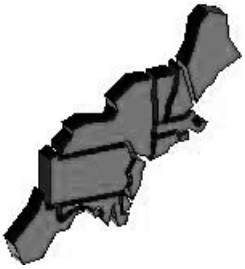
Northeastern Regional Association of
State Agricultural Experiment Station Directors

Cost Recovery Systems at Agricultural Experiment Station Research Facilities in the Northeast Region



June 23, 2015

Contents

1.0	Purpose and Scope	1
2.0	Introduction	1
3.0	Benefits and Costs of Direct Cost Recovery	3
4.0	Direct Cost Recovery Systems in the Northeast Region	3
5.0	System Elements	4
6.0	Implementation	12
7.0	Best Practices and Recommendations	13
	Appendix	14

1.0 Purpose and Scope

It is common for agricultural experiment stations to require research sponsors, faculty and staff, and external users to provide reimbursement for direct costs incurred for services provided in support of projects or activities at research facilities. While common, formal systems to recover costs based on fee schedules or reimbursement are not universal. Instituting these systems typically requires a significant commitment of staff time for development and substantial communication with faculty and other facility users to be successful. A challenge for research directors is that comprehensive information on system design and best practices is not available or easily accessible. The purpose of this document is to provide information on (1) direct cost recovery systems for four types of research facilities commonly used agricultural experiment stations in the Northeast and (2) best practices for system design, implementation, and administration. The intended audience includes research directors, facility managers, facility advisory committees, faculty, business office administrators, and institutional sponsored program administrators.

The types of research facilities included in this report are

- Crop farms
- Greenhouses
- Growth chambers
- Large animal/livestock facilities

Information for this document came from a 2013 survey of members of the Northeastern Regional Association of State Agricultural Experiment Station Directors (NERA) and policy and procedure documents for direct cost recovery systems at member institutions.

A list of policy documents and web-based information on direct cost recovery systems at NERA institutions is available in the appendix.

2.0 Introduction

Agricultural experiment stations typically maintain crop and livestock farms, greenhouses, and growth chamber facilities to support their research and outreach missions. And research farms and greenhouses are frequently used for extension education, and facilities on or near university campuses are often integral to undergraduate and graduate teaching programs.

The cost of maintaining research facilities and providing services is an on-going challenge. Aging infrastructure and increasingly expensive technology and equipment add to the challenge of funding routine operations. And research farms are typically

too small to achieve operating efficiencies close to norms in private industry. More importantly, the annual workload and operating costs for these facilities also can be greatly influenced by the number, size, and types of research projects or teaching and outreach activities requiring space and services.

Direct costs to facilities are those expenses that can be assigned to individual sponsored projects or activities, whether research, instructional, or outreach, with a reasonable degree of accuracy. These costs are in contrast to indirect costs for facility operations, which are incurred for common needs (e.g., infrastructure, utilities, and administration) and cannot be easily assigned to particular projects or activities. Depending on institutional policy, indirect cost funds from grants and contracts may be returned to colleges or units to help offset facility and administration expenses. In the absence of a formal system for recovery of direct project costs or when there is inadequate indirect cost return, it is not unusual for facility managers to employ ad hoc approaches to help cover facility expenses. Examples of ad hoc approaches include asking for voluntary contributions from principal investigators for equipment repairs, requiring reimbursement for certain types of supplies (e.g., growing medium) or use of staff, or requiring reimbursement for revenue lost as a result of research activities (e.g., reduction in crop or milk revenue). A formal direct cost recovery system uses a fee schedule to recover costs for defined services provided to projects or activities at facilities. A well-designed direct cost recovery system can provide an objective and more transparent approach to recover all or a portion of service costs associated with projects and activities and may yield other benefits.

The specific objectives of this document are to:

- Summarize the benefits and costs of direct cost recovery systems.
- Document present use of formal direct cost recovery systems at NERA institutions for the four facility types listed in Section 1.0.
- Describe the core elements of present systems for each facility type.
- Provide information on best practices for system design, implementation and administration.

3.0 Benefits and Costs of Direct Cost Recovery

Table 1: Potential benefits and costs of direct cost recovery systems at experiment station facilities.

