings with the dean have helped reduce waste spending, keep budget categories accurate, & plan for future years.

6. One of our newer classes, ASCI 126: Meat Science continues to grow in popularity with students. This class transfers to CSU's and UC with Animal Science Programs where this class equivalent is heavily impacted. Some of these students take our two other Food Safety Classes offered (AGMT 201 and ASCI 202). These classes expose students to the food safety and the food industry where jobs are plentiful here in the San Joaquin Valley.

7. The combined Animal Science-Dairy Science-Veterinary Assisting Advisory has once again gained some new members, now representing academia, research, sales, production agriculture, veterinary medicine, & consulting. We were able to hold an in-person advisory meeting in Spring 2020, with full attendance & excellent discussion about program goals & needs. The advisory was enthusiastic about recent developments, continued excellent animal sales, & a peek into some of our program specifics, & expressed full support for the direction of these combined programs.

8. In 2020-2021, we had 27 students complete an AS degree in Animal Science or an AS-T in Animal Science. This continues an upward trend established the last couple years as the most degrees awarded in Animal Science. Faculty enthusiasm about their subjects, student appreciation for hands-on learning, & better communication about how to earn degrees has contributed to this growth.

9. The Dairy Science program continues to gain student interest, mostly by overlap of students earning other degrees. The DSCI 104 Breeding & Selection of Dairy Cattle course had 13 students enrolled, who learned the theory behind cattle reproduction & breeding, & who were then able to apply that theoretical knowledge by visiting local dairies & palpating cows. DSCI 101 Introduction to Dairy Science enrollment has held steady, primarily picking up students who have very little dairy knowledge or experience. With the modified certificate & more overlap in degree requirements across DSCI/ASCI/VT, we expect to see more completers within the next 2 years.

10. EQUINE UNIT UPDATE??? The Equine unit has purchased two therapy units: the Game Ready Machine and Theraplate. Students will continue to be trained on these units and will be offering these therapies to local horse owners as soon as COVID restrictions are lifted. Learning to use therapy equipment will better prepare students to be placed in veterinary and equine barn management job positions.

11. Animal Science faculty and students continued with outreach activities, most of which were hybrid or virtual activities due to COVID, including FFA contests. This year, with more activities given the green light, we plan to include students in the World Ag Expo & local fairs, along with more FFA Speaking and Judging Contests.

12. Animal Science Course Success for 2020-2021 was 88.4%, above the Animal Science Statewide Success. The excitement of students to continue on campus with small lab groups despite COVID, & the accessibility of the EW drop likely contributed to this improvement. We hope to continue this trend as we move out of COVID, though the transition back to full-time schooling will be difficult for many of our students.

13. For the Summer 2021, COS Agriculture Division was awarded the Outstanding Post-Secondary Division Award from the California Agriculture Teachers Association. This award signifies outstanding achievements in the Division of Agriculture at COS. At COS, we have not been recognized for this award since 2005.
What improvements are needed?: 1. Continuing education for faculty remains important to keep faculty up to date with new information, technologies, and industry trends. Due to COVID, more & more professional development is taking place virtually, which allows for distribution of information without the requirement of travel.

2. Continued improvement of animal facilities. Cameras for farrowing and lambing would help faculty and students with parturition throughout the academic year at COS, and have been purchased, but not yet installed. Currently faculty and student herdsmen check on livestock throughout the night, which is a safety risk to personnel. Technology where faculty and students could access real time video of animals would increase safety of personnel and enhance learning for students.

3. Continued improvement of cross-unit equipment. Instructional Specialist Matt Prater has been able to manage pastures & arenas with existing equipment, though he could be significantly more efficient with more appropriate tools. Purchase of a manure spreader would allow more efficient utilization of his time, better pasture performance, & the added benefit of use at the Ornamental Horticulture & Plant Science units as well.

4. Student training programs for livestock unit protocols and improved student experience. The Canvas has been set up, & an outline of topics to be covered has been added. The next step is videoing common procedures, taking pictures of procedures, supplies, & areas of each unit, & incorporating those into training videos that can be accessed by students at any time. In addition, the requirement to work through these modules, plus volunteering at the livestock units, will be implemented for any students interested in becoming student herdsmen. Currently students are hired as herdsmen only after they've completed Work Experience and have knowledge of how our units run, but development & implementation of a more formal training program would improve consistency in student experiences and knowledge, which will translate to improved animal handling, sick animal identification and treatment.

