

# Agriculture Program Review

2011-2012

## 1. Program Description

### A. Description

The Agriculture Department offers the opportunity for students to excel by providing the latest information, technology, and hands-on learning opportunities in both the lecture and laboratory settings. A comprehensive set of undergraduate courses fulfill the general education and transfer requirements of students. Students may obtain an AS in Plant Science; Proficiency Certificate in Landscape Management; or Proficiency Certificate in Natural Resources Management; all of which help fulfill major requirements optimized in preparation for advanced degrees in Agriculture and Natural Resources Management at four-year institutions. A background in Agriculture and Natural Resources provides the basis for numerous challenging careers. Opportunities await the students in such fields as agricultural food production and processing, natural resources management, forestry, and numerous private and public sector careers with national, state and local agencies including state and national parks, Natural Resources Conservation Service, Forest Service, Bureau of Land Management (BLM), and other Department of Interior careers.

### B. Program Student Learning Outcomes - Successful students in the program are able to:

1. Apply knowledge of plants, animals, soils, and climates to environmental settings with understanding of basic principles of soil fertility and water quality.
2. Predict plant growth outcomes by applying basic principles of botany.
3. Recommend management strategies in the use of Earth's natural resources.
4. Recognize, interpret, and recommend control strategies for common plant pests and diseases, and understand the use of herbicides, pesticides, fertilizers, and integrated pest management principles.

### C. College Level Student learning Outcomes

1. Critical Thinking and Problem Solving
2. Communication
3. Information Competency

### D. Estimated Costs (Required for Certificate of Achievement ONLY)

	<b>Cost</b>
Enrollment Fees	\$720
Books	\$350
Supplies	\$50
Total	\$1120

### E. Criteria Used for Admission

No criteria for admission.

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## F. Vision

Ventura College will be a model community college known for enhancing the lives and economic futures of its students and the community.

## G. Mission

Ventura College, one of the oldest comprehensive community colleges in California, provides a positive and accessible learning environment that is responsive to the needs of a highly diverse student body through a varied selection of disciplines, learning approaches and teaching methods including traditional classroom instruction, distance education, experiential learning, and co-curricular activities. It offers courses in basic skills; programs for students seeking an associate degree, certificate or license for job placement and advancement; curricula for students planning to transfer; and training programs to meet worker and employee needs. It is a leader in providing instruction and support for students with disabilities. With its commitment to workforce development in support of the State and region's economic viability, Ventura College takes pride in creating transfer, career technical and continuing education opportunities that promote success, develop students to their full potential, create lifelong learners, enhance personal growth and life enrichment and foster positive values for successful living and membership in a multicultural society. The College is committed to continual assessment of learning outcomes in order to maintain high quality courses and programs. Originally landscaped to be an arboretum, the College has a beautiful, park-like campus that serves as a vital community resource.

## H. Core Commitments

Ventura College is dedicated to following a set of enduring Core Commitments that shall guide it through changing times and give rise to its Vision, Mission and Goals.

- Student Success
- Respect
- Integrity
- Quality
- Collegiality
- Access
- Innovation
- Diversity
- Service
- Collaboration
- Sustainability
- Continuous Improvement

## I. Degrees/Certificates

Program's courses are designed to articulate to UC and CSU for transfer students.

A.S. – Agricultural Plant Science. A.S. Natural Resources

Certificate of Achievement – Agricultural Plant Science, Landscape Management, Natural Resources

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## J. Program Strengths, Successes, and Significant Events

The Agriculture Department offers the opportunity for students to excel in rigorous program of study leading mainly to transfer to top agriculture and natural resources management schools throughout California, including California Polytechnic State University, UC Davis, California State University at Fresno, Humboldt, and the soon to be program in Agriculture at Cal State Channel Islands. The strength of the program has been its reputation for quality in providing the latest information, technology, and hands-on learning opportunities in both the lecture and laboratory settings. A comprehensive set of undergraduate courses fulfill the general education and transfer requirements of students. Students may obtain an AS in Plant Science; Proficiency Certificate in Landscape Management; or Proficiency Certificate in Natural Resources Management; all of which help fulfill major requirements optimized in preparation for advanced degrees in Agriculture and Natural Resources Management at four-year institutions. Success has been achieved in the number of students transferring to 4-year universities, most of which do not stop to achieve a certificate. Graduates and transfer students have moved on to achieve numerous degrees and occupations in agricultural food production and processing, natural resources management, forestry, and numerous private and public sector careers with national, state and local agencies including state and national parks, Natural Resources Conservation Service, Forest Service, Bureau of Land Management (BLM), and other Department of Interior careers.

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## K. Organizational Structure

President: Robin Calote

Executive Vice President: Ramiro Sanchez

Assistant Dean: Jerry Mortensen

Department Chair: Casey Mansfield

### Instructors and Staff

<b>Name</b>	<b>William Budke</b>
Classification	Professor, Geosciences/Agriculture
Year Hired	2002
Years of Work-Related Experience	
Degrees/Credentials	A.A., B.A., M.S.

<b>Name</b>	<b>Dr. Marta de Jesus</b>
Classification	Professor, Biology/Agriculture
Year Hired	Three years teaching one class in agriculture-Plant Biology
Years of Work-Related Experience	
Degrees/Credentials	B.S., M.S, PhD.

<b>Name</b>	<b>Kamelia Algiers</b>
Classification	Professor, Biology
Year Hired	2004 (Three years teaching one class agriculture-Plant Biology)
Years of Work-Related Experience	
Degrees/Credentials	B.S., M.S.

<b>Name</b>	<b>Kirk Richter</b>
Classification	Part-time Faculty, Agriculture
Year Hired	2006, Fillmore High School, East Campus Course Instructor
Years of Work-Related Experience	
Degrees/Credentials	B.S., M.S.

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## 2. Performance Expectations

A. Program Student Learning Outcomes - Successful students in the program are able to:

1. Apply knowledge of plants, animals, soils, and climates to environmental settings with understanding of basic principles of soil fertility and water quality.
2. Predict plant growth outcomes by applying basic principles of botany.
3. Recommend management strategies in the use of Earth's natural resources.
4. Recognize, interpret, and recommend control strategies for common plant pests and diseases, and understand the use of herbicides, pesticides, fertilizers, and integrated pest management principles.

B. Student Success Outcomes

1. The program will increase its retention rate from the average of the **program's** prior three-year retention rate. The retention rate is the number of students who finish a term with any grade other than W or DR divided by the number of students at census.
2. The program will increase its retention rate from the average of the **college's** prior three-year retention rate. The retention rate is the number of students who finish a term with any grade other than W or DR divided by the number of students at census.
3. The program will increase the student success rates from the average of the **program's** prior three-year success rates. The student success rate is the percentage of students who receive a grade of c or better.
4. The program will increase the student success rates from the average of the **college's** prior three-year success rates. The student success rate is the percentage of students who receive a grade of C or better.
5. Students will complete the program earning certificates and/or degrees.

C. Program Operating Outcomes

1. The program will maintain WSCH/FTEF above the 525 goal set by the district.
2. Inventory of instructional equipment is functional, current, and otherwise adequate to maintain a quality-learning environment. Inventory of all equipment over \$200 will be maintained and a replacement schedule will be developed. Service contracts for equipment over \$5,000 will be budgeted if funds are available.

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### D. Courses to Student Learning Outcomes Map

#### Course to Program-Level Student Learning Outcome Mapping (CLSLO)

**I:** This program-level student learning outcome is **INTRODUCED** in this course.

**P:** This program-level student learning outcome is **PRACTICED** in this course.

**M:** This program-level student learning outcome is **MASTERED** in this course.

Leave blank if program-level student learning outcome is not addressed.

Courses	PLSLO #1	PLSLO #2	PLSLO #3	PLSLO #4
AG V03	P	M		I
AG V04	P	P	P	I
AG V21	I	P	I	M
AG V22	I	P	I	M
AG V23	I	P	I	M
AG V30	I	M		P
AG V40	I	P		P
AG V41	P	P	I	P
AG V42A	P	P	I	P
AG V42B	P	P	I	P
AG V45	I	P	I	P
AG V54	P	I	M	I
AG V88	P	P	P	P
AG V90	M	M	M	M

# Agriculture Program Review

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## 3. Operating Information

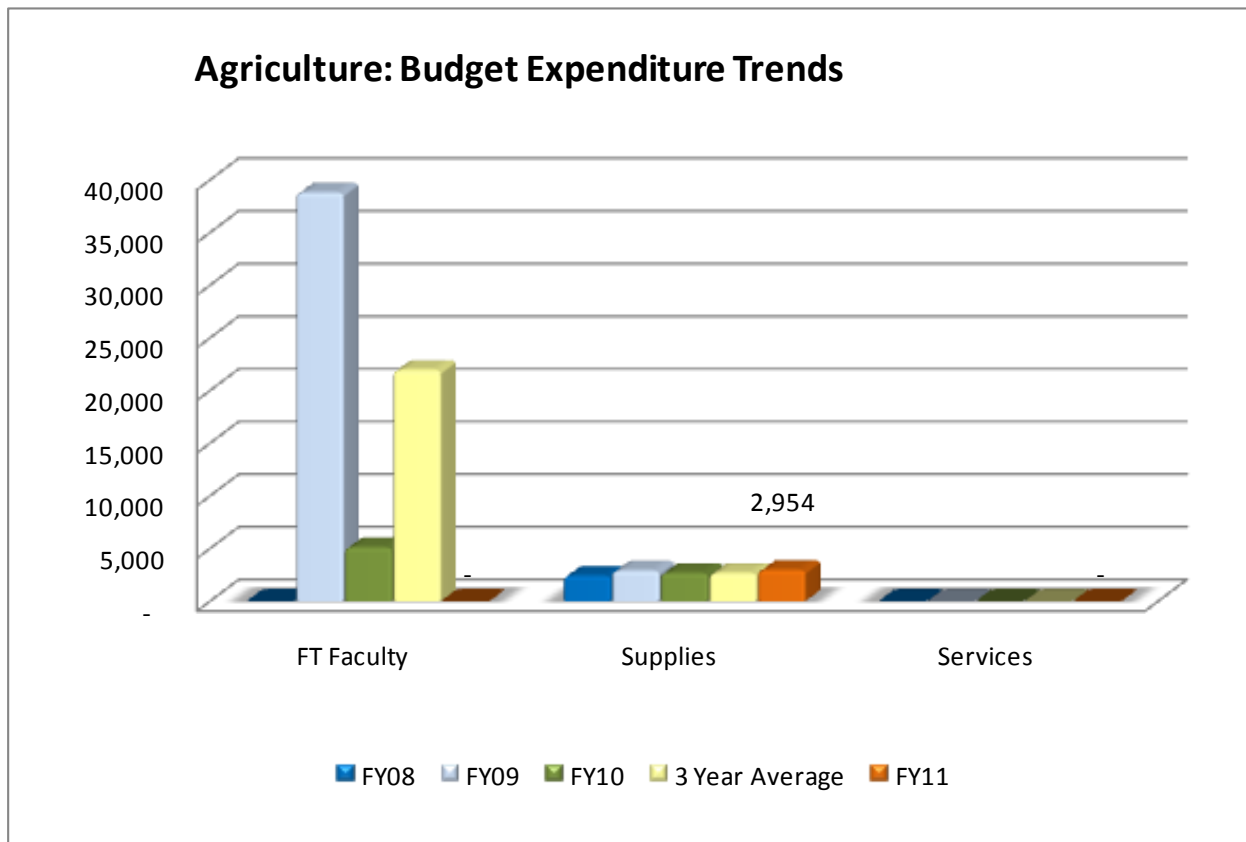
### A1: Budget Summary Table

To simplify the reporting and analysis of the Banner budget detail report, the budget accounts were consolidated into nine expense categories. The personnel categories include employee payroll expenses (benefits). The “3 Year Average” was computed to provide a trend benchmark to compare the prior three year expenses to the FY11 expenses. The “FY11 College” expense percentages are included to provide a benchmark to compare the program’s expenses to the overall college expenses.

Category	Title	FY08	FY09	FY10	3 Year Average	FY11	FY11 Program	FY11 College
1	FT Faculty	-	38,797	5,107	21,952	-	-100%	12%
7	Supplies	2,423	2,900	2,670	2,664	2,954	11%	24%
8	Services	8	7	-	8	-	-100%	-17%
	<b>Total</b>	<b>2,431</b>	<b>41,704</b>	<b>7,777</b>	<b>17,304</b>	<b>2,954</b>	<b>-83%</b>	<b>0%</b>

### A2: Budget Summary Chart

This chart illustrates the program’s expense trends. The data label identifies the FY11 expenses (the last bar in each group). The second-to-last bar is the program’s prior three year average.

