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**SUSTAINABLE  
AGRICULTURE  
N·E·T·W·O·R·K**  
THE NATIONAL OUTREACH ARM OF USDA-SARE

# Profitable Poultry: Raising Birds on Pasture



**Virginia's Joel Salatin, a leader in the movement to expand poultry production outdoors, demonstrates a movable pen, one alternative system detailed in this bulletin.** – Photo by Tom Gettings/Rodale Institute

LIKE MANY FAMILY FARMERS, CHUCK AND MARY SMITH integrate several diverse enterprises to ensure their continued ability to earn a living on 200 acres in north central Kentucky. “We look for things we can do as a family,” Chuck said, including his three daughters. “We want something that’ll keep us and them here for a long time.”

To the Smiths, that means diversifying into new enterprises and establishing sustainable practices quite unlike the traditional corn and soybean rotations that had nearly stripped the farm’s hillsides of topsoil before they bought it. They want to boost their income and increase, not further diminish, the farm’s fertility.

At least one enterprise they’ve adopted in recent years helps them accomplish those goals: pastured poultry. Each year, the Smiths raise 3,000 broilers and 100 turkeys in a pasture-based system, then sell them directly to customers from Louisville, 45 miles away.

The enterprise ensures a respectable income for their effort, involves the whole family and blends well with other aspects of their operation, from raising organic beef to growing grapes for a new winery. They graze their 50 cattle on the same pastures used by the chickens and are exploring the idea of turkeys grazing among their grapevines.

The Smiths also grow organic produce to sell at two local farmers markets and harvest five or six acres of tobacco each year. Of all those efforts, they point to their poultry operation as a remarkably dependable source of income. The family nets 50 percent of the sale price of each bird, with the chickens selling for \$1.75 per pound at an average weight of 3.5 pounds, and the turkeys selling for \$3 per pound at an average dressed weight of 18 pounds. Compared to the average payments for conventional growers raising chickens under contract – about 22 cents per 3.5 pound bird –

the Smiths find themselves ahead, especially because their chicken housing costs are so much lower.

Moreover, raising poultry on pasture presented few barriers at the start. Chuck Smith already had set aside pasture for his beef cattle, and initial costs for birds, their pens, supplemental feed and processing equipment were low.

It didn't take long for Smith to find that the enterprise returns more to the farm than it takes away. His cash flow throughout the six-month production period is remarkably steady. Fields are healthier because the chickens deposit nutrients, then work them into the soil. And the good will Smith has earned among his appreciative chicken customers has prompted many of them to try the family's other products. Finally, he knows they can expand the operation without much additional effort, a distinct possibility if demand continues apace.

"The market's there," said Chuck, "and it just seems to be getting bigger."

The consistent market is just one incentive for the

Smiths and other producers across the country who, in ever-increasing numbers, are raising poultry in alternative ways. Add the environmental benefits – like amending soil with poultry manure and improving pastures when paired with ruminants – and it's easy to see how outdoor poultry systems are meeting the needs of producers across the country.

"Birds on pasture make it easier to graze other kinds of livestock there, or to think about vegetable production that doesn't need a boost from chemical fertilizers," said Allan Nation, editor of *Stockman Grass Farmer*. "Before you know it, you've got a diversified operation that makes it simpler to earn money from several efforts, all of them working in concert, and all of them making your farm and your environment stronger. Pastured poultry drives the train."

This bulletin is about driving the train of your farm's activities and profitability with pasture-based poultry systems. Read on to learn more about them and consult the list of resources on p. 16 for more information.

## PART I

# Determining the Right Alternative Poultry Production System



## INDUSTRY CHANGES

RAISING POULTRY ON PASTURE ISN'T EXACTLY NEW. MOST broilers, layers and other domesticated fowl were raised outdoors before the advent of the now-dominant confinement method in the late 1950s.

Since then, large corporations have become the primary producers of poultry in the United States developing "vertically integrated" practices that allow them to capture nearly 100 percent of the multi-billion dollar annual market. Today, vertically integrated corporations control almost every aspect of how broilers and eggs are produced, processed and sold.

Individual farmers still participate, but as contractors who agree to meet standards that usually include furnishing climate-controlled confinement houses to hold 25,000 birds or more. Each house costs as much as \$140,000. Poultry companies usually supply farmers with chicks and feed needed to bring them to market weight in about seven weeks. They also supply subtherapeutic antibiotics to prevent disease, growth promotants for faster weight gain and drugs to control coccidiosis, common in concentrated operations.

The vertically integrated corporations then typically

manage the slaughtering and packaging process, paying contract farmers by the bird, with feed and heating costs factored into the equation. The system has helped make chicken a low-cost staple for American consumers.

But some farmers and consumers question whether, in the process of achieving that efficiency, values they consider important – autonomy and independence for farmers, the welfare of the flocks, and the taste and quality of their meat and eggs – have been lost. To meet a growing niche for poultry raised differently, a number of growers are choosing to raise birds in alternative ways, most of them reliant upon pasture.

“One of our key findings is that the system has real advantages on diversified farms,” said researcher George “Steve” Stevenson, director of the Center for Integrated Agricultural Systems (CIAS) at the University of Wisconsin, who won a grant from USDA’s Sustainable Agriculture Research and Education (SARE) program in 1999. “What’s really nice about pastured poultry is that it folds in with a whole range of other enterprises.”