5. Continued improvement of animal and student worker management. Dr. Waldner provided each unit manager an hour budget rather than a money budget for student hour allotment per month. This number of hours, plus better implementation of student volunteers & improved communication regarding expectations, has decreased our overall student worker fiscal budgets while maintaining a high level of attention & care towards our animals.

6. Addition of a second Animal Science Technician. As the Animal Science program continues to grow, a second technician is necessary for enhanced lab safety and setup efficiency, help with animal breeding programs and birthing assistance (cattle, sheep, and swine), support with facility projects (fence repair, pasture management), and equipment maintenance (tractors, Gator).

7. ASCI 130 Enrollment in ASCI 130 is up this semester. ASCI 130 Equine Evaluation has been an elective course for both the ASCI Certificate of Achievement and Associates degree, so that students can choose to take either Equine Evaluation or Livestock Evaluation (ASCI 002). Advertisement of this course as an alternative elective course has helped increase enrollment.

8. ASCI 224 Enrollment was low during the last 1.5 years, potentially due to COVID-19. This course is offered both in the fall and spring semesters, and modifications to the curriculum have been instituted to allow students to obtain different skills as they pertain to Livestock Merchandising. For the fall 2021 semester, the course has approximately 15 students, which is an increase over the past couple of years. Livestock Merchandising is geared toward students who have an interest in raising animals to sell as live animals or as animal products. Course enrollment has had its ups and downs. Lastly, we are trying to emphasize some industry applicability (applying knowledge gained to real-life scenarios), then advertising as such, would increase course enrollment.

9. Better communication with counselors regarding open courses, available certificates, & career paths related to each certificate. Because we have a variety of animal-related certificates falling within ASCI, DSCI, & VT, plus the addition or modification of existing certificates, counselors understandably are directing students to courses or certificates that don't necessarily match up with each student's career goals. Better communication about what each certificate's goals are, which courses are required, & overlap between courses in similar areas is essential to increase student enrollment, increase certificate completers, & increase overall student satisfaction with their education & career.

10. Improved student metrics and demographics. It is still difficult to determine which students in our ASCI/DSCI/VT courses are tracking for which certificate or degree. Ideally, we would have a list of students for each degree or certificate to build better relationships with them & assist them with getting courses they need for completion of certificates & degrees or for achieving whatever career goals they have in mind.

11. The Equine Certificates completer number was down during 2020, which could be due to COVID restrictions to students and the instructor not pursuing them more aggressively in Spring 2021. The instructor believes there were several students completed that did not apply, perhaps due to COVID and lack of communication. Additionally, many students are majoring in ASCI for degrees and/or certificates, so students may not be applying for the Equine Certificate at COS.

12. Student safety at night is important for the COS Livestock Units. Currently, lack of lighting makes it dangerous for students to work with livestock/horses at night. Better lighting is necessary to mitigate potential accidents for students and faculty working with livestock/horses at night.

13. Beef carcass model would be helpful to discuss wholesale and retail cuts for ASCI 126: Meat Science. Currently we take a field trip to a large commercial processor for beef fabrication and processing because slaughtering a beef carcass and fabricating it is to difficult to conduct at the Tulare College Center campus.

14. The livestock wash stalls/racks need new spray in liners due to the rubber deteriorating in these areas. This can be a problem for both human and animal safety, which is a concern for COS faculty and staff. New spray in liners for these areas would alleviate these issues.

Describe any external opportunities or challenges.: OPPORTUNITIES

1. Continued support of local producers of horses, sheep, swine, and cattle to form the basis of our breeding herds. Last year, we purchased three rams from Fresno State & local producers to add genetic diversity to our herd.
2. Intercollegiate Horse Show Association (IHSA) horse shows and community equine events to showcase our students and facilities.
3. FFA Field Days and other activities to showcase our facilities and make connections with local 4H/FFA chapters, both students and faculty alike.
4. Sale of COS livestock to local 4H/FFA members to showcase our genetics and present COS as a high quality college experience.