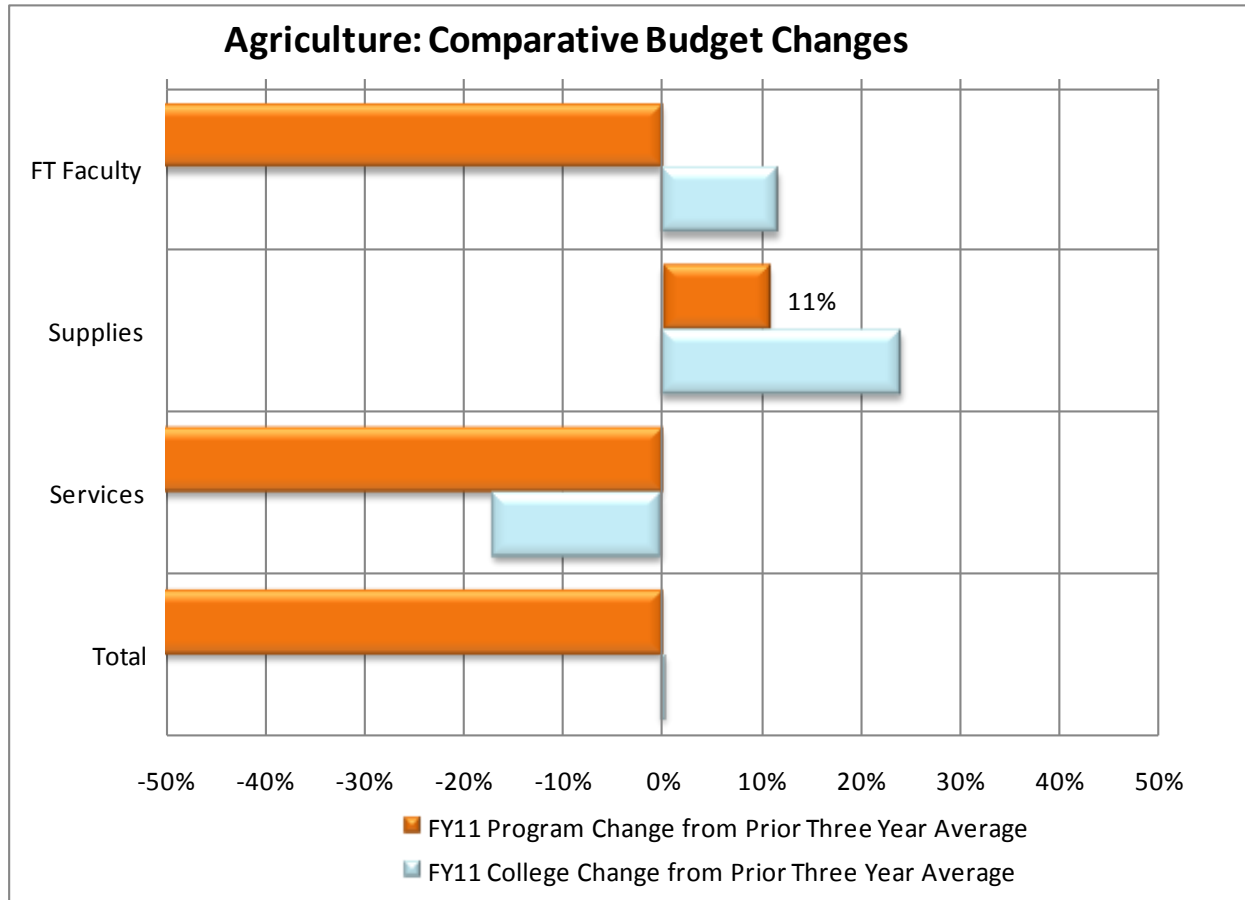


## Agriculture Program Review

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### A3: Comparative Budget Changes Chart

This chart illustrates the percentage change from the prior three year average expense to the FY11 expenses. The top bar for each budget category represents the program's change in expenses and includes the data label. The second bar represents the college's change in expenses.



### A4: Budget Detail Report

The program's detail budget information is available in *Appendix A – Program Review Budget Report*. This report is a PDF document and is searchable. The budget information was extracted from the District's Banner Financial System. The program budget includes all expenses associated to the program's Banner program codes within the following funds: general fund (111), designated college equipment fund (114-35012), State supplies and equipment funds (128xx), and the technology refresh fund (445). The *Program Review Budget Report* is sorted by program (in alphabetical order) and includes the following sections: total program expenses summary; subtotal program expenses for each different program code; detail expenses by fund, organization and account; and program inventory (as posted in Banner). To simplify the report, the Banner personnel benefit accounts (3xxx) were consolidated into employee type benefit accounts (3xxx1 = FT Faculty, 3xxx2 = PT Faculty, 3xxx3 = Classified, etc.).



## **Agriculture Program Review**

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### A5: Interpretation of the Program Budget Information

The agriculture program shows at least a 50% reduction in the average FT faculty expenditure over the last three years, while the College average FT faculty expenditure has increased 12%. A contributing factor to this significant reduction in average FT faculty expenditure may be due to faculty teaching hourly assignments versus having program courses taught as part of load. Since, the program is operating with existing faculty from other departments, the costs of instruction have been significantly reduced, while program courses have been taught consistently to support program objectives without program growth.

The supply budget shows a slight increase averaging 11%, however, this value is significantly below the college average. Supplies are usually purchased using annual CTEA grant funding instead of institutional funds. The total supply budget has been consistent and relatively insignificant at approximately \$2900 annually for more than three years, and is expected not to increase significantly in the next three years.

The agriculture program reduced by at least an average of 50% expenditures for services in fiscal year 2011, which significantly exceeded college reductions.

Equipment expenditures were markedly less in FY11 due to the ending of a two-year STEM grant that funded a major portion of the equipment needs in the Agriculture program in fiscal years 2008-2010. As the Agriculture program transitioned to a more robust science based curriculum consist with hands-on research based learning opportunities using state-of-the-art equipment without the need to burden institutional funds, no significant increases are expected to occur in equipment expenditures, since most agriculture equipment expenditures are supported by annual CTEA funding.

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## B1: Program Inventory Table

This chart shows the inventory (assets) as currently posted in the Banner Financial System. This inventory list is not complete and will require review by each program. Based on this review an updated inventory list will be maintained by the college. A result of developing a complete and accurate inventory list is to provide an adequate budget for equipment maintenance and replacement (total-cost-of-ownership). The college will be working on this later this fall.

Item	Vendor	Org	Fund	Purchased	Age	Price	Perm Inv #	Serial #
No Equipment in the Banner Assets system.								

## B2: Interpretation of the Program Inventory Information

The equipment list provided by Banner is incomplete and does not accurately reflect the program's holdings. An inventory is underway to provide an accurate equipment list. A quick survey of existing equipment shows that agriculture has nearly \$300,000 of equipment, approximately 80% of which was acquired through the CCRAA STEM grant from FY 2008-2010.

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C1: Productivity Terminology Table

<b>Sections</b>	A credit or non-credit class. Does not include not-for-credit classes (community education).
<b>Census</b>	Number of students enrolled at census (typically the 4 <sup>th</sup> week of class for fall and spring).
<b>FTES</b>	Full Time Equivalent Students A student in the classroom 15 hours/week for 35 weeks (or two semesters) = 525 student contact hours. 525 student contact hours = 1 FTES. Example: 400 student contact hours = $400/525 = 0.762$ FTES. The State apportionment process and District allocation model both use FTES as the primary funding criterion.
<b>FTEF</b>	Full Time Equivalent Faculty A faculty member teaching 15 units for two semesters (30 units for the year) = 1 FTE. Example: a 6 unit assignment = $6/30 = 0.20$ FTEF (annual). The college also computes semester FTEF by changing the denominator to 15 units. However, in the program review data, all FTE is annual. FTEF includes both Full-Time Faculty and Part-Time Faculty. FTEF in this program review includes faculty assigned to teach extra large sections (XL Faculty). This deviates from the district practice of not including these assignments as part of FTEF. However, it is necessary to account for these assignments to properly produce represent faculty productivity and associated costs.
<b>Cross Listed FTEF</b>	FTEF is assigned to all faculty teaching cross-listed sections. The FTEF assignment is proportional to the number of students enrolled at census. This deviates from the practice of assigning load only to the primary section. It is necessary to account for these cross-listed assignments to properly represent faculty productivity and associated costs.
<b>XL FTE</b>	Extra Large FTE: This is the calculated assignment for faculty assigned to extra large sections (greater than 60 census enrollments). The current practice is not to assign FTE. Example: if census > 60, 50% of the section FTE assignment for each additional group of 25 (additional tiers).
<b>WSCH</b>	Weekly Student Contact Hours The term "WSCH" is used as a total for weekly student contact hours AND as the ratio of the total WSCH divided by assigned FTEF. Example: 20 sections of 40 students at census enrolled for 3 hours per week taught by 4.00 FTEF faculty. $(20 \times 40 \times 3) = 2,400$ WSCH / 4.00 FTEF = 600 WSCH/FTEF.
<b>WSCH to FTES</b>	Using the example above: $2,400$ WSCH x 35 weeks = 84,000 student contact hours = $84,000 / 525 = 160$ FTES (see FTES definition). Simplified Formulas: $FTES = WSCH/15$ or $WSCH = FTES \times 15$
<b>District Goal</b>	Program WSCH ratio goal. WSCH/FTEF The District goal was set in 2006 to recognize the differences in program productivity.

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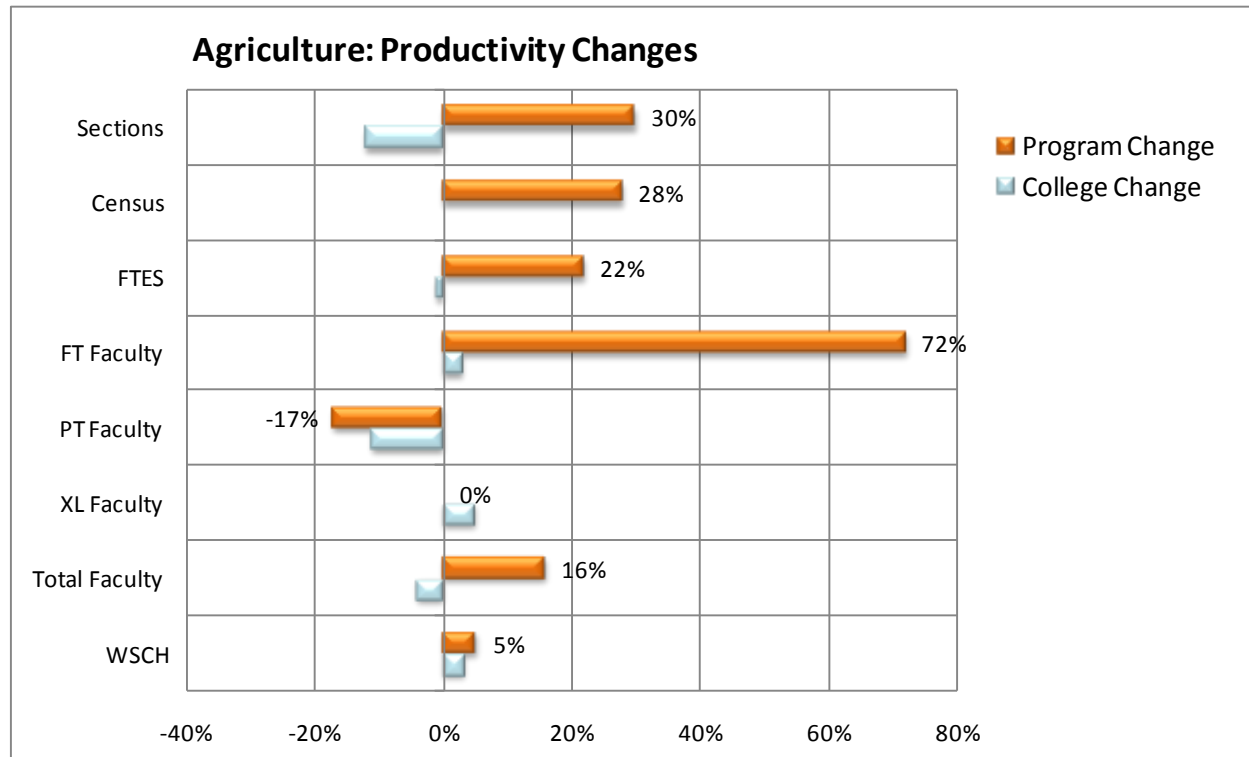
### C2: Productivity Summary Table

This table is a summary of the detail information provided in the *Program Review Productivity Report*. The “3 Year Average” was computed to provide a trend benchmark to compare the results of the prior three years to the FY11 results. The “FY11 College” percentages are included to provide a benchmark to compare the program’s percentages.

Title	FY08	FY09	FY10	3 Year Average	FY11	Program Change	College Change
Sections	7	8	8	8	10	30%	-12%
Census	122	161	164	149	190	28%	0%
FTES	18	25	26	23	28	22%	-1%
FT Faculty	0.13	0.47	0.32	0.31	0.53	72%	3%
PT Faculty	0.55	0.47	0.53	0.52	0.43	-17%	-11%
XL Faculty	-	-	-	-	-	0%	5%
Total Faculty	0.68	0.94	0.86	0.83	0.96	16%	-4%
WSCH	397	399	453	416	438	5%	3%

### C3: Comparative Productivity Changes Chart

This chart illustrates the percentage change from the prior three year average productivity to the FY11 productivity. The top bar for each budget category represents the program’s change in productivity and includes the data label. The second bar represents the college’s change in productivity.



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### C4: Interpretation of the Program Productivity Information

The agriculture program has slightly increased the number of sections being offered from 8 to 10 from FY 2008 to 2011, the average number of sections remains low at approximately 8 courses taught annually. The program has not been allowed to add sections during this period to significantly provide support necessary for a well rounded and complete program. A 30% increase over baseline of 7 to 8 sections begin taught does not reflect a significant increase in campus obligation to the program. Even with this modest increase in the number of sections being offered, there has been a significant 28% increase in the number of students served as reflected in the census enrollment, and FTES at 28% and 22% respectively. The burden of instruction has been increased on FT faculty with a substantial increase of 72%, moving up from an average of 53% over the last three years. PT faculty obligation has been reduced by 17% in FY 2011, however, this is not reflective of the obligation provided over the last 3 years at approximately 52%. Yet, overall, the program change from the 3 year average to FY 2011 is a modest increase of 5% WSCH, which aligns with the college change of 3% WSCH.