Potential Benefits	Potential Costs
Provides revenue for facilities that is aligned with project-related expenses.	Increased stress for facility users and managers that comes with a cultural change in how users receive services from facilities.
Encourages facility users to seek extramural funds to support facility operations. Avoids the disparities that can develop when facility managers rely on appeals to the good will of project directors to cover one-time facility costs.	Reduction in numbers of research projects or activities because of service costs. Greatest impacts may be on pilot projects or activities with minimal funding support or projects were it is difficult to secure funding for service fees from research sponsors. Consequently, project directors may elect to work at other locations to avoid fees.
Encourages more efficient use of facility services by project directors. This also tends to reduce competition for space or access to facility resources.	Increased workload for business office staff for initial and annual financial analyses, billing, and account management.
When first implemented, these systems often force "long overdue" discussions with individual project directors, academic units, or external users about disproportionate use of facility resources. Financial analyses that underpin direct cost recovery systems add formal cost information to these discussions.	Increased workload for facility managers to track projects and activities and help assign costs.
Increases clarity about services that will be provided to facility users, a benefit to both facility managers and users.	
Financial analyses for establishing service fees for specific functions are helpful in understanding facility costs and improving financial management.	
Service fees facilitate assignment of facility resources as matching support in grant proposals.	
Customer service becomes more relevant to facility managers.	

4.0 Direct Cost Recovery Systems in the Northeast Region

All NERA member institutions (N = 14) reported information on direct cost recovery systems. Information for the Ithaca and Geneva units of the New York Agricultural Experiment Station (Cornell University) are reported jointly. Direct cost recovery systems are common at NERA institutions overall (station or college), but use varied substantially among facility types and institutions (Table 2). Cost recovery systems were relatively common for greenhouse facilities (N = 9), growth chambers (N = 7), and large animal facilities (N = 7), and less common for crop farms (N = 3). Rutgers University reported the most comprehensive use of direct cost recovery with systems in place for all four facility types. Three institutions (Cornell University, University of Maine, University

of Maryland) reported systems for at least three facility types. Several institutions noted intentions to develop direct cost recovery systems in the near future. While we have no comparable historical data, anecdotal information from the survey suggests that use of direct cost recovery systems is trending upward.

Table 2. Present use of formal direct cost recovery systems at research facilities of member institutions of the Northeastern Regional Association of State Agricultural Experiment Station Directors, 2013.

Institution	Crop farms	Greenhouses	Growth chambers	Large animal/ livestock facilities
Rutgers University	X	X	X	X
Cornell University - Ithaca & Geneva	X	X	X	
University of Maine	X	X		X
Pennsylvania State University		X		
University of Connecticut				X
University of Connecticut – New Haven				
University of Delaware				X
University of the District of Columbia				
University of Maryland		X	X	X
University of Massachusetts		X	X	
University of New Hampshire			X	X
University of Rhode Island		X		
University of Vermont		X	X	X
University of West Virginia		X	X	

5.0 System Elements

5.1. Terms and Definition

A difficulty in comparing direct cost recovery systems among institutions is that the terminology used for similar concepts is highly variable, i.e., system elements may be defined uniquely at each institution. For example, respondents to the NERA survey used the following diversity of terms for cost recovery: cost recovery, full cost recovery, recovery of true costs, recovery of defined services, full recovery of non-subsidized costs, and recharge. Similarly, there was a similar diversity of terms used in responses to a cost sharing question: fees set below full costs, fees set below defined costs, subsidized costs, and supplemental funds. For this document we strived to use the following terms and definitions as consistently as possible except we used given terms

when reporting on specific services and fees at individual institutions. In addition, for each term below we have discussed the range of usage and potential implications for comparing systems.

Indirect costs are costs incurred for common needs and therefore cannot be identified with a particular sponsored project, an instructional activity, or any other institutional activity. Examples of indirect costs are general facility and administrative costs, including utilities, infrastructure repairs and general maintenance, and administrative compensation.

Direct costs are costs that can be identified specifically with a particular sponsored project, an instructional activity, or other institutional activity and that can be assigned to such activities relatively easily with a high degree of accuracy. Examples of direct costs are the compensation of employees performing work directly in support of an activity, the cost of material consumed or expended, and costs to operate and maintain equipment. In some cases, utility costs directly attributable to a particular project and separately metered may be considered a direct cost.

Services are resources of a facility that are provided in support of a project or activity except those associated with indirect costs. It is common to provide different levels of services: 1) basic service, 2) a higher tier service, and 3) services unique to a particular project such that cost recovery is more appropriately handled with an individual project agreement rather than a standard fee. Services are generally defined as specific functions (e.g., plant care in greenhouses), but the resources provided are comprised of labor, materials and supplies, commercial services, equipment, and other direct costs.

