

Produced in Cooperation with Farm Journal

Henry James with Kyna Estes

TA RURAL STUDIES

# THE FARMER'S GUIDE TO THE INTERNET

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# **ABOUT TVA RURAL STUDIES**

The Farmer's Guide to the Internet is the first publication of TVA Rural Studies. It was chosen for the initial effort because we believe it is a valuable product in itself. But just as importantly, it serves as a model for the operating philosophy of TVA Rural Studies as a whole. To the typical "real world" problem facing rural communities, The Farmer's Guide to the Internet offers a market-oriented solution that can be immediately applied by interested individuals. The objective of our entire research agenda is precisely that: searching for practical "people-oriented" solutions that are ready to use.

It is not accidental that issues of rural information access help define this larger agenda. In November 1994, when the Tennessee Valley Authority Board of Directors established a research center to explore issues shaping the future of rural America, a guiding question was whether rural communities would progress or fall further behind as a result of the intense pressures of accelerating information and communications technologies. Equally important was the question of how TVA can help rural communities and businesses use new technology to improve their condition.

Seeing a direct analogy to TVA's earliest mission, the Board recognized that electronically transmitted information will fuel wealth generation in the years ahead just as electricity did in the 1930's and 40's. Then, as now, the issue was, "Will access to the most basic raw materials of economic advance be equitably distributed, or will we divide into two America's—plugged in urban populations and disconnected rural ones?"

To deal with these challenges, the objective of *The Farmer's Guide to the Internet* goes beyond helping farmers have quick access to the information necessary for them to run their businesses, although that is a significant goal in itself. The larger intention, from TVA Rural Studies' point of view, is to help build a user base in rural communities sufficient to make the rural delivery of Internet service by commercial companies profitable at competitive market prices.

The farm community is an appropriate starting point. It is, by definition, a business conducted in a rural area, and, by general agreement, it is a significant component in the structure of rural life. Many of the farm-related sites laid out in the Guide will clearly be of interest to rural citizens who are not directly engaged in farming. Moreover, we plan to reorganize the information gathered in the first half of the book and distribute it in manuals for rural teachers, rural bankers, rural manufacturers, etc., supplemented in each case with directories of relevant Web sites and their addresses.

In the next few years, TVA Rural Studies will bring the same paradigm and values to a variety of other pressing rural issues: work force development and employment policy, the consequences of electricity deregulation, promoting expanded entrepreneurship in rural manufacturing, reconciling natural resource use with environmental stewardship, and improving our understanding of the forces leading to economic growth and decline.

These are the kinds of issues that will shape the future of rural America. And they will shape it for the better if individual rural citizens are armed with practical solutions like *The Farmer's Guide to the Internet* and the other research products that TVA Rural Studies will work to provide in the years ahead.

David Freshwater Program Manager TVA Rural Studies

# **ACKNOWLEDGMENTS**

The Farmer's Guide to the Internet has benefited from the work and insights of many people. We could not have started this book or completed it without their help.

Charles Johnson, the associate editor of Farm Journal based in Knoxville, Tennessee, was present at the conception of this project (see *Preface*). His insights on what farmers would need and want to know helped us focus our efforts from the very start.

Bob Coffman, Editor at Large at *Farm Journal*, knows farming, publishing and the Internet. Bob served as our chief contact with *Farm Journal* and working with him was a real pleasure. Bob was instrumental in guiding this project along, helping us turn our various ideas and our assortment of data into a book. More importantly, Bob helped us keep the book oriented toward providing practical information farmers could use in their day-to-day work.

Much of the data for this book was collected under the direction of Dr. David Freshwater, Associate Professor of Agricultural Economics at the University of Kentucky and Program Manager of TVA Rural Studies.

Kyna Estes, research associate at TVA Rural Studies and a graduate student in Agricultural Economics at UK, was responsible for compiling the information that appears in Part II, Harvesting the Internet, and for researching all the links. It helped that Kyna was raised on a farm, because she was able to cull the really useful farm-related resources from mountains of information. Helping Kyna with research were Dr. Jeanne Reeves, formerly a graduate student at UK, and David Brown, a senior in Agricultural Economics at UK.

Kyna was also assisted by Cari Bloodworth and Daniel Templeton, both Vanderbilt University students. Cari researched (and personally visited) each of the more than 1,000 sites listed in the book. Daniel provided technical information about using various Internet applications and also took the screen shots used to illustrate the book. Both Cari and Daniel are computer science majors and are knowledgeable about the Internet. They gave us valuable assistance in helping to explain how the Internet works and how to use it efficiently. Fred Smith, then a Vanderbilt University student and now a graduate student at Cornell, did much of the original research on methods for reducing Internet access costs for rural users.