It should be noted that no course being taught in agriculture has a enrollment cap higher than 26, which makes meeting the 525 benchmark goal practically impossible. However, course are typically full as census, and the retention and success rates are high for students enrolled in the program. Significant and substantial improvement has been achieved from FY 08 WSCH moving from 397 to 453 in FY10, having a running 3 year average of 416. Even with two more sections being offered in FY11, the WSCH go up to 438.

With structural grant supported fiscal resources the classroom capacity has increased from 24 in FY 2008 to 35 in FY 2011. Evaluation of whether to increase the class cap has been proposed to help achieve and/or exceed the 525 productivity benchmark. With a modest increase in enrollment potential from 24 to 30 due to increased capacity, it is expected that a 10% improvement in the productivity would result WSCH in courses within the agriculture program, that this would translate to an overall WSCH exceeding the 525 number consistently.

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### D1: District WSCH Ratio Productivity Table

This table shows the District WSCH ratio (WSCH/FTEF) for each course by year for this program. Courses not offered during FY11 (last year) or without faculty load (independent study) are excluded. Because these are ratios, the combined average is computed using total WSCH and total FTEF (not the average of ratios). The formula used in this table distributes FTEF to all cross-listed sections (proportional to census enrollment) but does not include the associated faculty costs of extra large assignment.

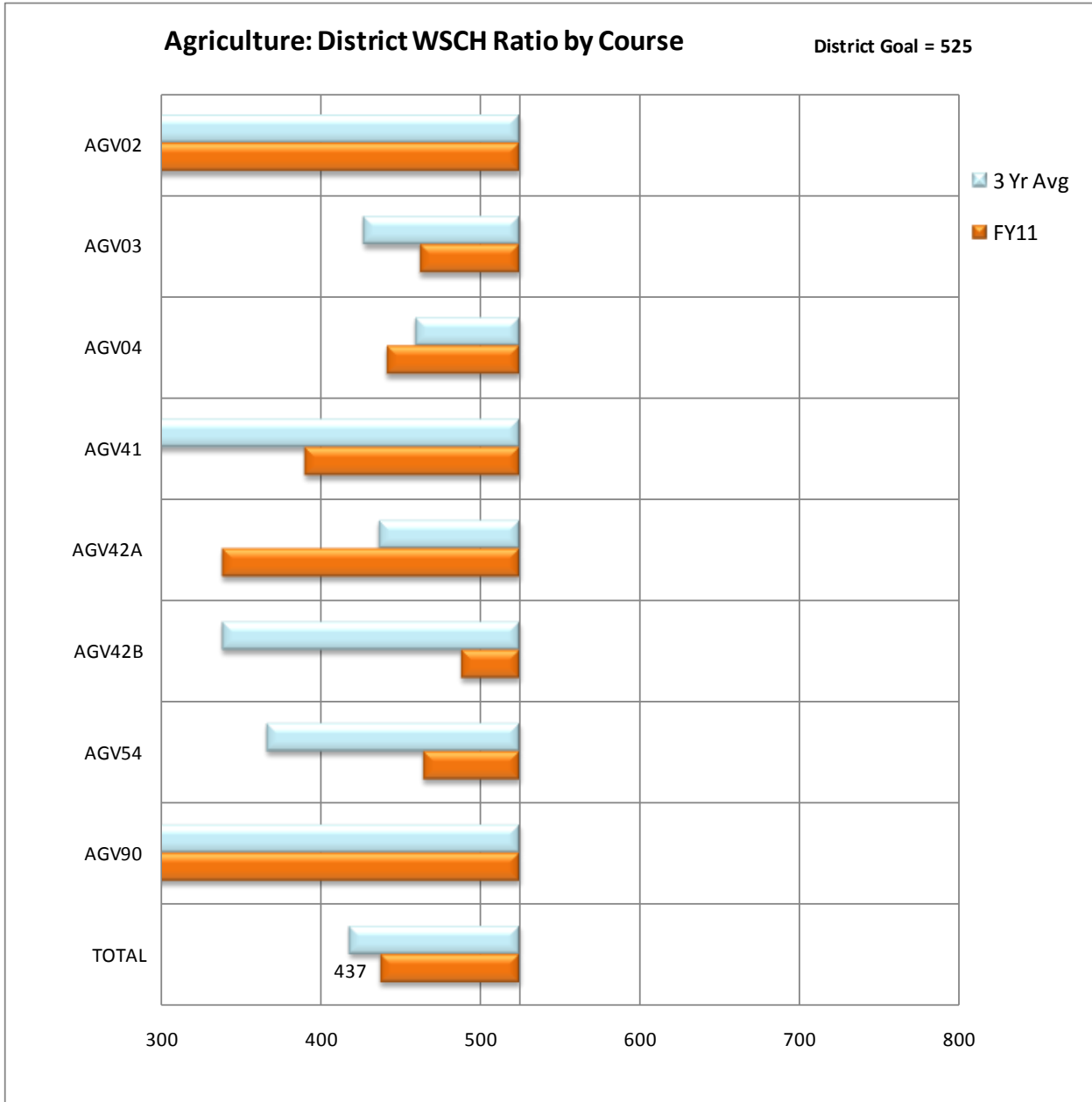
District WSCH Ratio = WSCH / (PT FTE + FT FTE).

<b>District WSCH Ratio: Weekly Student Contact Hours/(FT FTE+PT FTE)</b>									
Course	Title	FY08	FY09	FY10	3 Yr Avg	FY11	Change	Dist Goal	% Goal
AGV02	Agriculture Projects	-	-	-	-	-	0%	525	0%
AGV03	Plant Biology	413	394	491	427	462	8%	525	88%
AGV04	Soil and Water Science	-	431	488	459	441	-4%	525	84%
AGV41	Landscape Management	-	-	-	-	390	0%	525	74%
AGV42A	Landscape Plant ID & Uses I	431	413	450	436	338	-23%	525	64%
AGV42B	Landscape Plant ID & Uses II	375	300	-	338	488	44%	525	93%
AGV54	Conservation Natural Resources	337	382	383	366	464	27%	525	88%
AGV90	Directed Studies: Agriculture	-	-	-	-	-	0%	525	0%
<b>TOTAL</b>	<b>Annual District WSCH Ratio</b>	<b>399</b>	<b>392</b>	<b>462</b>	<b>418</b>	<b>437</b>	<b>5%</b>	<b>525</b>	<b>83%</b>

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### D2: District WSCH Ratio Productivity Chart

This chart illustrates the course level District WSCH ratio. The top bar shows the program's three year average. The second bar shows the program's FY11 WSCH ratio. The axis represents the District WSCH ratio goal set in 2006. The program's (or subject's) total WSCH ratio is shown as the TOTAL at the bottom of the chart.



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### D3: College WSCH Ratio Productivity Table

This table shows the College's WSCH ratio (WSCH/FTEF) for each course by year for the program. Courses not offered during FY11 (last year) or without faculty load (independent study) are excluded. Because these are ratios, the combined average is computed using total WSCH and total FTEF (not the average of ratios). The formula used in this table includes the associated faculty costs of extra large sections. Faculty teaching extra large sections are paid stipends equal to 50% of their section FTE assignment for each group of 25 students beyond the first 60 students (calculated in this table as XL FTE). This College WSCH Ratio is a more valid representation of WSCH productivity. The College WSCH Ratio will be used in the program review process.

College WSCH Ratio = WSCH / (PT FTE + FT FTE + XL FTE)

College WSCH Ratio: Weekly Student Contact Hours/(FT FTE + PT FTE + XL FTE)									
Course	Title	FY08	FY09	FY10	3 Yr Avg	FY11	Change	Dist Goal	% Goal
AGV02	Agriculture Projects	-	-	-	-	-	0%	525	0%
AGV03	Plant Biology	413	394	491	427	462	8%	525	88%
AGV04	Soil and Water Science	-	431	488	459	441	-4%	525	84%
AGV41	Landscape Management	-	-	-	-	390	0%	525	74%
AGV42A	Landscape Plant ID & Uses I	431	413	450	436	338	-23%	525	64%
AGV42B	Landscape Plant ID & Uses II	375	300	-	338	488	44%	525	93%
AGV54	Conservation Natural Resource	337	382	383	366	464	27%	525	88%
AGV90	Directed Studies: Agriculture	-	-	-	-	-	0%	525	0%
<b>TOTAL</b>	<b>Annual College WSCH Ratio</b>	<b>399</b>	<b>392</b>	<b>462</b>	<b>418</b>	<b>437</b>	<b>5%</b>	<b>525</b>	<b>83%</b>

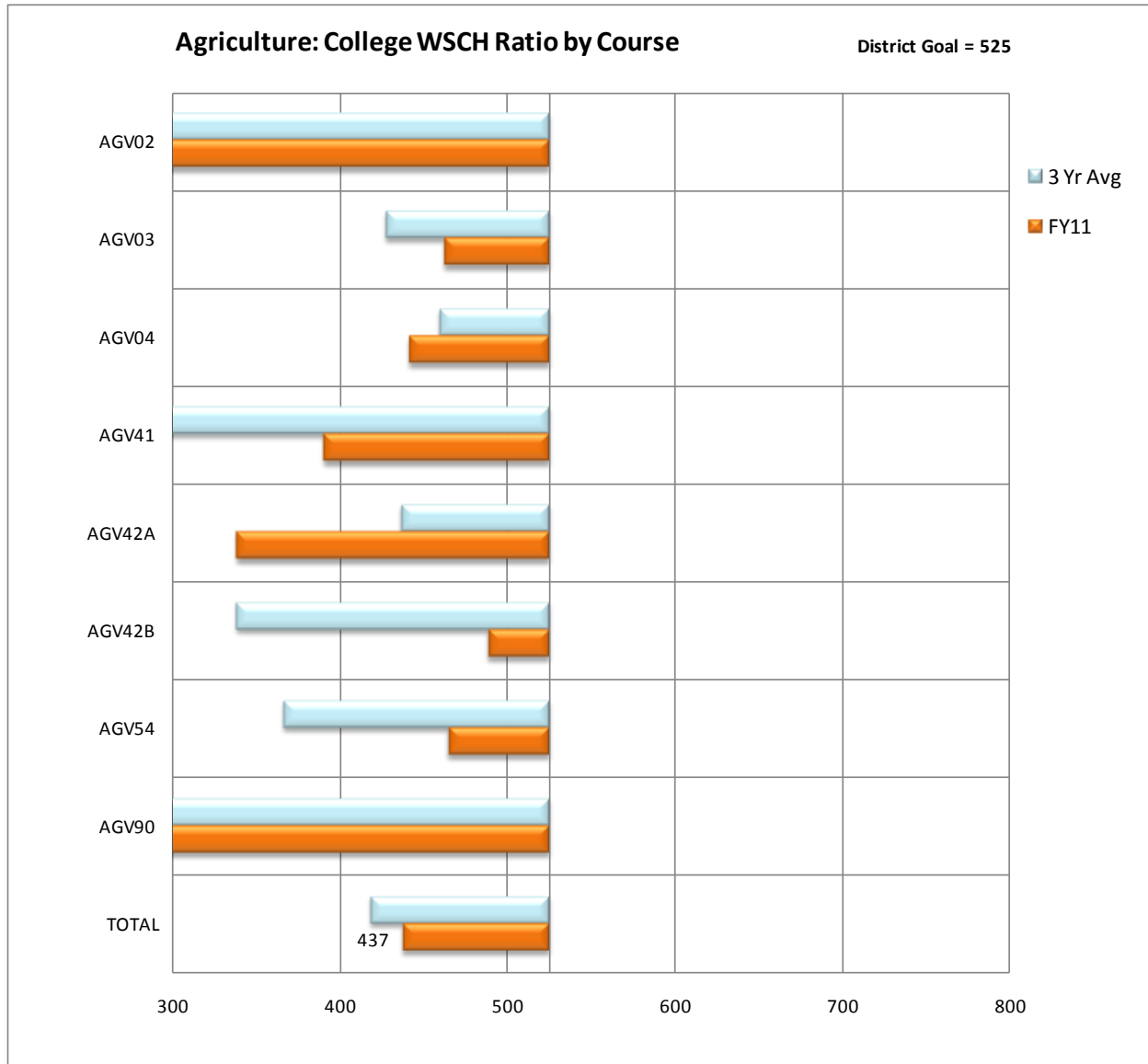


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## D4: College WSCH Ratio Productivity Chart

This chart illustrates the course level College WSCH ratio. The top bar shows the program’s three year average. The second bar shows the FY11 WSCH ratio. The axis represents the District WSCH ratio goal set in 2006. The program’s (or subject’s) total WSCH ratio is shown as the TOTAL at the bottom of the chart. The computation used for the College WSCH Ratio includes XL FTE (extra-large sections) and the assignment of FTEF to all cross-listed sections (proportional to census enrollment).



## D5: Productivity Detail Report

The program’s detail productivity information is available in *Appendix B – Program Review Productivity Report*. This report is a PDF document and is searchable. The productivity information was extracted from the District’s Banner Student System. The productivity

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information includes all information associated with the program's subject codes. The *Program Review Productivity Report* is sorted by subject code (alphabetical order) and includes the following sections: productivity measures and WSCH ratios by course by year.

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### D6: Interpretation of the Program Course Productivity Information

The D2 Chart shows mixed WSCH/FTEF ratios with an overall average of 437, which is 83% of the district 525 goal. Considering that all courses within the program have been limited to 24 students due to room size constraints the true efficiency is difficult to measure adequately. Realizing that constraints imposed by the number of desks in the room where most courses are taught, upgrades to the desks were secured by grant funding, and the capacity of the rooms has been increased to 36 seats. It is anticipated that with enrollment cap increase to program courses between 30 and 35 students would improve the WSCH and subsequently increase efficiency substantially. The addition of 6 to 11 students in each course would improve efficiency between 25 to 45%. If a corresponding increase in the cap in classes results increased enrollment, the agriculture program would be able achieve and potentially exceed the 525 level.