A **unit** is defined as a logical unit of measure to which direct costs for services are applied. Units for costing may be acre or square foot (e.g., crop farms), bench (e.g., greenhouses), or animal (animal facilities).

The **unit cost** is the total direct cost for defined service divided by the number of units. Unit costs are established annually based on the actual direct costs that are incurred in providing basic or other services and are developed in compliance with generally accepted accounting principles.

The **service fee** is a per-unit billing rate set to recover all or a portion of the direct costs associated with providing services at a facility. A labor fee for commitment of facility staff to projects and activities also is sometimes established for recovery of direct costs when labor and non-labor service fees are billed separately or when unique projects are billed for itemized costs rather than using a standard fee. Service fees should be audited and revised annually as needed. Note that terms such as land use fees, plot fees, or space use fees are avoided in this document unless a specific term reported by an institution is being noted. The term "service fee" is a more comprehensive term, and some space-based terms (e.g., space use fee) may incorrectly signal potential conflicts with indirect cost accounting. Note that published fees often appear highly variable among institutions. There are a number of potential reasons. The defined set of

services being provided at a facility may vary among institutions. I.e., Institutions may choose to exclude certain types of costs when calculating the cost basis for service fees. Also fees are sometimes set at a rate lower than the calculated unit cost. This latter case is sometimes referred to by survey respondents as subsidized costs or subsidized fees. Lastly fees may simply be nominal charges and unlinked to a detailed cost analysis.

In this document, **cost sharing** of the service fee means the station or unit with budget responsibility for the facility pays a portion of the fee for a particular project or activity. Or in the case of unique projects where cost recovery is by direct reimbursement, the station or unit pays a portion of the total direct cost of the project.

This definition of cost sharing is relatively narrow. For example, other entities within the university might pay a portion of a service fee and this would be commonly referred to as cost sharing. However, this type of cost sharing is not relevant to the purpose of this document because it is functionally equivalent to a second project sponsor paying the required fee. Another complexity is that when some categories of direct costs are purposefully excluded from the cost basis of a service fee or when the fee is set below the actual cost then there is in effect an undeclared cost sharing of full direct costs for all users. In some cases survey respondents referred to this as a subsidy. One survey respondent used the term waiver in a response to a question about cost sharing. The waiving of an applicable fee (i.e., no entity pays the fee) for a facility user is technically not cost sharing. Waivers also are problematic because federal sponsors cannot be charged higher fees than those charged to other users.

5.2. Types of Costs Recovered

At the most basic level, the types of costs typically recovered for service to projects or activities at facilities are labor, materials and supplies, equipment operating costs, and services provided by external vendors (e.g., veterinarian care, equipment service contracts). Utility costs (e.g., electric, water) may be recovered in certain situations; however, it is often not possible to segregate direct (project-specific) and indirect (base facility operation) utility usage. There was no indication in survey responses or policy documents that equipment or infrastructure depreciation was included in the cost basis for fees. (Note: Utility and infrastructure costs may be more commonly incorporated into direct cost recovery systems for aquaculture research facilities because utility costs can be substantially influenced by research activity and restructuring of tank systems for individual projects is common.)

The specific types of costs recovered for each facility type are summarized below and in Table 3. There was considerable variation in the types of costs targeted for recovery at each institution. As noted earlier, this is a product of four factors. Institutional decisions on the package of services to be provided on a fee basis determine the types of facility costs targeted for recovery. Some categories of facility costs may be explicitly excluded from the cost basis in the fee setting process for local reasons. Facilities and institutions

differ in cost efficiency for local reasons. Lastly, fees may be set below calculated costs. In combination these factors produced high variation among institutions in fees for similar facility types. To illustrate, at a particular crop farm, labor and consumables for common field activities (e.g., tillage, planting, nutrient management, pest control) may be provided on a fee basis while other associated services (e.g., composting, rotational crops, irrigation, equipment depreciation, greenhouse support) may be unavailable or be provided to all facility users without charge. As examples, institutions reported excluding costs for salaries of staff paid on state funds, director's salaries, salaries of full time employees, production of marker stakes, and utility costs.