Despite the lack of fairs & shows, livestock sales held strong at approximately $18,000.
5. Continued student participation in high level internships like the Kentucky Equine Management Internship, Seaboard Foods, and more.
6. Continued participation of student clubs in COS Harvest Fest to showcase our students, facilities, and programs to prospective students and the community.
7. The COS Equestrian Team is participating in person for the Fall 2021 season\post COVID. We are one of the few community colleges in CA participating in Equestrian Events. Currently, we have seen an increase in participation with 14 athletes. We strongly believe that participation has increased due to not being able to participate during COVID. The team introduces Non-Agriculture students to become students in Agriculture, while it additionally allows students majoring in Agriculture to be athletes for COS.

CHALLENGES
1. COVID-19. Due to the very hands-on nature of the Animal Science, Equine Science and Dairy Science programs, students in these courses during spring semester were unable to get the full agricultural education experience, though we made modifications to allow students to participate in labs. The online learning environment is difficult for many students to juggle with other responsibilities in their lives & we look forward to being back on campus full time.
2. For Fall 2021 semester, student participation for Face-to-Face classes has been minimal. This could be due to the lack of understanding of classes meeting again face-to-face, or not choosing to participate in face-to-face classes. These students have not dropped classes currently, but have chosen not to attend or participate.
Overall SLO Achievement: SLO's for all animal science classes are above the state average measurement for student success for course success. For Spring 2021, COS students had a student success rate of 87.78%% compared to the state average of 84.24%%. Our student success rate increased substantially from 2019. For COS, animal science program completers has continued to be consistent over the past three years with approximately 10 certificates and degrees being rewarded. Equine science shows a drop in 19-20 and is believed to due to COVID and instructor not pursuing certificate information for students. (see in improvements)
Changes Based on SLO Achievement: Due to our substantial improvements in student success, our current SLO's seem to be working appropriately. We have made changes the past couple of years, which has helped us increase our student success percentages.
Overall PLO Achievement: There were 195 students in 14 sections of Animal Science classes in Spring 2021. We had 19 students awarded Animal Science Degrees (AS and AS-T) , 5 students awarded Animal Science Certificates, and 3 students receiving certificates.
Changes Based on PLO Achievement: As a department we need to continue to emphasize compilations rates for degrees and certificates. This can be achieved by offering more sections of Animal Science classes, as well as continuing to encourage students to complete their certificates and degrees. An additional technician would be able to assist with more laboratory classes being offered, which would hopefully increase student success.
Outcome cycle evaluation: The animal science department has assessed courses and reviewed assessment as listed in Trackdat for Fall 2020 and Spring 2021. The courses that still need to be evaluated in Trackdat are ASCI 002, ASCI 112, ASCI 113, ASCI 117, ASCI 130, and ASCI 140. *NOTE* ASCI 232 and 120 are deleted courses.

Action: 2021-2022 Beef Carcass Model

To purchase a Beef Carcass model demonstrating the retail and wholesale cuts that can come from a beef carcass.

Leave Blank:
Implementation Timeline: 2021 - 2022
Leave Blank:
Leave Blank:
Identify related course/program outcomes: ASCI 126: Meat Science SLO #3 - The student will demonstrate safe and sanitary techniques for processing beef, sheep and pork carcasses into wholesale cuts and retail products.
Person(s) Responsible (Name and Position): Russell McKeith
Rationale (With supporting data):
Priority: High
Safety Issue: No
External Mandate: No
Safety/Mandate Explanation:

Resources Description

Equipment - Instructional - Beef Carcass Model (Active)
Why is this resource required for this action?: To show students where certain wholesale and retail cuts come from on a beef carcass. They will better understand where these different meat products come from.
Notes (optional):
Cost of Request (Nothing will be funded over the amount listed.): 3000

Link Actions to District Objectives

District Objectives: 2018-2021
District Objective 1.1 - The District will increase FTES by 1.75% over the three years
District Objective 2.1 - Increase the percentage of students who earn an associate degree or certificate (CTE and Non-CTE) by 5 percentage points over three years
District Objective 2.4 - By 2021, Increase the percentage of CTE students who achieve their employment objectives by 5 percentage points
District Objective 4.1 - Increase the use of data for decision-making at the District and department/unit level
District Objective 4.3 - College of the Sequoias Board of Trustees, administration, faculty, and staff will engage in best practices and staff development to sustain effective operational systems for institutional assessment and continuous improvement.