With FY11 having 10 sections being offered multiplied by 35 students at census enrolled in 3 hour per week of instruction, generates 1050 in WSCH. Assuming 2 FTEF are teaching the 10 sections, the agriculture program is at the 525 goal. However, the reality is that the agriculture program has been operating with approximately 1.5 FTEF, since there is no full time faculty assigned to the program. As such, increasing the cap in the courses to 35 generating a WSCH of 1050 will translate to a 700 WSCH. This assumes every course is running at full capacity at census. A more realistic census count would be 30 students per class, 10 sections, and 1.5 FTEF totaling 900 WSCH. This would generate WSCH of 600 of the district ratio. With 1050 WSCH times 35 weeks the total student contact hours are 36,750. Divided by the district goal of 525, the FTES is 70.

Increasing the cap for agriculture course will have a substantial and measured improvement in efficiency from the current overall 83% to an expected range of 114% to 133% of the 525 goal.

Additionally, the agriculture program has improved even without increasing class enrollment caps. In every year since FY08 to the present the agriculture program has improved by 5% overall average in achieving the 525 goal. One course, AG V42A, pulls down the average substantially at 64% of the 525 goal. This course is slated for deletion as the program is revised and consolidated. All but one additional class in the program approach 90% of the 525 goal.

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### E1: Student Success Terminology

<b>Census</b>	Number of students enrolled at Census (typically the 4 <sup>th</sup> week of class for fall and spring). Census enrollment is used to compute WSCH and FTES for funding purposes.
<b>Retain</b>	Students completing the class with any grade other than W or DR divided by Census Example: 40 students enrolled, 5 students dropped prior to census, 35 students were enrolled at census, 25 students completed the class with a grade other than W or DR: Retention Rate = 25/35 = 71%
<b>Success</b>	Students completing the class with grades A, B, C, CR or P divided by Census Excludes students with grades D, F, or NC.

### E2: Student Success Summary

The following two tables summarize the detail information provided in the *Appendix C - Program Review Student Success Report*. The first table shows the number of students. The second table shows the percentage of students. Both tables show the distribution of student grades by year for the program (subject). They show the number of students who were counted at census, completed the class (retention), and were successful. The “3 Year Average” was computed to provide a trend benchmark to compare the prior three year expenses to the FY11 success measures. The “College” success percentages are included to compare the results of the program to the results of the college.

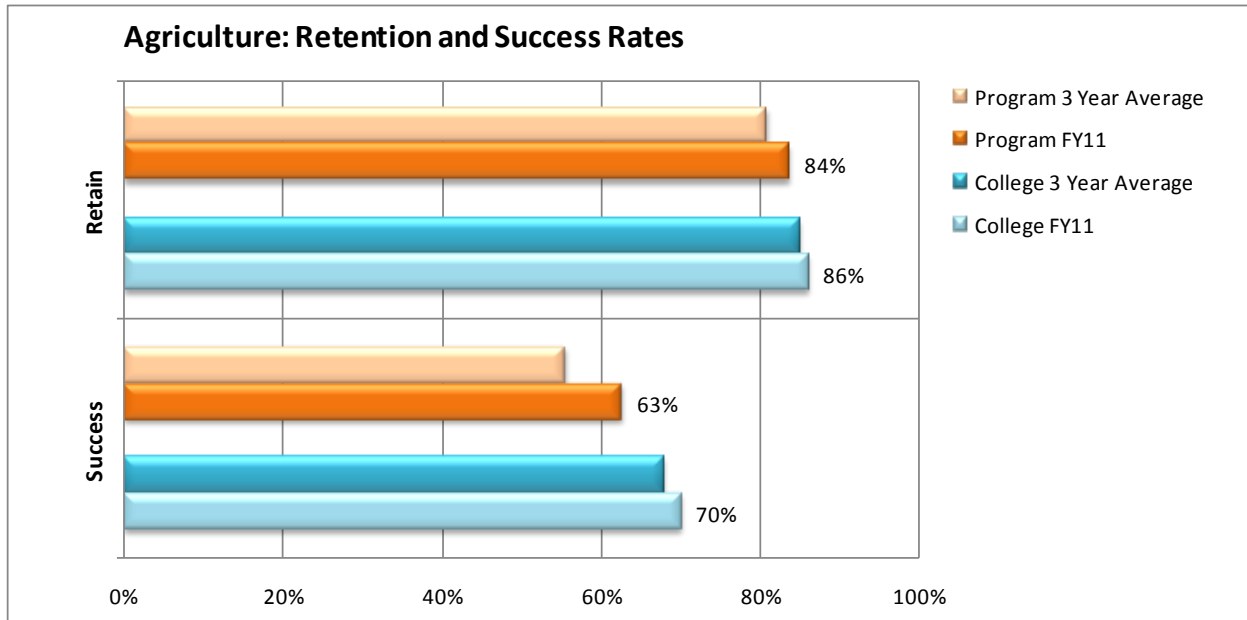
Subject	Fiscal Year	A	B	C	P/CR	D	F	W	NC	Census	Retain	Success
AG	FY08	27	15	18	5	9	13	33	-	120	87	65
AG	FY09	27	31	33	-	10	33	22	-	156	134	91
AG	FY10	32	25	29	1	13	32	31	-	163	132	87
AG	3 Year Avg	29	24	27	2	11	26	29	-	146	118	81
AG	FY11	41	30	47	1	9	31	31	-	190	159	119
Subject	Fiscal Year	A	B	C	P/CR	D	F	W	NC	Census	Retain	Success
AG	FY08	23%	13%	15%	4%	8%	11%	28%	0%		73%	54%
AG	FY09	17%	20%	21%	0%	6%	21%	14%	0%		86%	58%
AG	FY10	20%	15%	18%	1%	8%	20%	19%	0%		81%	53%
AG	3 Year Avg	20%	16%	18%	1%	8%	18%	20%	0%		81%	55%
AG	FY11	22%	16%	25%	1%	5%	16%	16%	0%		84%	63%
<b>College</b>	<b>3 Year Avg</b>	<b>33%</b>	<b>19%</b>	<b>12%</b>	<b>5%</b>	<b>5%</b>	<b>10%</b>	<b>15%</b>	<b>2%</b>		<b>85%</b>	<b>68%</b>
College	FY11	33%	20%	13%	3%	5%	10%	14%	2%		86%	70%

# Agriculture Program Review

## 2011-2012

### E3: Retention and Success Rates

This chart illustrates the retention and success rates of students who were counted at census. Each measure has four bars. The first bar represents the program's prior three year average percent. The second bar shows last year's (FY11) percent. The third and fourth bars represent the overall college percents.

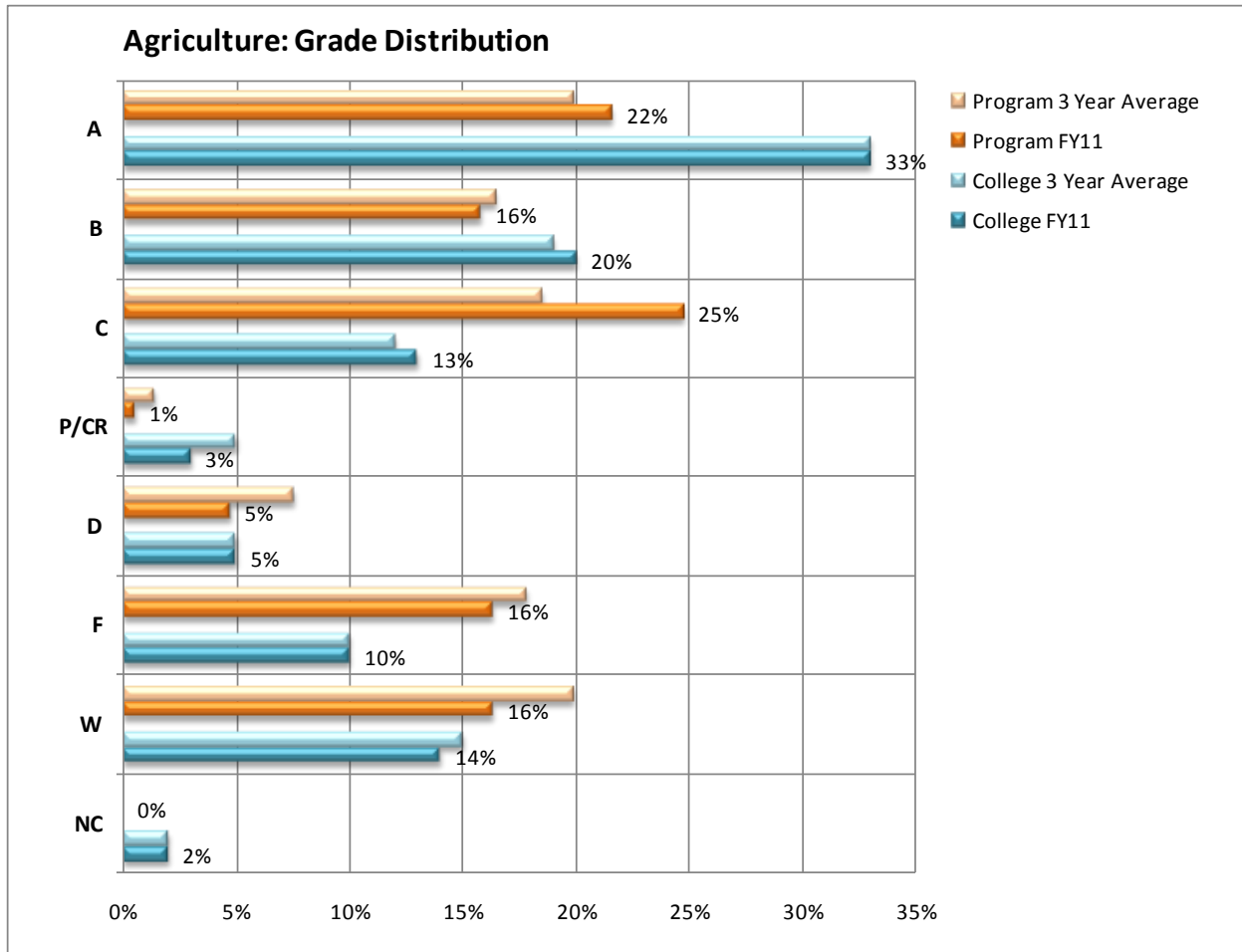


## Agriculture Program Review

2011-2012

### E4: Grade Distribution

This chart illustrates the program's distribution of grades (by subject). Each grade has four bars. The first bar represents the program's prior three year average percent of grades. The second bar shows last year's (FY11) grade distribution percents. The third and fourth bars represent the overall college distribution percents.



### E5: Student Success Detail Report

The program student success detail information is available in *Appendix C – Program Review Student Success Report*. This report is a PDF document and is searchable. The student success information was extracted from the District's Banner Student System. The student success information includes all information associated with the program's subject codes. The *Program Review Student Success Report* is sorted by subject code (alphabetical order) and includes the following sections: comparative summary and course detail by term. The following table defines the terminology.

## **Agriculture Program Review**

2011-2012

### E6: Interpretation of Program Retention, Student Success, and Grade Distribution

Student success and retention rates in agriculture are have improved and have been stable since FY09, following FY08 lows. While the program has transitioned into a more rigorous academic, science based curriculum, substantial improvement has been made to capture, retain, and move students to success in achievement. Every year, more that 50% of students succeed in achieving a grade of A, B, or C, which reflects a normal distribution without apparent grade inflation or lowering the academic standards. Agriculture has averaged and currently retains approximately the same number of students as the college overall, but is slightly lower in assigning successful grades than the college as a whole. This may have to do maintaining a level of academic expectation for achievement consistent with preparing students for highly impacted and competitive 4-year university transfer rather than for providing a pathway to certificates of achievement. This follows with the goal of the agriculture program to be rigorous yet balanced in providing fair assessment of student performance. While independent of higher academic standards expectations, the agriculture program is attracting a larger population of students enrolling in courses, while not expanding course section offerings, and retaining them at a consistent and increasingly high number. The agriculture program is on par with college average and FY11 retention and success rates.