Crop Farms

At institutions with cost recovery systems for crop farms, it was common to charge basic service fees on a per acre basis to recover labor and supply costs for tillage, cultivation, lime and fertilization, and pest management (Table 3). Some institutions may include other services for the basic service fee. For example, the following were provided at some institutions and included in the cost basis for fees: irrigation when available, machine harvest, cover/rotation crops, mowing field margins, pruning perennial plants, safety training, and project support by the facility manager. At some institutions, certain activities were explicitly excluded, e.g., pruning of perennial plants. At one institution, weeding and harvesting was provided based on an hourly fee in addition to the basic service fee. Also at one institution, rates for farms differed to reflect differences in soil type, irrigation capability, and available infrastructure on farms (coolers, fencing, greenhouses, high tunnels, etc.)

Table 3. Summary of services provided on a fee basis in direct cost recovery systems for four types of research facilities at member institutions of the Northeastern Regional Association of State Agricultural Experiment Station Directors, 2013.

Facility Type	Services commonly provided for basic service fees[a]	Additional services sometimes provided for basic fees or at additional cost[a]
Crop farms	Tillage, lime and fertilizer application, cultivation, pesticide application, mechanical harvest, field border mowing, tree pruning, equipment costs.	Cover/rotation crops, irrigation, hand-weeding, safety training. Fees also may reflect the benefits of available coolers, high tunnels, and soil fertility.
Greenhouses	Watering, pest and disease control, environmental control, greenhouse maintenance, routine sanitation, fertilization, seasonal application of shade materials.	Propagation, biological pest control, transplanting, pruning, harvesting. Supplies: Potting mixes, pots, stakes, labels.
Growth chambers	Supplies and labor for maintenance and repair of chambers.	User supplies: potting media, lime, fertilizers, stakes, rooting hormones.
Large animal/ livestock facilities	Supply costs and labor for animal inputs (water, food, and bedding) and stall cleaning. Other consumable supplies and routine facility needs related to animals.	On-farm forage production, health care, waste management, regulatory and registry costs, site-specific training

[a]Not all institutions with direct cost recovery systems provide all services for the basic or higher-tier service fees.

There were at least three distinct approaches for structuring fee systems at crop farms. At least one institution (University of Maine) recovered costs for labor and other expense categories with a single standard fee/acre. At least one institution (Cornell University) segregated costs for labor and equipment from a general operating expense category and had separate fees for each. Labor and equipment fees were charged as general labor or labor plus equipment (hourly basis). Charging for labor independently was deemed more equitable for projects with staff that could perform their own field work. A third model (Rutgers University) used separate fees for different categories of service: land preparation, plot maintenance, and irrigation.

At some institutions, there were systems to recover costs (labor, supplies, and miscellaneous costs) for unique projects or activities where standardized fees were not easily applied. For example, hourly rates may apply for use of facility staff for usual project activities or off-farm research. Or full reimbursement may be required for infrastructure modifications or consumables to support unusual projects. Or reimbursement may be required to offset unusually high revenue losses from project activities.

Greenhouses

At institutions with cost recovery systems for greenhouses, it is common to charge standard service fees to recover labor and supply costs for basic plant care; management of lighting, irrigation and ventilation systems; general housekeeping; and pest management (Table 3). Fees are typically charged on a bench unit or square foot basis. Some institutions exclude all or some labor costs. Some institutions may include other services for the basic or higher-tier service fees.

One institution noted that greenhouse utility costs were excluded in the cost basis for fees whereas several noted that all operating costs were included. However, it was not clear how utility costs are handled in these cases.

Growth Chambers

Information on direct cost recovery systems for growth chambers from the survey and existing policy documents was limited. Fees appear to be generally based on recovery of costs for supplies, equipment, and labor; however, recovery of labor costs was implied but not explicitly described or noted in some cases (Table 3). Fee structures were based on chamber size. Plant care supplies were sometimes included in service. However, plant care was the responsibility of the user. Some survey respondents noted that chamber depreciation was not included in the cost basis of fees. This was consistent with other comments that chamber replacement was a challenge for maintaining growth chamber service on the long term.