Action: 2021-2022 Purchase manure spreader for pasture & crop management

Instructional specialist Matt Prater has done an excellent job with pasture management, but is currently very inefficient as he is using equipment we currently own but is not ideal. Purchase of a 140 cubic foot manure spreader would allow better pasture management, arena management, & could be used at the OH and PLSI units.

Leave Blank:
Implementation Timeline: 2021 - 2022
Leave Blank:
Leave Blank:
Identify related course/program outcomes: ASCI 103: Feeds and Feeding SLO #2 - Given a livestock feeding scenario, students will be able to to identify appropriate feedstuffs foraccomplishing necessary product outputs, to a level that is industry standard and approved.
Person(s) Responsible (Name and Position): Matt Prater
Rationale (With supporting data):
Priority: High
Safety Issue: No
External Mandate: No
Safety/Mandate Explanation:

Resources Description

Equipment - Instructional - 140 cubic ft. powdered coasted standard manure spreader with PTO drive. (Active)
Why is this resource required for this action?: The manure that is being composted currently could then be spread on the pastures, SAgE Farm, and pumpkin patch to increase soil health and longevity.
Notes (optional):
Cost of Request (Nothing will be funded over the amount listed.): 11000

Link Actions to District Objectives

District Objectives: 2018-2021
District Objective 2.1 - Increase the percentage of students who earn an associate degree or certificate (CTE and Non-CTE) by 5 percentage points over three years

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Action: 2021-2022 Lights for COS Pastures/Alleys

For student and faculty safety, it is pertinent to have lights installed for the pastures/alleys when livestock/horses are being worked with and checked on when it is dark outside.

Leave Blank:
Implementation Timeline: 2021 - 2022
Leave Blank:
Leave Blank:
Identify related course/program outcomes:
Person(s) Responsible (Name and Position): Russell McKeith, Kim Pitigliano, Allison Vander Plaats - Animal Science Faculty
Rationale (With supporting data):
Priority: High
Safety Issue: Yes
External Mandate: No
Safety/Mandate Explanation:

Resources Description

Equipment - Non-Instructional - Proper lighting to work with and monitor livestock in the pastures/alley ways/livestock handling facilities when it is dark/minimal light outside. (Active)

Why is this resource required for this action?: Students checking/gathering livestock and equines at night are currently doing it with minimal/no light. Livestock could pose a safety threat to students and faculty.
Notes (optional):
Cost of Request (Nothing will be funded over the amount listed.): 80000

Link Actions to District Objectives

District Objectives: 2018-2021
District Objective 2.1 - Increase the percentage of students who earn an associate degree or certificate (CTE and Non-CTE) by 5 percentage points over three years
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Action: 2020-2021 Shades for Livestock and Equine Pastures

To purchase permanent shades for COS Livestock and Equine Pastures

Leave Blank:
Implementation Timeline: 2020 - 2021
Leave Blank:
Leave Blank:
Identify related course/program outcomes: This fall under many of the outcomes for ASCI classes at COS. We want to provide shade for livestock and equine currently in pastures, which do not have any shade. This is an animal health and welfare problem due to our extreme hot dry summers. To maximize health and wellbeing of the animals shades would drastically improve

current conditions.
Person(s) Responsible (Name and Position): Russell McKeith, Allison Vander Plaats, Kim Pitligiano
Rationale (With supporting data): Animals with a shade structure will have better health, as well as animal welfare status. Currently the animals have no shade whatsoever. To maximize health and wellbeing of the animals shades would drastically improve current conditions.
Priority: High
Safety Issue: Yes
External Mandate: No
Safety/Mandate Explanation:

Update on Action

Updates

Update Year: 2021-2022 08/25/2021
Status: Action Completed
Shades were purchased & installed over the summer of 2021, much to the enjoyment of animals housed in pastures
Impact on District Objectives/Unit Outcomes (Not Required):

Resources Description

Equipment - Non-Instructional - To purchase shade structures for equine and livestock residing in pastures at COS Livestock Units (Active)
Why is this resource required for this action?: Currently, there is no shade available for livestock and equine residing in the pastures. The extreme weather can have negative effects on the livestock and equine well-being. To escape these conditions, shades would drastically improve their overall well-being.
Notes (optional):
Cost of Request (Nothing will be funded over the amount listed.): 20000

Link Actions to District Objectives

District Objectives: 2018-2021
District Objective 1.1 - The District will increase FTES by 1.75% over the three years
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District Objective 2.4 - By 2021, Increase the percentage of CTE students who achieve their employment objectives by 5 percentage points
District Objective 4.1 - Increase the use of data for decision-making at the District and department/unit level

Action: 2021-2022 Student Safety

Spray lining for all wash racks is needed for student and livestock safety and proper handling of livestock.