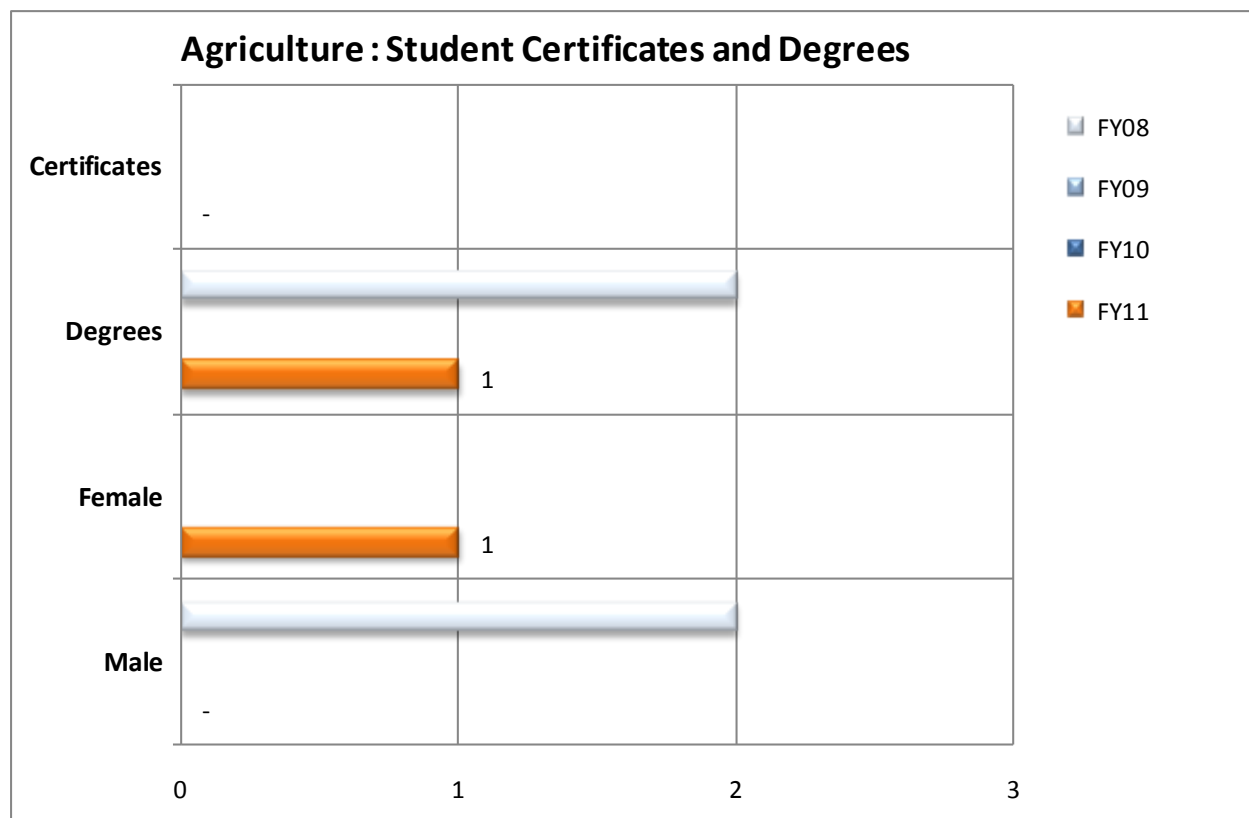
## Agriculture Program Review

2011-2012

### F1: Program Completion – Student Awards

This table shows the number of students who completed a program certificate or degree during the fiscal year. Gender distribution is included. The following chart illustrates this information.

Program	FY	Certificates	Degrees	Female	Male
Agriculture	FY08	-	2	-	2
Agriculture	FY09	-	-	-	-
Agriculture	FY10	-	-	-	-
Agriculture	FY11	-	1	1	
<b>Total Awards in 4 Years</b>		-	3	1	2



### F2: Interpretation of the Program Completion Information

The nature of agriculture and agricultural education has changed substantially in recent years as students enrolling in programs both at the community college and 4-year university levels expect to engage less in traditional pathways toward career objectives. In the past, certificates of achievement would have sufficed most students in achieving a career in the agricultural industry. With advances in technology including automated irrigation and fertilization systems, and global positioning systems, precision agriculture requires more rigorous science based education that aligns more with transfer to 4-year university academic achievement to succeed. The low number of agriculture certificates awarded is due to the fact that most students taking coursework in the agriculture program are transfer students



## **Agriculture Program Review**

2011-2012

who take courses articulated to 4-year CSU and UC schools in agriculture, natural resources, and environmental sciences.

The Agriculture Department offers the opportunity for students to excel in rigorous program of study leading mainly to transfer to top agriculture and natural resources management schools throughout California, including California Polytechnic State University, UC Davis, California State University at Fresno, Humboldt, and the soon to be program in Agriculture at Cal State Channel Islands. The strength of the program has been its reputation for quality in providing the latest information, technology, and hands-on learning opportunities in both the lecture and laboratory settings. A comprehensive set of undergraduate courses fulfill the general education and transfer requirements of students. Students may obtain an AS in Plant Science; Proficiency Certificate in Landscape Management; or Proficiency Certificate in Natural Resources Management; all of which help fulfill major requirements optimized in preparation for advanced degrees in Agriculture and Natural Resources Management at four-year institutions. Success has been achieved in the number of students transferring to 4-year universities, most of which do not stop to achieve a certificate. Graduates and transfer students have moved on to achieve numerous degrees and occupations in agricultural food production and processing, natural resources management, forestry, and numerous private and public sector careers with national, state and local agencies including state and national parks, Natural Resources Conservation Service, Forest Service, Bureau of Land Management (BLM), and other Department of Interior careers.

# Agriculture Program Review

2011-2012

## G1: Student Demographics Summary Tables

This table shows the program and college census enrollments for each demographic category. It also shows the average age of the students. The program FY11 results can be compared to its prior three year average, the college FY11 results, and the college prior three year average.

Subject	FY	Hispanic	White	Asian	Afr Am	Pac Isl	Filipino	Nat Am	Other	Female	Male	Other	Avg Age
AG	FY08	32	65	3	1	-	6	3	10	61	59	-	30
AG	FY09	57	68	4	5	-	-	1	21	46	105	5	26
AG	FY10	63	70	3	7	-	2	-	18	48	115	-	24
<b>AG</b>	<b>3 Year Avg</b>	<b>51</b>	<b>68</b>	<b>3</b>	<b>4</b>	<b>-</b>	<b>3</b>	<b>1</b>	<b>16</b>	<b>52</b>	<b>93</b>	<b>2</b>	<b>26</b>
<b>AG</b>	<b>FY11</b>	<b>70</b>	<b>95</b>	<b>2</b>	<b>6</b>	<b>3</b>	<b>-</b>	<b>7</b>	<b>7</b>	<b>59</b>	<b>130</b>	<b>1</b>	<b>26</b>
College	3 Year Avg	11,806	11,169	988	1,005	217	827	403	2,302	15,888	12,694	134	27
<b>College</b>	<b>FY11</b>	<b>13,034</b>	<b>10,566</b>	<b>977</b>	<b>1,040</b>	<b>196</b>	<b>886</b>	<b>402</b>	<b>1,688</b>	<b>15,734</b>	<b>13,014</b>	<b>40</b>	<b>24</b>

This table shows the program and college percentage of census enrollments for each demographic category.

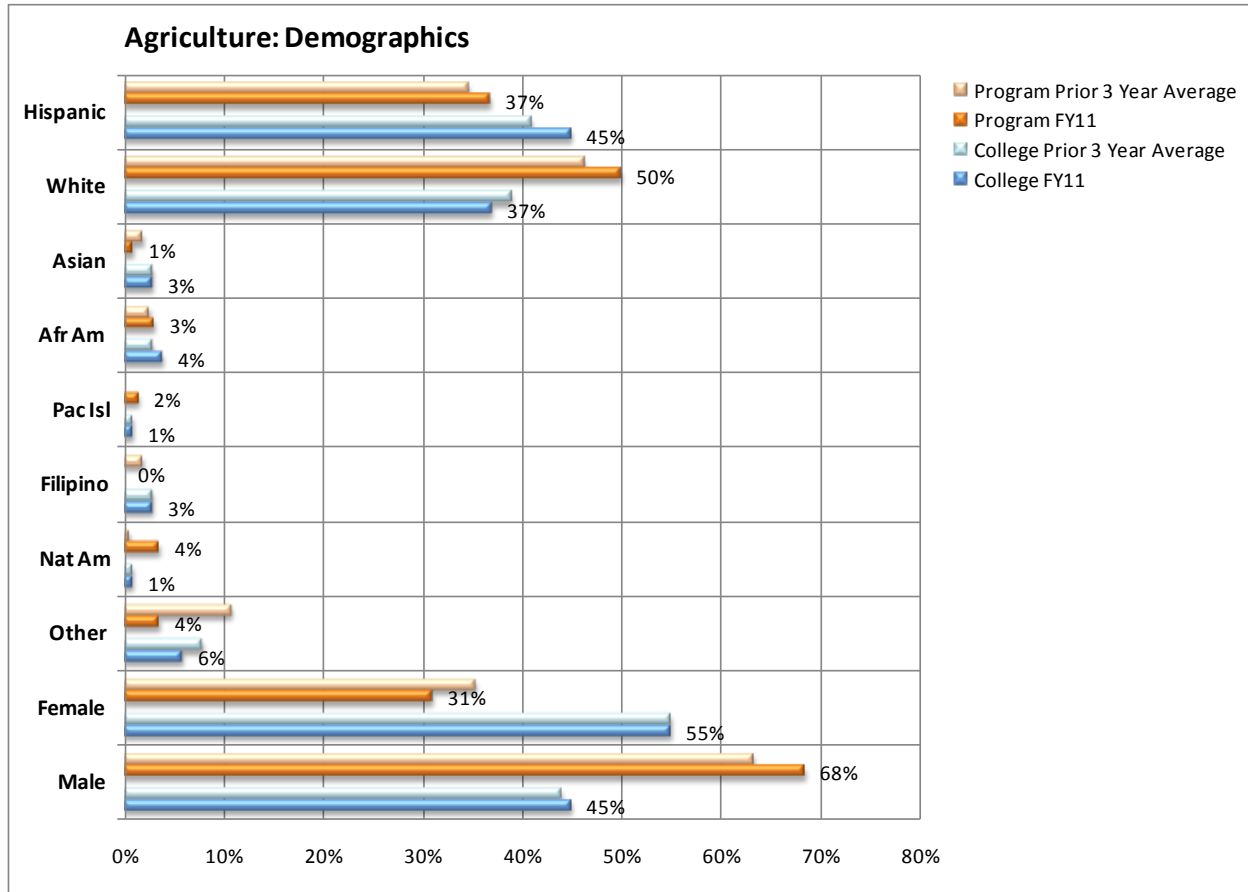
Subject	FY	Hispanic	White	Asian	Afr Am	Pac Isl	Filipino	Nat Am	Other	Female	Male	Other	Avg Age
AG	FY08	27%	54%	3%	1%	0%	5%	3%	8%	51%	49%	0%	30
AG	FY09	37%	44%	3%	3%	0%	0%	1%	13%	29%	67%	3%	26
AG	FY10	39%	43%	2%	4%	0%	1%	0%	11%	29%	71%	0%	24
<b>AG</b>	<b>3 Year Avg</b>	<b>35%</b>	<b>46%</b>	<b>2%</b>	<b>3%</b>	<b>0%</b>	<b>2%</b>	<b>1%</b>	<b>11%</b>	<b>35%</b>	<b>63%</b>	<b>1%</b>	<b>26</b>
<b>AG</b>	<b>FY11</b>	<b>37%</b>	<b>50%</b>	<b>1%</b>	<b>3%</b>	<b>2%</b>	<b>0%</b>	<b>4%</b>	<b>4%</b>	<b>31%</b>	<b>68%</b>	<b>1%</b>	<b>26</b>
College	3 Year Avg	41%	39%	3%	3%	1%	3%	1%	8%	55%	44%	0%	27
<b>College</b>	<b>FY11</b>	<b>45%</b>	<b>37%</b>	<b>3%</b>	<b>4%</b>	<b>1%</b>	<b>3%</b>	<b>1%</b>	<b>6%</b>	<b>55%</b>	<b>45%</b>	<b>0%</b>	<b>24</b>

# Agriculture Program Review

2011-2012

## G2: Student Demographics Chart

This chart illustrates the program’s percentages of students by ethnic group. . Each group has four bars. The first bar represents the program’s prior three year percent. The second bar shows last year’s (FY11) percent. The third and fourth bars represent the overall college percents.



## G3: Student Demographics Detail Report

The program student success detail information is available in *Appendix D – Program Review Student Demographics Report*. This report is a PDF document and is searchable. The student success information was extracted from the District’s Banner Student System. The student demographic information includes all information associated with the program’s subject codes. The *Program Review Student Demographics Report* is sorted by subject code (alphabetical order) and includes the following sections: comparative summary by year, and detail demographics by term and course.

## G4: Interpretation of the Program Demographic Information

The ethnic and gender distribution in Agriculture has remained relatively constant over the past three years and roughly mirrors the college as a whole.

# Agriculture Program Review

2011-2012

## 4. Performance Assessment

### A1: Program-Level Student Learning Outcomes

Program-Level Student Learning Outcome 1	Performance Indicators
Apply knowledge of plants, animals, soils, and climates to environmental settings with understanding of basic principles of soil fertility and water quality.	Students will formulate and test hypotheses using guided experimentation using modern equipment to collect and analyzed data, and demonstrate mastery by comparing conclusions against initial hypothesis. 80% of the students enrolled in the Soil & Water Science, AG V04 will achieve mastery.
<b>Operating Information</b>	
In AG V04, Soil & Water Science, 83% were able to apply knowledge of plants, animals, soils, and climates to environmental settings, and were able to demonstrate mastery of the basic principles of soil fertility and water quality.	
<b>Analysis – Assessment</b>	
In the one course evaluated, students met the performance goal. More data is needed to assess beyond this one course.	

Program-Level Student Learning Outcome 2	Performance Indicators
Predict plant growth outcomes by applying basic principles of botany.	Students will formulate and test hypotheses using guided experimentation using modern equipment to collect and analyzed data, and demonstrate mastery by comparing conclusions against initial hypothesis. 80% of the students enrolled will succeed in achieving the PLSLO
<b>Operating Information</b>	
Insufficient data is available to assess the PLSLO	
<b>Analysis – Assessment</b>	
Data relating to this SLO has been collected, but further analysis of this data will be required. Additional data will need to be gathered and interpreted due to variations in instructor data collection methodologies.	