Large Animal/Livestock Facilities

At institutions with cost recovery systems for large animal facilities, it is common to charge service fees to recover labor and supply costs for feed, bedding, other routine

animal or facility supplies, cleaning animal stalls, waste management, and preventative health care (Table 3). Fees are typically charged on an animal per diem basis. Notably some stations reported that labor costs were excluded. Some institutions may include other services in the cost basis for fees. For example, the following services were provided at some institutions:

- Food and bedding production costs
- Regulatory and registry costs
- Animal-related equipment maintenance
- Costs for raising replacement animals
- Safety training

5.2 Fees and Level of Cost Recovery

One goal of the survey was to better understand the degree that institutions were attempting to achieve full recovery of direct costs for projects and activities. Assessing the variation in cost recovery within facility types and across institutions was not possible based on the survey information and policy documents because of variation in the packages of services provided for service fees, the types of costs included or excluded in costing services, and the unknown degree to which reported fees recovered full calculated costs for services. It is also important to note that full cost recovery also depends on how it is defined. For example, most institutions charge a fee to cover costs for a defined set of services. In contrast, other services appeared to be provided without charge. These cases could be viewed as either full cost recovery for the defined services or less than full cost recovery for the full suite of services provided. Some institutions also excluded certain types of costs in costing services at crop farms and greenhouses. One institution also reported limiting cost recovery for a dairy facility to expenses for services above and beyond what was required to maintain the herd and operate the dairy. And finally it is generally unknown whether current fees at institutions were set at or below full costs for defined services. For example, one institution set its cost recovery goal for its crop farms at 10% of total annual operations and also capped the number of acres (i.e., 10 acres) per project per farm that required fee payment. This structural variability allows only a comparison of fees for each facility type and not an assessment of relative cost recovery. Available information on service fees for crop farms, greenhouses, and growth chambers are summarized in Table 4.

5.3 Processes for Determining Costs and Setting Fees

Survey respondents provided little information on processes for determining costs. Some institutions reported that costing analyses were done by college or station business offices using fiscal year expense data for facilities to estimate break even costs for defined services. Analyses must conform to rules for federal allowable costs. Some institutions reported that processes were dictated by their university division of financial affairs (e.g., Cornell University Policy 3.10, Recharge Operations and Service Facilities).

Table 4. Available information on fees for services[a] provided at three types of facilities at member institutions of the Northeastern Regional Association of State Agricultural Experiment Station Directors in 2014.

Member Institutions	Crop farms[b]	Greenhouses[b]	Growth chambers
Cornell University	Land use and infrastructure fee: $100–350/ac[c] Labor & equipment: $30/hr; General labor: $20/hr	**Facility level 1:** basic plant care ($0.31/ft/mo)[d] extended plant care ($0.37/ft/mo)[d] **Facility level 2:** basic plant care ($0.38/ft/mo)[d] extended plant care ($0.44/ft/mo)[d]	$21–72.60/chamber/mo[d] depending on chamber size
University of Maine	Annual crop farms: $950–1500/ac[d] Perennial crop farms: $2500–3700/ac[d] Labor for other services: $20/hr	$5.12 per bench (32 ft)/mo.	
Rutgers University	Land preparation: $160/ac[d] Plot maintenance: $170/ac[d] Irrigation: $170/ac[d]	**Department rental fees[e]** 40′x40′ greenhouse: $1782/yr 20′x20′ containment zone: $963/yr 10′x20′ containment zone: $650/yr	Small chamber: $22/week[d] Large chamber: $118/week[d]
Pennsylvania State University			Reach-in model: $2.00/day[d] Walk-in model: $4.00/day[d]
University of Vermont		$3.06–4.14/ft/mo[d]	

[a]Specific services provided vary among institutions within facility type.
[b]It is common for requests for less than a full acre or bench to be charged for a minimum unit area.
[c]Excludes labor costs. Labor costs are charged separately
[d]Includes labor costs.
[e]Greenhouse space is rented to university departments, which then allocate space to their faculty members.

One institution reported that a department committee determined rate schedules for greenhouses, but the specific process was not reported. Some but not all institutions noted that costs were audited annually. Generally, costing analysis requires working with facility managers and staff to segregate labor and operating costs by specific activities to estimates costs for defined services.

5.4 Application to Facility Users

Where direct cost recovery systems are in place, payment of fees appears to be uniformly required of all university faculty and staff requesting service in support of research and outreach activities. It was not clear from survey responses or policy documents to what extent academic programs were required to pay for service in support of teaching activities. One institution's policy indicated that service fees apply to academic courses and that graduate students or advisors are required to pay fees for service for graduate research projects. A second institution noted that academic units were charged for use of greenhouse space for teaching activities.