Mary Helen Clarke took all the various pieces—rough drafts, floppy disks, and post-it notes—and put them into book form. She also wrote several of the sidebars, rewrote most of the text (several times), and edited the entire manuscript. Her help was invaluable in making this material readable. Bill Tyler designed the cover (with

help from Al Casciato at *Farm Journal*). Bill also did the page design and the layout.

Richard Courtney guided us through all aspects of publishing, explaining everything and lending moral support and encouragement all the while. Timothy Walter of the Aspen Institute's Rural Telecommunications Initiative provided valuable information about rural Internet access.

I would like to thank those who read and commented on our early drafts—we learned a lot from them, and as a result of their comments and advice, were able to produce a much better product than we started with. They were Hugh Smith and Ed Ditto at TVA; Jared Baker, Brad Gross, and Nathan Smith at UK; Russ Morgan, a Kentucky Area Farm Management Specialist; and Don Holcomb, a western Kentucky farmer.

I would also like to express deep appreciation to Norm Zigrossi, Cleo Norman, and Jim Barkley of the Tennessee Valley Authority for their support of this project.

Henry James Franklin, Tennessee

# **PREFACE**

The idea for this book was conceived one muggy Friday in July 1995. Charles Johnson, a *Farm Journal* associate editor based near Knoxville, was in middle Tennessee doing some interviews with farmers and came by our offices at TVA Rural Studies in Nashville to see if any of our projects would be of interest to *Farm Journal* readers.

In the course of discussing several of our ongoing projects, the subject of the Internet came up. That summer, three Vanderbilt University interns had been working with us on a project to examine the costs and other obstacles involved in accessing the Internet from rural areas. We had lots of information on ways to get around some of these problems, and thought that this information might be useful to farmers. Johnson agreed, and mentioned that *Farm Journal* was on the verge of launching its new Internet service *Farm Journal Today*.

The costs of access from rural areas was certainly a factor keeping many farmers from using the Internet. Another issue was that looking for information on the Internet was (and still is) notoriously difficult and time-consuming. As Johnson pointed out, most farmers don't have the time to sort through all the chaff to find the useful information needed to run their business. For example, a search over the Internet for *cotton* might list hundreds of tee-shirt shops in California, which is not helpful to a grower looking for today's closing price. Although useful information is out there on the Net, the vast quantity of data available is itself a hindrance to finding the information you truly need. *Farm Journal* editors were concerned that due to these problems, it could take years before most farmers were connected to the Internet and using its resources effectively.

That weekend in July, we kept kicking around the idea of doing something that would combine our information on reducing Internet access costs with a comprehensive listing of agricultural information on the Internet. On Monday morning, we drafted and faxed a book proposal to Earl Ainsworth, who was at the time the editor of *Farm Journal* (and who was recently elevated to the post of publisher).

Now Farm Journal is not just the nation's oldest farming magazine, it is one of America's oldest, most venerable publications of any kind. So we expected the deal-making process to be. . . shall we say, unhurried? So we were more than a little surprised when that same afternoon, we got a call from Farm Journal giving this project an enthusiastic green light.

And that's the story of how this book came to be. Our goal throughout the project has been to distill our research and data into practical steps that rural users can take to get on the Information Superhighway without paying an outrageous price and to find useful farm-related information when they get there. Our hope is that this book will introduce farmers and other rural citizens to new, faster, and more affordable ways of finding information and solving problems.

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PART I CHAPTER ONE INTRODUCTION



### IN THIS CHAPTER:

- . WHAT IS THE INTERNET?
- DO FARMERS REALLY NEED THE INTERNET?
- · HOW FARMERS ARE USING THE INTERNET
- · LEARNING THE LINGO
- FOR MORE INFORMATION

# **CHAPTER 1**

### INTRODUCTION

The Farmer's Guide to the Internet has two purposes: to help you get on the Internet inexpensively and to help you use your online time efficiently. Rural citizens often don't have the same low-cost "local access" to the Internet that urban residents do. In Part I, we will show you ways to lower the cost of Internet access from rural areas. You'll also find basic information about computers, Internet software, and online services. How you use the Internet also contributes to overall operating costs, so we've included information and advice about using the Internet efficiently. One component of efficient operation is knowing exactly where to find the information you want, so you can get to it quickly. Part II of the book catalogs agricultural information resources available on the Internet. There you'll find more than 1,000 Internet "site" listings for farm and agriculture-related information organized by type of crop as well as by state.