## Agriculture Program Review

2011-2012

Program-Level Student Learning Outcome 3	Performance Indicators
Recommend management strategies in the use of Earth's natural resources.	Students will formulate and test hypotheses using guided experimentation using modern equipment to collect and analyzed data, and demonstrate mastery by comparing conclusions against initial hypothesis. 80% of the students enrolled will succeed in achieving the PLSLO
<b>Operating Information</b>	
Insufficient data is available to assess the PLSLO	
<b>Analysis – Assessment</b>	
Data relating to this SLO has been collected, but further analysis of this data will be required. Additional data will need to be gathered and interpreted due to variations in instructor data collection methodologies.	

Program-Level Student Learning Outcome 4	Performance Indicators
Recognize, interpret, and recommend control strategies for common plant pests and diseases, and understand the use of herbicides, pesticides, fertilizers, and integrated pest management principles.	Students will formulate and test hypotheses using guided experimentation using modern equipment to collect and analyzed data, and demonstrate mastery by comparing conclusions against initial hypothesis. 80% of the students enrolled will succeed in achieving the PLSLO
<b>Operating Information</b>	
Insufficient data is available to assess the PLSLO	
<b>Analysis – Assessment</b>	
Data relating to this SLO has been collected, but further analysis of this data will be required. Additional data will need to be gathered and interpreted due to variations in instructor data collection methodologies.	

## Agriculture Program Review

2011-2012

### 4B: Student Success Outcomes

Student Success Outcome 1	Performance Indicators
The program will increase its retention rate from the average of the <b>program's</b> prior three-year retention rate. The retention rate is the number of students who finish a term with any grade other than W or DR divided by the number of students at census.	The program will increase the retention rate by 2% or more above the average of the <b>program's</b> retention rate for the prior three years.
<b>Operating Information</b>	
Agriculture's retention rate has improved from FY08 at 73% to 84% in FY11, which is in line with the college 3-year running average of 85%.	
<b>Analysis – Assessment</b>	
The agriculture program needs maintain and continue to improve retention in the program.	

Student Success Outcome 2	Performance Indicators
The program will increase its retention rate from the average of the <b>college's</b> prior three-year retention rate. The retention rate is the number of students who finish a term with any grade other than W or DR divided by the number of students at census.	The program will increase the retention rate by 2% or more above the average of the <b>college</b> retention rate for the prior three years.
<b>Operating Information</b>	
Agriculture's retention rate has improved from FY08 at 73% to 84% in FY11, which is in line with the college 3-year running average of 85%.	
<b>Analysis – Assessment</b>	
The agriculture program needs maintain and continue to improve retention in the program.	

## Agriculture Program Review

2011-2012

Student Success Outcome 3	Performance Indicators
The program will increase the student success rates from the average of the <b>program's</b> prior three-year success rates. The student success rate is the percentage of students at census who receive a grade of C or better.	The program will increase student success rate by 2% or more above the <b>program's</b> average student success rate for the prior three years.
<b>Operating Information</b>	
Success is below the college level success percentage, but is consistently above 50%. Improvement needs to be made in success to better align with the colleges 70% rate.	
<b>Analysis – Assessment</b>	
Success is below the college level success percentage, but is consistently above 50%. Improvement needs to be made in success to better align with the colleges 70% rate.	

Student Success Outcome 4	Performance Indicators
The program will increase the student success rates from the average of the <b>college's</b> prior three-year success rates. The student success rate is the percentage of students at census who receive a grade of C or better.	The program student success will increase by 5% over the average of the <b>college's</b> student success rate for the prior three years.
<b>Operating Information</b>	
Success is below the college level success percentage, but is consistently above 50%. Improvement needs to be made in success to better align with the colleges 70% rate.	
<b>Analysis – Assessment</b>	
Improved success rates need to be achieved consistent with the students retained in classes. The agriculture program needs to improve beyond current success of 63% to better align with the colleges 70% rate.	

# Agriculture Program Review

2011-2012

<b>Student Success Outcome 5</b>	<b>Performance Indicators</b>
Students will complete the program earning certificates and/or degrees.	Increase the number of students earning a certificate to a minimum of 20% of the number of students enrolled in second-year courses.
<b>Operating Information</b>	
Agriculture will substantially improve attracting students to certificate programs or revise the program and certification programs with consideration as to continuance.	
<b>Analysis – Assessment</b>	
It appears that the current program offerings are not attracting the number of students necessary to achieve the goal of a 20% of the number of students enrolled in the second-year courses, consideration will be made to substantially modify or eliminate current certification offerings.	



# Agriculture Program Review

2011-2012

## C. Program Operating Outcomes

Program Operating Outcome 1	Performance Indicators
The program will maintain WSCH/FTEF above the 525 goal set by the district.	The program will exceed the efficiency goal of 525 set by the district by 2%.
<b>Operating Information</b>	
<p>The D2 Chart shows mixed WSCH/FTEF ratios with an overall average of 437, which is 83% of the district 525 goal. Considering that all courses within the program have been limited to 24 students due to room size constraints the true efficiency is difficult to measure adequately. Realizing that constraints imposed by the number of desks in the room where most courses are taught, upgrades to the desks were secured by grant funding, and the capacity of the rooms has been increased to 36 seats. It is anticipated that with enrollment cap increase to program courses between 30 and 35 students would improve the WSCH and subsequently increase efficiency substantially. The addition of 6 to 11 students in each course would improve efficiency between 25 to 45%. If a corresponding increase in the cap in classes results increased enrollment, the agriculture program would be able achieve and potentially exceed the 525 level.</p> <p>With FY11 having 10 sections being offered multiplied by 35 students at census enrolled in 3 hour per week of instruction, generates 1050 in WSCH. Assuming 2 FTEF are teaching the 10 sections, the agriculture program is at the 525 goal. However, the reality is that the agriculture program has been operating with approximately 1.5 FTEF, since there is no full time faculty assigned to the program. As such, increasing the cap in the courses to 35 generating a WSCH of 1050 will translate to a 700 WSCH. This assumes every course is running at full capacity at census. A more realistic census count would be 30 students per class, 10 sections, and 1.5 FTEF totaling 900 WSCH. This would generate WSCH of 600 of the district ratio. With 1050 WSCH times 35 weeks the total student contact hours are 36,750. Divided by the district goal of 525, the FTES is 70.</p> <p>Increasing the cap for agriculture course will have a substantial and measured improvement in efficiency from the current overall 83% to an expected range of 114% to 133% of the 525 goal.</p> <p>Additionally, the agriculture program has improved even without increasing class enrollment caps. In every year since FY08 to the present the agriculture program has improved by 5% overall average in achieving the 525 goal. One course, AG V42A, pulls down the average substantially at 64% of the 525 goal. This course is slated for deletion as the program is revised and consolidated. All but one additional class in the program approach 90% of the 525 goal.</p>	
<b>Analysis – Assessment</b>	
Attainment of the 525 goal is achievable provided small, but significant change is made to class caps.	

Program Operating Outcome 2	Performance Indicators
Inventory of instructional equipment is functional, current, and otherwise adequate to maintain a quality-learning environment. Inventory of all equipment over \$200 will be maintained and a replacement schedule will be developed. Service contracts for equipment over	A current inventory of all equipment in the program will be maintained. Equipment having a value over \$5000 will have a service contract. A schedule for service life and replacement of outdated equipment will reflect the total cost of ownership.

**Agriculture Program Review**  
2011-2012

\$5000 will be budgeted if funds are available.	
<b>Operating Information</b>	
The inventory list is out of date and needs to be reviewed (3B1)	
<b>Analysis – Assessment</b>	

# Agriculture Program Review

2011-2012

Program Operating Outcome 3	Performance Indicators
<b>Operating Information</b>	
<b>Analysis – Assessment</b>	

Program Operating Outcome 4	Performance Indicators
<b>Operating Information</b>	
<b>Analysis – Assessment</b>	

# Agriculture Program Review

2011-2012

## 5. Findings

### Finding 1

All courses in agriculture need to be updated, modified, revised, or deleted to modernize the program to meet the objectives of students entering the program.

### Finding 2

A program name change might significantly boost the program appeal.

### Finding 3

Increasing the cap in classes will result in substantial potential increases in measured WSCH ratio enabling program to exceed 525 goals.

### Finding 4

Cross-listing of courses, and revision to the certificate programs will improve outreach to students, and improve efficiency numbers.

### Finding 5

Instructional multiple use building to provide student instruction where water, soil, and plant materials may be sampled, tested, and spilled.

# Agriculture Program Review

2011-2012

## 6. Initiatives

Initiative : Revise, update, modify, or delete courses in the agriculture program to meet the expectations of students entering the program hoping to transfer to 4-year universities.

**Initiative ID** All courses in the agriculture program.

**Links to Finding 1** Ongoing curriculum revisions related to state-of-the-art technical and scientific knowledge of the subject areas taught in class. Improve hands-on learning opportunities for students to align with university program transfer requirements, and potential for students to successfully transfer to 4-year institutions.

**Benefits:** Students can move through the curriculum efficiently and achieve their goal of certificate, AS, or transfer without wasted semesters waiting for courses to be offered.

**Request for Resources:** None

### Funding Sources

No new resources are required (use existing resources)	X
Requires additional general funds for personnel, supplies or services (includes maintenance contracts)	
Requires computer equipment funds (hardware and software)	
Requires college equipment funds (other than computer related)	
Requires college facilities funds	
Requires other resources (grants, etc.)	

# Agriculture Program Review

2011-2012

**Initiative:** Program name change

**Initiative ID:** Program Naming

**Links to Finding 2:** As has occurred at numerous community college and university agriculture programs throughout the country have had to do to appeal to a broader spectrum of students, agriculture programs have changed or modified their names to include resources management and/or environmental sciences themes to attract and train students for careers beyond conventional traditional agriculture practice. Agriculture today represents a broad and diverse technological capability, broad interdisciplinary studies in botany, ecology, water science, earth science, environmental science, and resources management.

**Benefits:** Improvements in identity translate to broader appeal to students wanting to gain specific technical and science skills necessary for employment and/or transfer to university programs are gained by broadening the title to include courses better articulated to specific programs of study beyond Ventura College.

**Request for Resources:** None

## Funding Sources

Please check one or more of the following funding sources.

No new resources are required (use existing resources)	X
Requires additional general funds for personnel, supplies or services (includes maintenance contracts)	
Requires computer equipment funds (hardware and software)	
Requires college equipment funds (other than computer related)	
Requires college facilities funds	
Requires other resources (grants, etc.)	

## Agriculture Program Review 2011-2012

**Initiative:** Increase class enrollment caps in all Agriculture courses

**Initiative ID:** Increase Enrollment Caps

**Links to Finding 3:** Substantial potential increases in WSCH ratio can be achieved by increasing the number of students who may enroll in a course offering, with intent to exceed 525 goals, and to provide improved cost efficiency without the need to hire additional faculty to perform instructional duties.

**Benefits:** Students will have more potential to take existing courses, while maintaining number of sections, at a reduced cost in FTEF obligation.

Request for Resources: None

### Funding Sources

No new resources are required (use existing resources)	X
Requires additional general funds for personnel, supplies or services (includes maintenance contracts)	
Requires computer equipment funds (hardware and software))	
Requires college equipment funds (other than computer related)	
Requires college facilities funds	
Requires other resources (grants, etc.)	

## Agriculture Program Review

2011-2012

**Initiative:** Cross-list courses and revise certificate programs.

**Initiative ID:** Course cross listing and update certificates.

**Links to Finding 4:** Students will be offered courses in equivalent areas without the need to increase the number of sections.

**Benefits:** Student options will be broadened, with no net increase in the number of sections opened up to serve student need for courses that are not offered regularly enough to fulfill certificate requirements.

**Request for Resources:** None

### Funding Sources

No new resources are required (use existing resources)	X
Requires additional general funds for personnel, supplies or services (includes maintenance contracts)	
Requires computer equipment funds (hardware and software)	
Requires college equipment funds (other than computer related)	
Requires college facilities funds	
Requires other resources (grants, etc.)	



# Agriculture Program Review

2011-2012

**Initiative:** Provision of an instructional outbuilding

**Initiative ID:** Instructional Multiple-Use Outbuilding

**Links to Finding 4:** A small 30 by 50 multiple use metal structure with concrete/tile floors to maintain course instruction using soil, water, and plant materials would significantly improve instructional quality of the agriculture program. The building would house equipment in a safe and reliable manner to be used directly for instruction, and where experiments could be set up during laboratory exercises, and potential left until the next class period where results could be verified.

**Benefits:** The benefits of having a simple multiple use structure where high technology agricultural/biological/soil testing/water quality testing/landscaping equipment can be stored, and be in a ready state for instruction significantly strengthens the program offerings course by course as students are able to access knowledge and develop skills that will enhance the probability of transfer and employment, since they will be expected to know as they move to careers and academic programs in industry and university settings.

**Request for Resources:** Estimated cost of metal outbuilding; \$40,000  
Cost for constructing building; \$40,000

## Funding Sources

No new resources are required (use existing resources)	
Requires additional general funds for personnel, supplies or services (includes maintenance contracts)	
Requires computer equipment funds (hardware and software)	
Requires college equipment funds (other than computer related)	
Requires college facilities funds	X
Requires other resources (grants, etc.)	

# Agriculture Program Review

2011-2012

## 6A: Initiatives Priority Spreadsheet

The following blank tables represent Excel spreadsheets and will be substituted with a copy of the completed Excel spreadsheets.