Leave Blank: Continued Action
Implementation Timeline: 2019 - 2020, 2021 - 2022
Leave Blank: 08/17/2015
Leave Blank: 06/30/2019
Identify related course/program outcomes: ASCI 140 #2: Given examples of appropriate physical posturing and guided practice of balance and mounting, students will be able to apply the concepts of posture and proper balance while mounted on their horse. They will also demonstrate different types of reining, including one and two handed techniques while relating leg aides to the horses gait. Equine industry standards shall be applied to competency in this area.
ASCI 140 #3

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Given appropriate modeling of leg aides and movements, students will be able to identify various leg aides that complement the different gaits of the horse. They will also observe and practice proper leads of the horse. Equine industry standards shall be applied to the competency in this area.
ASCI 001 #1 Upon completion of this course students will be able to restrain, move and safely monitor livestock from pen to trailer.
(Active)
Person(s) Responsible (Name and Position): Kim Pitigliano
Rationale (With supporting data): 1. Non slip flooring is needed for the safety of students and livestock while hauling and bathing animals.

Priority: High
Safety Issue: Yes
External Mandate: No
Safety/Mandate Explanation: Students and/or livestock could get hurt if not put in at the COS Livestock Units.

Update on Action

Updates

Update Year: 2020 - 2021 10/02/2020
Status: Action Completed
The lighting for the alleyways/pastures for student safety is asked in another action request.
Impact on District Objectives/Unit Outcomes (Not Required):

Resources Description

Equipment - Instructional - Permanent Ruber liners for the beef, equine and sheep wash racks (Active)
Why is this resource required for this action?: To help with livestock and human safety. Currently, our rubber mats in our wash rack are deteriorating so they need to be replaced for safety reasons
Notes (optional):
Cost of Request (Nothing will be funded over the amount listed.): 20000

Link Actions to District Objectives

District Objectives: 2018-2021
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District Objective 4.3 - College of the Sequoias Board of Trustees, administration, faculty, and staff will engage in best practices and staff development to sustain effective operational systems for institutional assessment and continuous improvement.

District Objectives: 2015-2018
District Objectives - 1.1 - Increase overall enrollment by 1.75% annually
District Objectives - 2.1 - Increase the number of students who are transfer-prepared annually.
District Objectives - 2.3 - Increase course success and completion rates in pre-transfer English, Math, and English as a Second Language courses annually.

Action: 2020-2021 Student worker management and training

Program Review - Animal Science

Continue with protocol integration into livestock units, training of student workers and volunteers on how to use protocols, and more strictly manage student worker hours and tasks to stay within given budgets through closer monitoring of hours and tasks and formal student training.

Leave Blank:
Implementation Timeline: 2020 - 2021
Leave Blank:
Leave Blank:
Identify related course/program outcomes:
Person(s) Responsible (Name and Position): Allison Vander Plaats, Russell McKeith
Rationale (With supporting data): Students are an invaluable part of our COS livestock units, but lack of consistency in training and unclear expectations have lead to problems in the past with budgeting hours and the high quality of animal care that we expect. A more formal training program for student workers and incorporation of unit protocols into our animal science courses will give students valuable real-life experience in finding and treating sick animals, and improve their knowledge and safety working around livestock.
Priority: High
Safety Issue: Yes
External Mandate: No
Safety/Mandate Explanation:

Update on Action

Updates

Update Year: 2021-2022 08/25/2021
Status: Continue Action Next Year
Student hours are better monitored with creation of hour budget rather than fiscal budget. Student training is ongoing, with creation of Canvas complete, but creation of content in progress
Impact on District Objectives/Unit Outcomes (Not Required):

Link Actions to District Objectives

District Objectives: 2018-2021
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Action: 2020-2021 Increased enrollment in Animal Science and Dairy Science courses

Continued evaluation of certificates and degrees, clarification with counselors, and advertisement will result in increased enrollment in struggling courses. Courses to consider include ASCI 130, ASCI 224, DSCI 101, and DSCI 104.