Survey responses were limited, but it appeared that users from private industries and organizations are generally required to pay fees. One institution reported applying a rate of twice the standard service fee for private companies that contract for service at one crop farm. At one institution, all work by external users required an institutional project leader and the work was billed at the standard rate. At other institutions, service fees may not apply if the facility did not provide resources in support of that activity.

5.5 Cost Sharing of Fees

Based on survey responses, payment of full fees (i.e., no cost sharing) was generally expected for research and outreach activities. Several institutions indicated that cost sharing was allowable, but not current practice. The following practices occurred at individual institutions: cost sharing only approved for plant breeding or variety evaluation work, cost sharing approval required prior to grant proposal submission for livestock work, cost sharing negotiated as part of startup packages for new faculty, and cost sharing requests were considered using a formal proposal process.

Given that the application of service fees to teaching activities was unclear in survey responses, there was little information on associated cost sharing. One institution noted that decisions on cost sharing for academic courses at facilities were made in consultation with academic chairs and directors as part of routine planning for academic programs. One institution established a separate limited fund to cost share a percentage of teaching activity costs in greenhouses. And it was also noted that some unique aspects of teaching programs (e.g., horticultural plant collection) may require special cost-sharing arrangements.

5.6 Fee Collection

It was common for facilities to use service request forms to initiate project or activity tracking and ultimately to provide quantitative data on services used by station or college business offices. It appeared common for business offices, in consultation with the facility manager, to compile and review activity records and subsequently bill project accounts. Service fees were billed as a direct expense to grant, contract, or other accounts through university accounting systems. Project accounts may be billed periodically or at the termination of the project depending on local needs. It was common for accounts to be billed at the end of growing seasons or quarterly. Greenhouses and growth chamber facilities sometimes were billed more frequently (e.g., monthly).

One institution reported using custom built software to facilitate completion of work records for transmittal to its business office. Another institution reported that it was in the process of developing a reservation and billing systems for its farm and greenhouse operations.

5.7 Revenue Use

Survey information on revenue use was limited. In the case of crop farms and greenhouse, two institutions reported that revenue was returned to the facility or responsible academic unit to offset expenses. At one institution, fees from multiple facilities were aggregated centrally and used for equipment and infrastructure replacement and to offset some expenses at individual facilities. In the case of large animal facilities, four institutions reported that revenue was returned to the facility operating budget. There was limited information for growth chamber facilities.

6.0 Implementation

Directors provided the following comments and recommendations related to implementation of direct cost recovery systems:

- Some facility users will resist establishment of formal direct cost recovery systems. Others will see benefits for the long term. Directors should recognize that instituting a system will result in a cultural change for a facility community. In mature systems, additional stress occurs when subsidies are reduced.
- It can be a challenge to coordinate or normalize fee structures on crop farms with different cultures and requirements. This is less of a challenge when facilities are managed centrally by the station or college.
- Project directors may struggle with assembling budgets for multi-institutional proposals because fees for similar types of facilities at different institutions may range widely.
- Posting of fees, policies, and guidance on fee descriptions for budget justifications will make proposal writing easier for project directors and minimize errors. The institutional office of sponsored programs should have access to this information.
- The initial costing analyses for facility operations will require an extended time line because it is an iterative process involving facility managers, business office staff, and other administrators. Anticipate this need in the implementation time line.
- Facility users may have activities where their project staff do all or part of the work provided as fee-for- service. There may be a number of these situations all with unique histories at the time of system implementation. There should be a general policy on allowable work by project staff and on how fees will be applied in these cases. Expect project directors to adjust their use of project staff over time in response to new policies and fees.
- Public groups that receive service or access at facilities may need special attention when rolling out a new cost recovery program.

- Accommodating existing teaching in a new direct cost recovery system can be a challenge if a facility has heavy use for student courses. Cost sharing strategies are one approach to managing service fees for teaching.

7.0 Best Practices and Recommendations

Directors recommend the following best practices:

- Work with your university office of sponsored programs during system planning. Talk to key folks in other institutions to learn about approaches for costing and administrative procedures and to become aware of pitfalls.
- Commit to a substantial and extended effort to explain the need for implementing a system and why it will be beneficial to facility users in the long run.
- Be conservative initially and avoid inclusion of any direct cost category that might suggest a conflict with indirect cost accounting.
- Strive toward consistency in practice across facilities.
- Centralize facility management at the station or college level as feasible or appropriate to facilitate the creation and administration of a common direct cost recovery system.
- Establish an advisory group(s) to assist in developing direct cost recovery systems and evaluating future policy adjustments. Be transparent by showing project directors and others facility cost information during system development.
- For simplicity, strive to charge similar fees at like facilities. And strive to limit annual fluctuations in service fees. One way to achieve uniformity and stability is to set fees below cost across facilities and at a level where annual fluctuations in facility costs will likely not require a fee increase at any unit in the near term.
- In communications with users, emphasize the concept of "fee for services" rather than using terms such as plot or land use or bench fees.
- Encourage entrepreneurial endeavors that serve to offset facility costs and reduce service fees.