### Personnel –Faculty Requests

Other	Program	Program Priority (0, 1, 2, 3...)	Division Priority (R,H,M,L)	Committee Priority (R, H, M, L)	College Priority (R, H, M, L)	Initiative ID	Initiative Title	Resource Description	Estimated Cost	No New Resources Requested	General Fund	Other
1												
2												
3												
4												
5												

### Personnel – Other Requests

Personnel - Other	Program	Program Priority (0, 1, 2, 3...)	Division Priority (R,H,M,L)	Committee Priority (R, H, M, L)	College Priority (R, H, M, L)	Initiative ID	Initiative Title	Resource Description	Estimated Cost	No New Resources Requested	New General Funds	Other
1												
2												
3												
4												
5												

# Agriculture Program Review

2011-2012

## Computer Equipment and Software

Equipment - Computer Related	Program	Program Priority (0, 1, 2, 3...)	Division Priority (R,H,M,L)	Committee Priority (R, H, M, L)	College Priority (R, H, M, L)	Initiative ID	Initiative Title	Resource Description	Estimated Cost	No New Resources Requested	Technology Fund	Other
1												
2												
3												
4												
5												

## Other Equipment Requests

Equipment	Program	Program Priority (0, 1, 2, 3...)	Division Priority (R,H,M,L)	Committee Priority (R, H, M, L)	College Priority (R, H, M, L)	Initiative ID	Initiative Title	Resource Description	Estimated Cost	No New Resources Requested	Equipment Fund	Other
1												
2												
3												
4												
5												

## Facilities Requests

Facilities	Program	Program Priority (0, 1, 2, 3...)	Division Priority (R,H,M,L)	Committee Priority (R, H, M, L)	College Priority (R, H, M, L)	Initiative ID	Initiative Title	Resource Description	Estimated Cost	No New Resources Requested	Facilities Fund	Other
1												
2												
3												
4												
5												

# Agriculture Program Review

2011-2012

## Other Resource Requests

Other Resources	Program	Program Priority (0, 1, 2, 3...)	Division Priority (R,H,M,L)	Committee Priority (R, H, M, L)	College Priority (R, H, M, L)	Initiative ID	Initiative Title	Resource Description	Estimated Cost	No New Resources Requested	General Fund	Other
1												
2												
3												
4												
5												

### 6B: Program Level Initiative Prioritization

All initiatives will first be prioritized by the program staff. If the initiative can be completed by the program staff and requires no new resources, then the initiative should be given a priority 0 (multiple priority 0 initiatives are allowed). All other initiatives should be given a priority number starting with 1 (only one 1, one 2, etc.).

### 6C: Division Level Initiative Prioritization

The program initiatives within a division will be consolidated into division spreadsheets. The dean may include additional division-wide initiatives. All initiatives (excluding the '0' program priorities) will then be prioritized using the following priority levels:

**R:** Required – mandated or unavoidable needs (litigation, contracts, unsafe to operate conditions, etc.).

**H:** High – approximately 1/3 of the total division's initiatives by resource category (personnel, equipment, etc.)

**M:** Medium – approximately 1/3 of the total division's initiatives by resource category (personnel, equipment, etc.)

**L:** Low – approximately 1/3 of the total division's initiatives by resource category (personnel, equipment, etc.)

### 6D: Committee Level Initiative Prioritization

The division's spreadsheets will be prioritized by the appropriate college-wide committees (staffing, technology, equipment, facilities) using the following priority levels.

**R:** Required – mandated or unavoidable needs (litigation, contracts, unsafe to operate conditions, etc.).

**H:** High – approximately 1/3 of the total division's initiatives by resource category (personnel, equipment, etc.)

**M:** Medium – approximately 1/3 of the total division's initiatives by resource category (personnel, equipment, etc.)

**L:** Low – approximately 1/3 of the total division's initiatives by resource category (personnel, equipment, etc.)

## **Agriculture Program Review**

2011-2012

### 6E: College Level Initiative Prioritization

Dean's will present the consolidated prioritized initiatives to the College Planning Council. The College Planning Council will then prioritize the initiatives using the following priority levels.

**R:** Required – mandated or unavoidable needs (litigation, contracts, unsafe to operate conditions, etc.).

**H:** High – approximately 1/3 of the total division's initiatives by resource category (personnel, equipment, etc.)

**M:** Medium – approximately 1/3 of the total division's initiatives by resource category (personnel, equipment, etc.)

**L:** Low – approximately 1/3 of the total division's initiatives by resource category (personnel, equipment, etc.)

## **Agriculture Program Review**

2011-2012

### 7A: Appeals

After the program review process is complete, your program has the right to appeal the ranking of initiatives.

If you choose to appeal, please complete the form that explains and supports your position. The appeal will be handled at the next higher level of the program review process.

### 7B: Process Assessment

In this first year of program review using the new format, programs will be establishing performance indicators (goals) for analysis next year. Program review will take place annually, but until programs have been through an entire annual cycle, they cannot completely assess the process. However, your input is very important to us as we strive to improve, and your initial comments on this new process are encouraged.

# ELEMENTS OF AGRICULTURE AND NATURAL RESOURCES





# Agricultural Sciences

Title	FY08	FY09	FY10	3 Year Average	FY11	Program Change	College Change
Sections	7	8	8	8	10	30%	-12%
Census	122	161	164	149	190	28%	0%
FTES	18	25	26	23	28	22%	-1%
FT Faculty	0.13	0.47	0.32	0.31	0.53	72%	3%
PT Faculty	0.55	0.47	0.53	0.52	0.43	-17%	-11%
XL Faculty	-	-	-	-	-	0%	5%
Total Faculty	0.68	0.94	0.86	0.83	0.96	16%	-4%
WSCH	397	399	453	416	438	5%	3%

Most classes taught by mix of FT/PT instructors.

FY 2011:  $FT/PT = .53/.43 = 1.23$

3-Year Average:  $FT/PT = .31/.52 = .59$



# Productivity - WSCH Ratio for Agriculture

College WSCH Ratio: Weekly Student Contact Hours/(FT FTE + PT FTE + XL FTE)									
Course	Title	FY08	FY09	FY10	3 Yr Avg	FY11	Change	Dist Goal	% Goal
AGV02	Agriculture Projects	-	-	-	-	-	0%	525	0%
AGV03	Plant Biology	413	394	491	427	462	8%	525	88%
AGV04	Soil and Water Science	-	431	488	459	441	-4%	525	84%
AGV41	Landscape Management	-	-	-	-	390	0%	525	74%
AGV42A	Landscape Plant ID & Uses I	431	413	450	436	338	-23%	525	64%
AGV42B	Landscape Plant ID & Uses II	375	300	-	338	488	44%	525	93%
AGV54	Conservation Natural Resource	337	382	383	366	464	27%	525	88%
AGV90	Directed Studies: Agriculture	-	-	-	-	-	0%	525	0%
<b>TOTAL</b>	<b>Annual College WSCH Ratio</b>	<b>399</b>	<b>392</b>	<b>462</b>	<b>418</b>	<b>437</b>	<b>5%</b>	<b>525</b>	<b>83%</b>

Efficient program = Despite Constraints. Other Comparable program District Goals are 400 not 525.

# Agriculture WSCH/FTEF

- Agriculture WSCH/FTEF ratios overall average of 437, which is 83% of the district 525 goal.
- Considering that all courses within the program have been limited to 24 students due to room size constraints the true efficiency is difficult to measure adequately.
- Realizing that constraints imposed by the number of desks in the room where most courses are taught, upgrades to the desks were secured by grant funding, and the capacity of the rooms has been increased to 36 seats. It is anticipated that with enrollment cap increase to program courses between 30 and 35 students would improve the WSCH and subsequently increase efficiency.
  - **The addition of 6 to 11 students in each course would improve efficiency between 25 to 45%. If a corresponding increase in the cap in classes results increased enrollment, the agriculture program is exceeding the 525 District Goal.**
- Increasing the cap for agriculture course will have a substantial and measured improvement in efficiency from the current overall 83% to an expected range of 114% to 133% of the 525 goal.
- Additionally, the agriculture program has improved even without increasing class enrollment caps. In every year since FY08 to the present the agriculture program has improved by 5% overall average in achieving the 525 goal. One course, AG V42A, pulls down the average substantially at 64% of the 525 goal. This course is slated for deletion as the program is revised and consolidated. All but one additional class in the program approach 90% of the 525 goal.

# Comparative Expectations of Efficiency

- Other similarly designed programs, have a District Goal of 400 rather than the 525 value used to assess Agriculture. If Agriculture were assessed similarly to these programs, the program substantially exceeds efficiency measures without changing the capacity of student enrollment in courses.
- FY11 had 10 sections;
  - Multiplying 10 sections by 35 students at census enrolled in 3 hour per week of instruction, generates 1050 in WSCH.
  - Assuming 2 FTEF are teaching the 10 sections, the agriculture program is at the 525 goal.
  - However, the reality is that the agriculture program has been operating with less than 1.5 FTEF, since there is no full time faculty assigned to the program.
- Increasing the cap in the courses to 35 generates WSCH of 1050 translating to 700 WSCH. (assuming every course is running at full capacity at census). Not unrealistic.
- Realistic census counts are currently in excess of 30 students per class, 10 sections, and 1.5 FTEF totaling 900 WSCH.
  - Generating WSCH of 600 of the district ratio. Exceeding 525 by substantial margin.
  - At 1050 WSCH times 35 weeks the total student contact hours are 36,750.
  - Divided by the district goal of 525, the FTES is 70.

# Cost of Agriculture & Natural Resources

Category	Title	FY08	FY09	FY10	3 Year Average	FY11	FY11 Program	FY11 College
1	FT Faculty	-	38,797	5,107	21,952	-	-100%	12%
7	Supplies	2,423	2,900	2,670	2,664	2,954	11%	24%
8	Services	8	7	-	8	-	-100%	-17%
	<b>Total</b>	<b>2,431</b>	<b>41,704</b>	<b>7,777</b>	<b>17,304</b>	<b>2,954</b>	<b>-83%</b>	<b>0%</b>

## Agriculture: Budget Expenditure Trends



# Agriculture & Natural Resources Student Retention and Success



Subject	Fiscal Year	A	B	C	P/CR	D	F	W	NC	Census	Retain	Success
AG	FY08	27	15	18	5	9	13	33	-	120	87	65
AG	FY09	27	31	33	-	10	33	22	-	156	134	91
AG	FY10	32	25	29	1	13	32	31	-	163	132	87
AG	3 Year Avg	29	24	27	2	11	26	29	-	146	118	81
AG	FY11	41	30	47	1	9	31	31	-	190	159	119
Subject	Fiscal Year	A	B	C	P/CR	D	F	W	NC	Census	Retain	Success
AG	FY08	23%	13%	15%	4%	8%	11%	28%	0%		73%	54%
AG	FY09	17%	20%	21%	0%	6%	21%	14%	0%		86%	58%
AG	FY10	20%	15%	18%	1%	8%	20%	19%	0%		81%	53%
AG	3 Year Avg	20%	16%	18%	1%	8%	18%	20%	0%		81%	55%
AG	FY11	22%	16%	25%	1%	5%	16%	16%	0%		84%	63%
College	3 Year Avg	33%	19%	12%	5%	5%	10%	15%	2%		85%	68%
College	FY11	33%	20%	13%	3%	5%	10%	14%	2%		86%	70%

# Program Review Findings

## **Finding 1**

All courses in agriculture need to be updated, modified, revised, or deleted to modernize the program to meet the objectives of students entering the program.

## **Finding 2**

A program name change might significantly boost the program appeal.

## **Finding 3**

Increasing the cap in classes will result in substantial potential increases in measured WSCH ratio enabling program to exceed 525 goals.

## **Finding 4**

Cross-listing of courses, and revision to the certificate programs will improve outreach to students, and improve efficiency numbers.

## **Finding 5**

Instructional multiple use building to provide student instruction where water, soil, and plant materials may be sampled, tested, and spilled.

# Program Review Initiatives



## Initiative ID. AG1201

- **Initiative :** Revise, update, modify, or delete courses in the agriculture program to meet the expectations of students entering the program hoping to transfer to 4-year universities.
- **Links to Finding 1** Ongoing curriculum revisions related to state-of-the-art technical and scientific knowledge of the subject areas taught in class. Improve hands-on learning opportunities for students to align with university program transfer requirements, and potential for students to successfully transfer to 4-year institutions.
- **Benefits:** Students can move through the curriculum efficiently and achieve their goal of certificate, AS, or transfer without wasted semesters waiting for courses to be offered.
- **Request for Resources:** None

# Program Review Initiatives



**Initiative ID:** AG1202

## **Program name change**

- **Links to Finding 2:** As has occurred at numerous community college and university agriculture programs throughout the country have had to do to appeal to a broader spectrum of students, agriculture programs have changed or modified their names to include resources management and/or environmental sciences themes to attract and train students for careers beyond conventional traditional agriculture practice. Agriculture today represents a broad and diverse technological capability, broad interdisciplinary studies in botany, ecology, water science, earth science, environmental science, and resources management.
- **Benefits:** Improvements in identity translate to broader appeal to students wanting to gain specific technical and science skills necessary for employment and/or transfer to university programs are gained by broadening the title to include courses better articulated to specific programs of study beyond Ventura College.
- **Request for Resources:** None



# Program Review Initiatives



**Initiative ID: AG1203**

**Increase class enrollment caps in all Agriculture courses**

- **Links to Finding 3:** Substantial potential increases in WSCH ratio can be achieved by increasing the number of students who may enroll in a course offering, with intent to exceed 525 goals, and to provide improved cost efficiency without the need to hire additional faculty to perform instructional duties.
- **Benefits:** Students will have more potential to take existing courses, while maintaining number of sections, at a reduced cost in FTEF obligation.
- **Request for Resources:** None

# Program Review Initiatives



**Initiative ID: AG1204**

**Cross-list courses and revise certificate programs.**

- **Links to Finding 4:** Students will be offered courses in equivalent areas without the need to increase the number of sections.
- **Benefits:** Student options will be broadened, with no net increase in the number of sections opened up to serve student need for courses that are not offered regularly enough to fulfill certificate requirements.
- **Request for Resources:** None

# Program Review Initiatives



## Initiative ID. AG1201

- **Initiative :** Revise, update, modify, or delete courses in the agriculture program to meet the expectations of students entering the program hoping to transfer to 4-year universities.
- **Links to Finding 1** Ongoing curriculum revisions related to state-of-the-art technical and scientific knowledge of the subject areas taught in class. Improve hands-on learning opportunities for students to align with university program transfer requirements, and potential for students to successfully transfer to 4-year institutions.
- **Benefits:** Students can move through the curriculum efficiently and achieve their goal of certificate, AS, or transfer without wasted semesters waiting for courses to be offered.
- **Request for Resources:** None

# Program Review Initiatives



**Initiative ID: AG1205**

## **Provision of an instructional multiple-use outbuilding**

- **Links to Finding 4:** A small 30 by 50 multiple use metal structure with concrete/tile floors to maintain course instruction using soil, water, and plant materials would significantly improve instructional quality of the agriculture program. The building would house equipment in a safe and reliable manner to be used directly for instruction, and where experiments could be set up during laboratory exercises, and potential left until the next class period where results could be verified.
- **Benefits:** The benefits of having a simple multiple use structure where high technology agricultural/biological/soil testing/water quality testing/landscaping equipment can be stored, and be in a ready state for instruction significantly strengthens the program offerings course by course as students are able to access knowledge and develop skills that will enhance the probability of transfer and employment, since they will be expected to know as they move to careers and academic programs in industry and university settings.
- **Request for Resources:** Estimated cost of metal outbuilding; \$40,000

A close-up photograph of several purple flowers, likely from the Lamiaceae family, with a soft-focus green background. The flowers are arranged in clusters on thin stems. The text "Thank you for your consideration." is overlaid in the center of the image in a black, sans-serif font.