Leave Blank:
Implementation Timeline: 2020 - 2021
Leave Blank:
Leave Blank:
Identify related course/program outcomes:
Person(s) Responsible (Name and Position): Allison Vander Plaats, Russell McKeith, Kim Pitigliano
Rationale (With supporting data):

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Priority: High
Safety Issue: No
External Mandate: No
Safety/Mandate Explanation:

Update on Action

Updates

Update Year: 2021-2022 09/28/2021
Status: Continue Action Next Year
Enrollment for Fall 2020 ASCI courses seem to have maintained or increased for certain courses.
Impact on District Objectives/Unit Outcomes (Not Required):

Link Actions to District Objectives

District Objectives: 2018-2021
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Action: 2020-2021 IMV Imaging ultrasound with rectal probe

Purchase an ultrasound for pregnancy diagnosis in COS cattle, sheep, and pigs, as well as use as a teaching tool for pregnancy diagnosis, lung evaluation, and lump/bump evaluation.

Leave Blank:
Implementation Timeline: 2020 - 2021
Leave Blank:
Leave Blank:
Identify related course/program outcomes: Related to outcomes in ASCI 110 Swine Science, ASCI 111 Beef Cattle Science, ASCI 112 Small Ruminant Science, and improved care and data collection for livestock health and management
Person(s) Responsible (Name and Position): Allison Vander Plaats
Rationale (With supporting data): Ultrasonography is an increasingly important part of pregnancy diagnosis in livestock. We currently blood test our cattle, but that doesn't provide sufficient information leading to many retests. Students will practice animal handling, gain familiarity with looking at ultrasound images and how ultrasounds work, and learn to identify pregnant versus open animals. We currently use our convex ultrasound for pregnancy diagnosis of sheep and pigs with great success and student enthusiasm and would like to expand opportunities to cattle (the convex probe is not sufficient for this purpose). The existing equine ultrasound is not sufficient for this purpose due to size and lack of portability.
Priority: Medium
Safety Issue: No
External Mandate: No
Safety/Mandate Explanation:

Update on Action

Updates

Update Year: 2021-2022 08/25/2021
Status: Action Completed
Easi-Scan GO was purchased, along with iPad Pro to allow students to watch during scanning. Ultrasound has been used for

pregnancy diagnosis of cattle, sheep, & swine with great student enthusiasm about ability to see
Impact on District Objectives/Unit Outcomes (Not Required):

Resources Description

Equipment - Instructional - IMV Easi-Scan Go Ultrasound (Active)
Why is this resource required for this action?: Ultrasonography is an increasingly important tool in pregnancy diagnosis, as well as evaluation of other body systems (including lungs, testicles, and lumps and bumps). This machine would be useful for all of our livestock species, allowing students to view what the user is viewing, and improve pregnancy diagnosis.
Notes (optional):
Cost of Request (Nothing will be funded over the amount listed.): 15000

Link Actions to District Objectives

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Action: 2020-2021 Animal Science awards trophy case

Purchase and set up of a trophy case in the Livestock Pavilion to show off student achievements and contribute to student involvement and enthusiasm in Animal Science programs and activities.

Leave Blank:
Implementation Timeline: 2020 - 2021
Leave Blank:
Leave Blank:
Identify related course/program outcomes:
Person(s) Responsible (Name and Position): Kim Pitigliano
Rationale (With supporting data):
Priority: Low
Safety Issue: No
External Mandate: No
Safety/Mandate Explanation:

Update on Action

Updates

Update Year: 2021-2022 08/25/2021
Status: Continue Action Next Year
No case has been purchased & no location yet agreed upon. Continued discussion is required
Impact on District Objectives/Unit Outcomes (Not Required):

Link Actions to District Objectives

District Objectives: 2018-2021

Program Review - Animal Science

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District Objective 2.1 - Increase the percentage of students who earn an associate degree or certificate (CTE and Non-CTE) by 5 percentage points over three years
District Objective 2.2 - Increase the number of students who transfer to a four-year institution by 10 percent over three years
District Objective 2.4 - By 2021, Increase the percentage of CTE students who achieve their employment objectives by 5 percentage points
District Objective 4.1 - Increase the use of data for decision-making at the District and department/unit level