To help you navigate through the book, we've included the following guides:



We'll use this symbol to caution you about operating hazards on the Internet. Fortunately, few things connected with the Internet are truly dangerous, so don't expect to see this symbol too often.



We'll use this symbol to highlight critical information we don't want you to miss.



This symbol will direct you to advice, suggestions, and helpful hints that can make your Internet experience more enjoyable, more productive, and more efficient.

This chapter provides a very basic introduction to the Internet. It includes interviews with several farmers who are already making productive use of the Internet. For those of you who not sure whether you need to be on the Internet, this is a good place to start.

#### WHAT IS THE INTERNET?

Simply put, the Internet is nothing more than a lot of computers connected together that you can access over a network. But what a network! It's estimated that there are probably around 5 million computers connected to the Internet. This is the number of computers that contain *information* you can access, not the number of users (who are far more numerous). In fact, a recent study by the Nielsen Company (the same people who do the TV ratings) found that more than 24 million people in the U.S. and Canada now use the Internet. With millions of information-containing computers connected in a worldwide network—and with each computer capable of containing thousands of pages of information that are instantly accessible from any part of the globe—the Internet is a knowledge resource that transcends any other ever created in the history of mankind.

#### THE NEW INFORMATION AGE

Access to information has always been important, so much so that we tend to define periods of history—from the Dark Ages to the Renaissance—according to how people obtained and used information. The clay tablets and scrolls of early cultures, the great library at Alexandria, the Bible, the printing press, along with the telegraph, telephone, broadcasting, and computers, form the paving stones on the road leading to this Information Superhighway. With the advent of the Internet, we have definitely entered into a new Information Age.

But with all the potential good the Information Superhighway can deliver, it's not without curves and potholes. There is a risk that we will create a society of information *haves* and *have-nots* if we fail to ensure that everyone has access to this information on more or less equal terms. This is especially critical in rural areas, where the cost of using the Internet can sometimes be 5 to 10 times higher than in urban areas.

When we began this project a year ago, few rural areas had low-cost local access. Today, as more local telephone companies—particularly the smaller independents and cooperatives—are beginning to offer Internet access and some rural electric cooperatives are getting on board as well, many more rural areas now have affordable local access to the Internet. With the passage of the new federal telecommunications regulations, increased competition among telephone companies, long distance carriers, and cable companies will make the situation even better—eventually. But in the past year alone, more and more rural areas have received low-cost local access to the Internet.

V chapter one

So if it's been some time since you last looked into Internet access from your area—look again. And if you still feel that Internet access is just too expensive—keep reading. We've put together suggestions, tips, and even a few tricks that can help you achieve lower costs when you connect to the Internet, even if you don't yet have local access.

### DO FARMERS REALLY NEED THE INTERNET?

As a farmer, do you *really* need to be on the Internet? A year ago, many of the farmers we talked to would have probably said "No." The farming and agricultural information then available on the Net was hardly worth the effort and cost it took to get it. But in the past year or so, things have changed—a lot. Many of the 1,000 or so Internet resources listed in Part II of this book have been around *less than one year*. And the resources that were already there are now much improved and easier to use.

But the Internet is important not only for what it can do today, but for what it can and will do tomorrow. The cost of publishing and distributing information in printed form is expensive, and those costs are climbing. Newsprint prices went up 40% last year alone. Postal rates went up again last year, too. Then there's the disposal problem—discarded printed matter accounts for most of the "fill" in our overburdened landfills.

On the other hand, *electronic* publishing on the Internet is dirt cheap. Even individual farmers now have their own *home pages*. As government agencies and commercial companies try to become more efficient, the Internet is quickly becoming the distribution medium of choice. Today, electronic publishing on the Internet is without a doubt the least expensive way to make the most information available to the most people. And that information can be updated instantly.

For now, most information will continue to be available in both printed and electronic forms. But as printing budgets are squeezed and costs rise, more and more information will appear online, while less and less will be printed and mailed. Those reports, pamphlets, and brochures you've been getting free all these years will go the way of the cracker barrel and the general store once the bean counters figure out the savings. Eventually, some of the materials that now arrive free in the mail will only be available online. If you're not comfortably using the Internet by the time that happens, then what?

Of course, the Internet will never totally replace printed media, and there will always be a need for printing. (You can keep a magazine on the dash of your truck