Acknowledgments

Many individuals contributed to this project and the final report. Frederick A. Servello (University of Maine) authored the report. Dan Rossi (Executive Director, NERA) compiled the survey results and provided input throughout the project and report development. Many NERA directors provided direct cost recovery documents from their institutions and input during report development. Shannon Johnson and Barbara Harrity at the University of Maine assisted with the manuscript. Everyone's contributions are greatly appreciated.

Appendix

Below is a list of policy and procedures documents and web-accessible information for direct cost recovery systems at member institutions of the Northeastern Regional Association of State Agricultural Experiment Station Directors.

Crop Farms

Documents

- Rutgers University: Snyder Operations Policy, http://snyderfarm.rutgers.edu/forms/Snyder-Farm-2013-SF-Policy.doc
- Cornell University: Fee and Rate Structure, http://cuaes.cornell.edu/cals/cuaes/ag-operations/campus-farms/loader.cfm?csModule=security/getfile&PageID=1051230
- University of Maine: Policies and Procedures on Direct Cost Recovery and Sharing at Crop, Greenhouse, and Livestock Facilities, http://umaine.edu/mafes/home/resources-for-staff/

Information on websites

- University of Maine: Farm and Greenhouses—Service Fees and Labor Rates at Farms, http://umaine.edu/mafes/home/service-fees-and-labor-rates/

Greenhouses

Documents

- Rutgers University: Greenhouses and Growth Chambers: Rental of Greenhouse and Growth Chamber Space, http://njaes.rutgers.edu/research-greenhouse/rental.asp
- Cornell University: Greenhouse Use Policy, http://oeh.cals.cornell.edu/GHUse2.html
- University of Maine: Policies and Procedures on Direct Cost Recovery and Sharing at Crop, Greenhouse, and Livestock Facilities, http://umaine.edu/mafes/home/resources-for-staff/
- Pennsylvania State University: Guide to Greenhouse and Growth Chamber Policy and Use – Greenhouse and growth chamber space rental policies, http://agsci.psu.edu/faculty-staff/services/greenhouses-and-plant-growth-facilities/information/guide-to-greenhouse-and-growth-chamber-policy-and-use

Information on websites

- University of Maine: Farm and Greenhouses—Service Fees and Labor Rates at Farms, http://umaine.edu/mafes/home/service-fees-and-labor-rates/

Growth Chambers

Documents

- Rutgers University, Greenhouses and Growth Chambers: Rental of Greenhouse and Growth Chamber Space, http://njaes.rutgers.edu/research-greenhouse/rental.asp
- Cornell University: Interim Growth Chamber Use Policy, http://cuaes.cornell.edu/cals/cuaes/ag-operations/greenhouses/loader.cfm?csModule=security/getfile&PageID=1075536
- Pennsylvania State University: Guide to Greenhouse and Growth Chamber Policy and Use—Greenhouse and growth chamber space rental policies, http://agsci.psu.edu/faculty-staff/services/greenhouses-and-plant-growth-facilities/information/guide-to-greenhouse-and-growth-chamber-policy-and-use

Information on websites

Large Animal/Livestock Facilities

Documents

- Rutgers University: Research and Farm Operating Policy, http://njaes.rutgers.edu/animalcare/perdiem.asp
- University of Maine: Policies and Procedures on Direct Cost Recovery and Sharing at Crop, Greenhouse, and Livestock Facilities, http://umaine.edu/mafes/home/resources-for-staff/

Information on websites:

- University of Maine: Farm and Greenhouses—Service Fees and Labor Rates at Farms, http://umaine.edu/mafes/home/service-fees-and-labor-rates/

Related Financial Policy Documents for Service Facilities

- Recharge Operations and Service Facilities, Policy 3.10. Cornell University Policy Library, http://www.dfa.cornell.edu/cms/treasurer/policyoffice/policies/volumes/finance/upload/vol3_10.pdf