Action: 2020-2021 Cameras for sheep and swine units

Purchase cameras to assist with farrowing and lambing of COS Livestock, allowing better monitoring of animals close to giving birth

Leave Blank:
Implementation Timeline: 2020 - 2021
Leave Blank:
Leave Blank:
Identify related course/program outcomes: This is linked to SLOs in ASCI 112: Small Ruminant Science and ASCI 110: Swine Science.
Person(s) Responsible (Name and Position): Russell McKeith and Dr. Allison Vander Plaats
Rationale (With supporting data): Students will be able to view the farrowing and lambing process easier and more frequently by having it recorded via cameras. Additionally, there are safety concerns for faculty and students who check the animals during the night when the campus is closed.
Priority: High
Safety Issue: Yes
External Mandate: No
Safety/Mandate Explanation:

Update on Action

Updates

Update Year: 2021-2022 08/25/2021
Status: Continue Action Next Year
Initial planning has taken place, but cameras have not yet been installed & are not yet functional
Impact on District Objectives/Unit Outcomes (Not Required):

Resources Description

Equipment - Instructional - Wireless camera system to observe livestock in the swine and sheep barns. More specifically, the cameras would be in the farrowing room in the swine unit, as well as focusing on the pens in the sheep unit. (Active)
Why is this resource required for this action?: Currently we do not have this technology, which will make it easier to check the animals more frequently. Present practice is to check the gilts/sows that are getting ready to farrow approximately every 5 hours. This becomes cumbersome when checking the animals when campus is closed due to safety precautions for faculty and student herdsmen. Additionally, this would allow students to observe the parturition process at a later date during the actual class period.
Notes (optional):
Cost of Request (Nothing will be funded over the amount listed.): 5000

Link Actions to District Objectives

District Objectives: 2018-2021
District Objective 1.1 - The District will increase FTES by 1.75% over the three years
District Objective 2.1 - Increase the percentage of students who earn an associate degree or certificate (CTE and Non-CTE) by 5

percentage points over three years

District Objective 2.2 - Increase the number of students who transfer to a four-year institution by 10 percent over three years

District Objective 2.4 - By 2021, Increase the percentage of CTE students who achieve their employment objectives by 5 percentage points

District Objective 4.1 - Increase the use of data for decision-making at the District and department/unit level

Action: 2020-2021 Learning Models for Equine Students

Reproduction and Hoof learning models are needed for proper hands on instruction in the Equine Classes.

Leave Blank:
Implementation Timeline: 2020 - 2021
Leave Blank:
Leave Blank:
Identify related course/program outcomes: ASCI 22 #4 Upon completion of this course students will be able to list and disseminate function for each major anatomical system of the horse.
ASCI 123 #1 Given a bred mare or reproductive scenario, students will be able to demonstrate understanding proper equine care from gestation through foaling. This will include applying record management to equine health decisions. The student will be evaluated in this area by demonstrating his problem solving ability with a production scenario problem to include health and reproduction. The student must consider all possible management decisions to classify the problem.
Person(s) Responsible (Name and Position): Kim Pitigliano
Rationale (With supporting data): Agriculture is taught with a hands-on approach. Models will help explain detailed information about two of the most important aspects of equine science, Reproduction and Hoof Care. Students that struggle with day to day lecture will find the models helpful in a lab setting as well as they can be used during the lecture portion of class.
Priority: High
Safety Issue: No
External Mandate: No
Safety/Mandate Explanation:

Update on Action

Updates

Update Year: 2021-2022 08/25/2021
Status: Action Completed
Both reproductive & hoof models were purchased
Impact on District Objectives/Unit Outcomes (Not Required):

Resources Description

Equipment - Instructional - Reality Works-Horse Hoof Model and Horse Uterus Model. SKU#s 43010210 and 43010501 (Active)
Why is this resource required for this action?: Items need to be ordered to better explain to and assess students.
Notes (optional): LINK to items:
https://www.realityworks.com/product/horse-hoof-model/

https://www.realityworks.com/product/horse-uterus-model/

Cost of Request (Nothing will be funded over the amount listed.): 1500

Link Actions to District Objectives

District Objectives: 2018-2021

District Objective 1.1 - The District will increase FTES by 1.75% over the three years
District Objective 2.1 - Increase the percentage of students who earn an associate degree or certificate (CTE and Non-CTE) by 5 percentage points over three years
District Objective 2.2 - Increase the number of students who transfer to a four-year institution by 10 percent over three years
District Objective 2.4 - By 2021, Increase the percentage of CTE students who achieve their employment objectives by 5 percentage points
District Objective 4.1 - Increase the use of data for decision-making at the District and department/unit level

Action: 2018-2019 Increased Continuing education for Faculty

Continuing Education for faculty to learn up-to-date animal science reproduction skills and other current industry skills to instruct students on the most current industry standards.

