

RIMS, A REFORESTATION INFORMATION MANAGEMENT SYSTEM

DIANE S. RUDEEN

Diane S. Rudeen is an information system consultant with Rudeen and Associates, 2203 - 25th Lane NE, Olympia, WA 98506; telephone: 360.701.5949; email: dirudeen@attbi.com

Rudeen D.S. 2003. RIMS, a Reforestation Information Management System. In: Riley L.E., Dumroese R.K., Landis T.D., technical coordinators. National Proceedings: Forest and Conservation Nursery Associations—2002. Ogden, UT: USDA Forest Service, Rocky Mountain Research Station. Proceedings RMRS-P-28: 127–129. Available at: <http://www.fcnet.org/proceedings/2002/rudeen.pdf>

Abstract

Washington Department of Natural Resources Webster Nursery successfully met an increased workload with reduced staffing levels after implementing an automated information system. RIMS, the Reforestation Information Management System, supports the entire seedling production lifecycle.

Key Words

Seedling inventory, sowing request, field inventory, orders, nursery management, greenhouse management, handheld computer, Husky, Oracle, client/server, Visual Basic, Crystal Reports, automated tools.

INTRODUCTION

In 1996, Webster Nursery faced an increasingly complex inventory and a 33% workload increase. Many different tools were used to track seedling inventory and sales but were not integrated or sophisticated. Significant staff time was necessary to verify and compile data. Procedures were not well documented. The nursery decided to improve tools, productivity, and efficiency rather than adding staff. Resources were devoted to planning and building an integrated information system.

The RIMS system (fig. 1) has allowed the nursery to meet the increased workload with fewer people. Staff

have more time for crop analysis and improvement, as well as continuing business improvement. The system is comprehensive and flexible. The nursery has continued to allocate resources to add modules and features, implementing a new release annually.

DISCUSSION

Due to the increasing complexity of inventory, a projected workload increase of 33%, the need to know accurate and up to the minute status of seedling orders and inventory movements, and the difficulty in compiling data from the existing data collection systems, demands on staff had increased

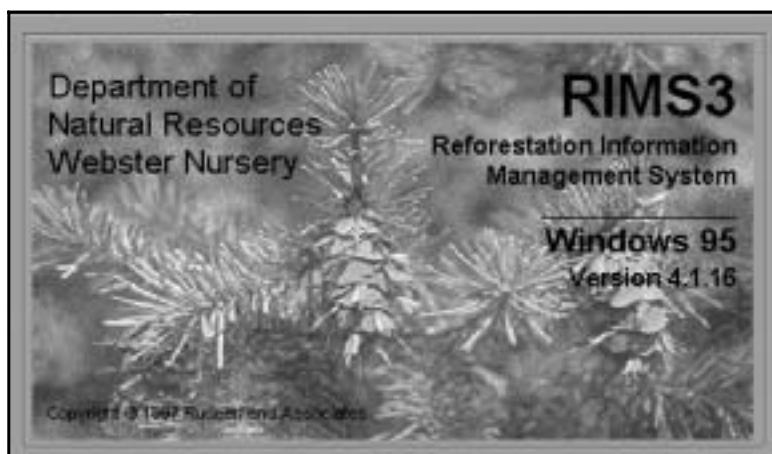


Figure 1.

to unmanageable levels. As part of a comprehensive plan to address these requirements and improve productivity without adding FTEs (“Full Time Equivalents”), Webster Nursery made plans to build better automated tools for information management.

During the summer of 1996, a feasibility study was done to start the process of planning for the information system. Since the cost of building a custom system to automate all important information was very high, and other nursery systems didn’t meet the nursery’s requirements, nursery managers decided to build a custom system in phases.

The nursery’s goal was to have data: 1) entered by its originator; 2) accessible to those who need it; 3) maintained by someone with assigned responsibility; 4) monitored for accuracy and completeness; 5) protected from loss and corruption by good system management methods and tools; and 6) available for varied reporting needs.

Different design teams were formed for the various RIMS modules. Nursery staff were always involved in design decisions. Almost all nursery staff use the system, including office staff, warehouse staff, the bareroot manager, the greenhouse manager, the nursery manager, the seed plant manager, and the warehouse manager. The program manager and division manager view data on screens and reports.

Approximately once every year, a new release of RIMS is developed. Modules and features are prioritized and grouped into affordable releases. The current scope of RIMS includes Sowing Requests; Seed Lot Inventory; Sowing, Verifying, Transplanting; Seedling Locations; Field Inventory Counts; Seedling Orders, Shipments, Payments; Seedling Lift Schedules; Seedling Inventory History; Billings; Customers; Mailing Lists; Reports; and Year End Processes. Husky handheld computers are used to collect data in the field and transfer it to the RIMS database (fig. 2). Handheld applications are integrated with the desktop application.