Thank you for your consideration.

# QUESTIONS?



# Agriculture Program Review

2011-2012

## Ventura College Agriculture Program

- The traditional perception of agriculture as that of Cows, Sows, and Plows is no longer a relevant model. Agriculture is an interdisciplinary, multifaceted, high technology, efficient, and often misunderstood industry that produces all of the food and fiber for our nation, and significant portion of the world. Since at least 2003, the Ventura College Agriculture Program has been in the process of transforming and aligning with the new realities of agricultural education and industrial needs. It has successfully turned the corner into a relevant, interdisciplinary science and technology based program, albeit small and seemingly insignificant. Most of the work has been done in a quiet and focused manner, leveraging scarce resources into substantial and significant opportunities for grant support totaling over \$3.5 million dollars. This has assisted in modernizing facilities without use of institutional resources, and the purchase of state-of-the art equipment to bring high technology and educational opportunities to students who are intent to transfer to major 4-year universities, including UC Davis, California Polytechnic State Universities (SLO, Pomona), Fresno State, Humboldt, and UC Riverside.
- Ventura College has completed what most national traditional Agriculture Programs have had to do to stay relevant as student enrollments in, “traditional” agriculture have declined beginning in around 2001. As University Agriculture Programs have had to do nationally, Ventura College has had to transform in to a more appealing academic and vocational educational track for students seeking to learn practical application of high technology and interdisciplinary sciences including global positioning systems, water chemistry, soil science, and plant sciences.
- Many long standing Agriculture Programs have changed name and focus to align more with environmental and resources management sciences. One major examples is found at Cal Poly San Luis Obispo, where the 100 year old Agriculture Program, steeped in tradition as Cow, Sow, and Plow school, underwent a major shift, and is now know as the College of Agriculture, Food and Environmental Sciences. Under this Division, are contained the departments Earth & Soil Sciences and Natural Resources Management which also merged to create a new department called Natural Resources Management & Environmental Sciences.
- This trend is not unique to Cal Poly, but has been a national trend at major “Ag” universities and colleges nationally. Ventura College is a Lead Partner in the National Science Foundation’s National Center for Agriscience & Technology Education. In 2004, Ventura College was host to a national conference having approximately 220 agriculture faculty and industry partners to explore and develop strategies for transforming agricultural education into the next century recognizing the need for transformation change to account for the high technology and high skills training needed to support 21<sup>st</sup> Century agriculture across the country.
- Combining Environmental Science and Natural Resources (ESRM), Biotechnology, Plant Science, Soil Sciences, and Water Science, the Agriculture Department has managed to transform without using institutional dollars, and without having need to hire a full time faculty.

## Agriculture Program Review

2011-2012

- Core classes have been retained and updated to reflect changing realities by bringing interdisciplinary sciences faculty from other areas to maintain the Plant Science AS degree, and Certificates in Natural Resources and Landscaping.
- As a regional hub of educational opportunity the Ventura College Agriculture Program dates back to 1925, when Ventura County was driven by two industries, Oil and Agriculture. Ventura County Agriculture today is the number one revenue generator in the County, bringing in an estimated \$1.7 billion in annual revenue. Ventura County ranks number 8 in total agricultural production of California's 58 counties.
- Two USDA grants, totaling \$600,000, and now a STEM grant totaling over \$2,000,000 have been to a great extent achieved by the existence of the Agriculture Program. The lead faculty in agriculture have successfully leveraged the small, but significant resources provided to the department to build an academic program with high technology.
- Agriculture remains a very important sector in California's economy. Farming-related sales have more than quadrupled over the past three decades, from \$7.3 billion in 1974 to nearly \$31 billion in 2004. This increase has occurred despite a 15 percent decline in acreage devoted to farming during the period, and water supply suffering from chronic instability. Factors contributing to the growth in sales-per-acre include more intensive use of active farmlands and technological improvements in crop production.
- As with the transformation of California agriculture, national trends follow that both technology and agricultural education have had to transform to meet the demands of an improving food and fiber production and maintain less impacting practices to lessen the environmental impacts of agriculture.
- Since inception at Ventura College, the Agriculture department has had to transform several times to meet the needs of students hoping to gain transferable academic and vocational skills. Ventura College students transfer to California Polytechnic University, SLO and Pomona, Cal State Fresno, UC Davis, UC Riverside, and Chico State University.
- For these and numerous other reasons, it is requested that the Agriculture Program be continued with requisite time to cap off the good and substantive work currently being completed in the program for the benefit of students and Ventura College.
- Agriculture is one of the few programs on campus that does not have a full-time instructor. Each program the college offers should have at least one full-time faculty. A full-time faculty member runs and develops the program. Full-time faculty promote the program and attract students. Full-time faculty write curriculum and attend campus meetings.
- This program is taught entirely by part-time instructors. There is no full-time instructor to schedule classes, develop curriculum, recruit and train new part-time instructors or promote the program within the community.



## Agriculture Program Review

2011-2012

- Currently, the Agriculture program utilizes one classroom and a minimum budget. Access to additional classroom space, a chemistry lab and skill-development lab space would enable the program to grow.
- Challenges
- The Agriculture Program, even in fiscal good times was not allowed to grow by offering even one additional course to round out the program necessary for a student to complete the Plant Science Associates of Science Degree, nor Natural Resources Management Certificate, nor Landscape Management Certificate.
- Restrictions on increasing the semester hours from 19 to 23 would have significantly provided a complete and well rounded programmatic educational opportunity to students. These constraints have been a self fulfilling detriment to the concept of continuance. There is no technical justification from an efficiency standpoint, nor a cost standpoint to justify discontinuance.

Semester	Hourly FTEF	Full-Time FTEF	Total FTEF
Fall 2004	0.27	0.00	0.27
Spring 2005	0.20	0.00	0.20
Fall 2005	0.47	0.00	0.47
Spring 2006	0.47	0.00	0.46
Fall 2006	0.99	0.00	0.99
Spring 2007	0.53	0.20	0.73
Fall 2008	0.73	0.00	0.73
Spring 2008	0.47	0.26	0.73
Fall 2009	0.27	0.73	1.0
Spring 2009	0.73	0.27	1.0

# Agriculture Program Review

2011-2012

## Instructors and Staff

<b>Name</b>	<b>William Budke</b>
Classification	Professor, Geosciences/Agriculture
Year Hired	2002
Years of Work-Related Experience	
Degrees/Credentials	A.A., B.A., M.S.

<b>Name</b>	<b>Dr. Marta de Jesus</b>
Classification	Professor, Biology/Agriculture
Year Hired	Three years teaching one class in agriculture-Plant Biology
Years of Work-Related Experience	
Degrees/Credentials	B.S., M.S, PhD.

<b>Name</b>	<b>Kamelia Algiers</b>
Classification	Professor, Biology
Year Hired	2004 (Three years teaching one class agriculture-Plant Biology)
Years of Work-Related Experience	
Degrees/Credentials	B.S., M.S.

<b>Name</b>	<b>Kirk Richter</b>
Classification	Part-time Faculty, Agriculture
Year Hired	2006, Fillmore High School, East Campus Course Instructor
Years of Work-Related Experience	
Degrees/Credentials	B.S., M.S.

## Agriculture Program Review

2011-2012

Title	FY08	FY09	FY10	3 Year Average	FY11	Program Change	College Change
Sections	7	8	8	8	10	30%	-12%
Census	122	161	164	149	190	28%	0%
FTES	18	25	26	23	28	22%	-1%
FT Faculty	0.13	0.47	0.32	0.31	0.53	72%	3%
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XL Faculty	-	-	-	-	-	0%	5%
Total Faculty	0.68	0.94	0.86	0.83	0.96	16%	-4%
WSCH	397	399	453	416	438	5%	3%

The agriculture program has slightly increased the number of sections being offered from 8 to 10 from FY 2008 to 2011, the average number of sections remains low at approximately 8 courses taught annually. The program has not been allowed to add sections during this period to significantly provide support necessary for a well rounded and complete program. A 30% increase over baseline of 7 to 8 sections begin taught does not reflect a significant increase in campus obligation to the program. Even with this modest increase in the number of sections being offered, there has been a significant 28% increase in the number of students served as reflected in the census enrollment, and FTES at 28% and 22% respectively. The burden of instruction has been increased on FT faculty with a substantial increase of 72%, moving up from an average of 53% over the last three years. PT faculty obligation has been reduced by 17% in FY 2011, however, this is not reflective of the obligation provided over the last 3 years at approximately 52%. Yet, overall, the program change from the 3 year average to FY 2011 is a modest increase of 5% WSCH, which aligns with the college change of 3% WSCH.

It should be noted that no course being taught in agriculture has an enrollment cap higher than 26, which makes meeting the 525 benchmark goal practically impossible. However, courses are typically full as census, and the retention and success rates are high for students enrolled in the program. Significant and substantial improvement has been achieved from FY 08 WSCH moving from 397 to 453 in FY10, having a running 3 year average of 416. Even with two more sections being offered in FY11, the WSCH goes up to 438.

With structural grant supported fiscal resources the classroom capacity has increased from 24 in FY 2008 to 35 in FY 2011. Evaluation of whether to increase the class cap has been proposed to help achieve and/or exceed the 525 productivity benchmark. With a modest increase in enrollment potential from 24 to 30 due to increased capacity, it is expected that a 10% improvement in the productivity would result in WSCH in courses within the agriculture program, that this would translate to an overall WSCH exceeding the 525 number consistently.

## Agriculture Program Review

2011-2012

District WSCH Ratio: Weekly Student Contact Hours/(FT FTE+PT FTE)									
Course	Title	FY08	FY09	FY10	3 Yr Avg	FY11	Change	Dist Goal	% Goal
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<b>TOTAL</b>	<b>Annual District WSCH Ratio</b>	<b>399</b>	<b>392</b>	<b>462</b>	<b>418</b>	<b>437</b>	<b>5%</b>	<b>525</b>	<b>83%</b>

The D2 Chart shows mixed WSCH/FTEF ratios with an overall average of 437, which is 83% of the district 525 goal. Considering that all courses within the program have been limited to 24 students due to room size constraints the true efficiency is difficult to measure adequately. Realizing that constraints imposed by the number of desks in the room where most courses are taught, upgrades to the desks were secured by grant funding, and the capacity of the rooms has been increased to 36 seats. It is anticipated that with enrollment cap increase to program courses between 30 and 35 students would improve the WSCH and subsequently increase efficiency substantially. The addition of 6 to 11 students in each course would improve efficiency between 25 to 45%. If a corresponding increase in the cap in classes results increased enrollment, the agriculture program would be able achieve and potentially exceed the 525 level.

With FY11 having 10 sections being offered multiplied by 35 students at census enrolled in 3 hour per week of instruction, generates 1050 in WSCH. Assuming 2 FTEF are teaching the 10 sections, the agriculture program is at the 525 goal. However, the reality is that the agriculture program has been operating with approximately 1.5 FTEF, since there is no full time faculty assigned to the program. As such, increasing the cap in the courses to 35 generating a WSCH of 1050 will translate to a 700 WSCH. This assumes every course is running at full capacity at census. A more realistic census count would be 30 students per class, 10 sections, and 1.5 FTEF totaling 900 WSCH. This would generate WSCH of 600 of the district ratio. With 1050 WSCH times 35 weeks the total student contact hours are 36,750. Divided by the district goal of 525, the FTES is 70.

Increasing the cap for agriculture course will have a substantial and measured improvement in efficiency from the current overall 83% to an expected range of 114% to 133% of the 525 goal.

Additionally, the agriculture program has improved even without increasing class enrollment caps. In every year since FY08 to the present the agriculture program has improved by 5% overall average in achieving the 525 goal. One course, AG V42A, pulls down the average substantially at 64% of the 525 goal. This course is slated for deletion as the program is revised and consolidated. All but one additional class in the program approach 90% of the 525 goal.