Leave Blank: Continued Action
Implementation Timeline: 2019 - 2020, 2021 - 2022
Leave Blank: 09/01/2017
Leave Blank: 05/31/2019
Identify related course/program outcomes: ASCI 123 Horse Production:
Course Outcome
1. Given a bred mare or reproductive scenario, students will be able to demonstrate understanding proper equine care from gestation through foaling. This will include applying record management to equine health decisions. The student will be evaluated in this area by demonstrating his/her problem solving ability with a production scenario problem to include health and reproduction. The student must consider all possible management decisions to classify the problem.
ASCI 110 Swine Production:
Course Outcome:
1. Upon completion of this course, students will be able to list and define accepted practices for selecting and maintaining a breeding herd of swine.
ASCI 111 Beef Production:
Course Outcome:
1. Upon completion of this course, students will be able to explain and demonstrate basic breeding, selection practices for beef cattle.
ASCI 112 Sheep Production:
Course Outcome:
1. Upon completion of this class, students will be able to describe and implement a breeding program for the production of lambs.
Person(s) Responsible (Name and Position): Kim Pitigliano and Russell McKeith - Animal Science Faculty
Rationale (With supporting data): Proper training for current knowledge regarding standard industry reproduction techniques is essential to give students proper training to prepare them for employment in the equine/livestock industry. New animal science facilities in Tulare offer the opportunity for students to have hands-on education utilizing the most current and novel methodology. The Animal Science and Equine advisory committees strongly recommend staying on the cutting edge with modern reproduction techniques, and believe it is essential in utilizing these facilities to their best educational advantage.
Priority: High
Safety Issue: Yes
External Mandate: No
Safety/Mandate Explanation:

Update on Action

Updates

Update Year: 2021-2022 09/28/2021
Status: Continue Action Next Year
It is important for faculty to stay current on all necessary industry skills in animal science.
Impact on District Objectives/Unit Outcomes (Not Required):

Program Review - Animal Science

Resources Description

Technology - Funding for classes. Classes that are needed for current industry practices include: Artifical insemination procedures (including deep horn insemination), embryo transfer, frozen and cooled semen, as well as proper bull, ram, boar and stallion handling. (Active)

Why is this resource required for this action?: Funding is required because industry training is offered via private companies and training entities.

Notes (optional):

Cost of Request (Nothing will be funded over the amount listed.): 2500

Link Actions to District Objectives

District Objectives: 2018-2021
District Objective 1.1 - The District will increase FTES by 1.75% over the three years
District Objective 2.1 - Increase the percentage of students who earn an associate degree or certificate (CTE and Non-CTE) by 5 percentage points over three years
District Objective 2.2 - Increase the number of students who transfer to a four-year institution by 10 percent over three years
District Objective 4.1 - Increase the use of data for decision-making at the District and department/unit level
District Objective 4.3 - College of the Sequoias Board of Trustees, administration, faculty, and staff will engage in best practices and staff development to sustain effective operational systems for institutional assessment and continuous improvement.

District Objectives: 2013-2015
2013-2015: District Objective #7 - District Objective #7 for 2013 - 2015: Allocate resources based on an accountable and systematic District-wide planning and budget development process that links this allocation to Institutional Program Reviews and the Strategic Plan.

District Objectives: 2015-2018
District Objectives - 1.1 - Increase overall enrollment by 1.75% annually
District Objectives - 2.1 - Increase the number of students who are transfer-prepared annually.
District Objectives - 2.2 - Increase the number of students who earn an associate degree or certificate annually.
District Objectives - 2.4 - Increase Career Technical Education course success rates and program completion annually.
District Objectives - 3.2 - Increase training for academic and student services staff and faculty to respond to the unique needs of our student population.