Benefits include: 1) improved management of data, access to data, and integrity of data; 2) simplified processes and procedures, fewer forms, fewer manual records; 3) reduced inefficiencies such as duplication of effort in processes performed and data handling; 4) consistent and accurate information that is accessible to all staff in a timely manner; and 5) staff responsibilities that focus on data analysis and use rather than data compilation.

Webster Nursery has no IT staff and depends on contractors to develop and maintain RIMS. Costs to date (1996 to 2002) are approximately US\$ 690,000. The system has a relational Oracle database, full featured client/server architecture, a Visual Basic

Code	Type	Species	Zone	Bev Range	City	Age	F	SS	Cdn Type	Avail Bal	Recv Bal	Field Bal	Cooler Bal	Green Bal
PUB-301	F	Douglas Fir	Twin Harbors	5-1000	Alenden, Long	2	3-8			340,000	183,000	503,000	0	0
PUB-302	F	Douglas Fir	Islands	5-1000	Bahn, Friday Hi	2	3-8			60,000	31,000	91,000	0	0
PUB-303	F	Douglas Fir	Islands	5-1000	Bahn, Friday Hi	2	3-8			76,000	33,000	109,000	0	0
PUB-304	F	Douglas Fir	Islands	1000-2000	Bahn, Friday Hi	2	3-8			20,000	16,000	36,000	0	0
PUB-305	F	Douglas Fir	Lower Columbia	5-1000	Carson, Cathlam	2	3-8			25,000	18,000	43,000	0	0
PUB-306	F	Douglas Fir	Lower Columbia	5-1000	Carson, Cathlam	2	3-8			140,000	80,000	206,000	0	0
PUB-307	F	Douglas Fir	Lower Columbia	5-1000	Carson, Cathlam	2	3-8			305,000	171,000	626,000	0	0
PUB-308	F	Douglas Fir	Skagit	2000-3000	Diablo Dam, One	2	3-8			47,000	23,000	68,000	0	0
PUB-309	F	Douglas Fir	Snoqualmie	2000-3000	Crystal Mountain	2	3-8			222,000	116,000	336,000	0	0
PUB-310	F	Douglas Fir	Tuade	2000-3000	Astford, Coupe	2	3-8			25,000	9,000	34,000	0	0
PUB-311	F	Douglas Fir	Tuade	2000-3000	Astford, Coupe	2	3-8			81,000	31,000	62,000	0	0
PUB-312	F	Douglas Fir	Yakima	2000-3000	Berne, Cle Elum	2	3-8			43,000	19,000	62,000	0	0
PUB-313	F	Douglas Fir	Yakima	4000-5000	Berne, Cle Elum	2	3-8			14,000	8,000	19,000	0	0
PUB-314	F	Douglas Fir	White Salmon	1000-2000	Dore Peak, For	2	3-8			23,000	14,000	37,000	0	0
PUB-315	F	Douglas Fir	Fend Oreille	2000-3000	Coe, Deer Park	2	3-8			21,000	8,000	29,000	0	0
PUB-316	F	Douglas Fir	Fend Oreille	2000-3000	Coe, Deer Park	2	3-8			25,000	13,000	38,000	0	0
PUB-317	F	Douglas Fir	Grande Ronde	4000-4800	Anastone, Hood	2	3-8			19,000	16,000	35,000	0	0
PUB-318	F	Douglas Fir	MCO Forts	5-2000	Forts, Near Bay	2	3-8			82,000	39,000	121,000	0	0
PUB-319	F	Douglas Fir	MCO Southwest	5-2000	Beths Ground, Li	2	3-8			117,000	44,000	161,000	0	0

Figure 2.

user interface, Crystal Reports writer, and an interface to Husky handheld computers.

Future enhancement plans include making customer reports available on the web, automating the interface between DNR regions and the nursery (sowing requests, orders), a cost accounting module, additional use of handheld computers, bar coding, growth tracking, and crop trends and goals.

RIMS could be modified to meet the needs of different nurseries.

CONTACTS

For more information, contact Tony Ramirez, manager of Webster Nursery at 360.753.5305 or tony.ramirez@wadnr.gov, or Diane Rudeen of Rudeen and Associates at 360.701.5949 or dirudeen@attbi.com.

SUMMARY

The RIMS system is an automated tool that supports many activities at Webster Nursery, covering the entire seedling lifecycle. Many benefits have been realized. The Nursery plans to continue to enhance the tool to support even more business functions. Staff are willing to share ideas with other nurseries designing information systems.