## POULTRY SYSTEM OPTIONS

SINCE POULTRY FARMERS BEGAN LOOKING FOR ALTERNATIVES, innovators have responded by perfecting various systems, many of them outdoors, that raise chickens for greater profit with less environmental impact and better conditions for the birds. The ways to raise poultry are varied to meet producers’ goals and take into account climate, topography and available labor.

**The Salatin Influence.** In the early 1990s, Virginia farmer Joel Salatin published a book detailing a new system to compete for the small but growing niche of consumers who want to buy poultry raised outside the corporate system. His *Pastured Poultry Profits*, 10,000 of which have sold, explains the innovations Salatin made to the old practice of allowing poultry to range free around the barn lot. It lays out production strategies alongside promises that readers who follow his methods can net \$25,000 in only six months on 20 acres.

Chickens are raised in floorless, 10’ x 12’ x 2’ pens containing 75 to 90 broilers. Producers move the pens daily to fresh pasture. While receiving exercise and fresh air foraging for plants and insects, the chickens drop manure that adds fertility to the soil. Producers buy day-old chicks between April and October, then move them from brooders onto pasture after a few weeks.

According to many, Salatin’s book sparked a renewed interest in raising poultry on pasture. The book details how to brood chicks, rear birds in pens, slaughter, dress and package the birds, process eggs, and sell poultry products.

## Before taking the plunge, consider...

- ☛ In penned systems, expect to move pens daily.
- ☛ Poultry operations are usually seasonal, unless producers build semi-permanent housing, see “Yarding” p. 4.
- ☛ You may need to dig to find suppliers such as hatcheries and other contractors. Yet, those retailers will likely ship materials to you.
- ☛ Pastured birds are susceptible to weather-related stress and predation.
- ☛ Reliable processing may be hard to find; many farmers process on site.
- ☛ While some are concerned that pastured poultry might be exposed to avian influenza through migratory waterfowl, others claim that flocks and pasture managed with care to avoid parasites are at less risk than large confinement houses.

Salatin has since begun to work directly with others to pass along his experiences and ideas, holding field days and speaking frequently at conferences. With help from SARE and Heifer International, a nonprofit organization that promotes community development through sustainable livestock production, Salatin held workshops for limited-resource farmers interested in learning more about pastured poultry.

“You walk away from three days with [Salatin] knowing everything from how to keep a chicken healthy to how to keep your customers happy,” said Rosa Shareef, a farmer from New Medinah, Miss., who attended one of the workshops in 1997.

“He’s a wizard,” said Tom Delahanty, a former conventional chicken farmer in Wisconsin, who moved to Socorro, N.M., to raise pastured poultry. There, mild desert winters allow him to keep birds on pastures year-round; Salatin’s methods provided a jumping-off point from which he designed a field pen to fit his conditions.

David Bosle brought the Salatin model to his central Nebraska farm, using Salatin’s book “as a bible,” he said. A corn grower who had never raised livestock, he started with chickens on pasture almost by accident. When talking with friends, he mentioned that he was considering raising chickens. Soon, he had 100 orders over the phone before buying his first chick.

“I thought, ‘OK, there’s something out there,’” he said. Years later, Bosle has 250 steady customers to whom he sells 2,400 chickens a year.

**The Label Rouge System.** For people seeking ways to increase the profit potential of range poultry systems as a full-time enterprise, the new “Label Rouge” approach may hold promise. The “red label” system, popular in France since the mid-1960s, produces range poultry on a larger scale and takes advantage of direct marketing opportunities. In France, Label Rouge chickens have captured 30 percent of the poultry market.



## ALTERNATIVE POULTRY SYSTEMS

**PASTURED POULTRY PENS** – Encloses birds in floorless portable pens that are moved daily to fresh pasture. Birds feed on grass or other forages, worms and insects, and supplemental grain-based feed. They work their manure into the soil by scratching.

**“NET” RANGE (OR “DAY RANGE”)** – Contains birds in movable housing, with electric poultry netting defining a series of paddocks surrounding the house, (often a hoop-like structure). Producers move flocks through paddocks, shifting them as the condition of the pasture dictates. With access to the shelter for feeding, rest and shade, birds can escape from both predators and inclement weather. Birds feed on grass or other forages such as vegetable or grain crops, worms and insects, and supplemental grain-based feed. Birds remain vulnerable to predation – especially avian predation – but may be better protected from the more common nocturnal predation because the housing units are usually more resistant than field pens to raccoons, foxes and skunks.

**YARDING** – Keeps birds in stationary housing, but allows them access to yard or pasture during daylight. This model has been a popular way for some confinement poultry producers to tap into the growing market for “free range” poultry, including the new USDA certified organic program. They can use the same houses designed for the industrial con-

finement model, modifying the practice simply by fencing a yard or pasture surrounding the house and allowing flocks to range on it. Without taking care to subdivide the area into paddocks, however, farmers using this method risk concentrating birds, which can denude the soil, deplete nutritious forages and concentrate pathogens. Again, because birds are not contained in pens, they are more open to predation, at least during daylight hours.

**“CHICKEN TRACTOR”** – Contains poultry in small pens to help prepare the soil for garden plots. Birds feed on weeds, garden plants, insects and grubs, and supplemental grain-based feed – while “tilling” and “fertilizing” the soil. Andy Lee, a Virginia farmer and researcher, wrote a book about this system, claiming the birds can do wonders in weed suppression and soil revitalization.

**FREE RANGE** – Allows birds to range freely across pastures, gardens, and/or cropland, and to return at night or in inclement weather to portable housing. Skids or “eggmobiles” are moved regularly to encourage grazing of particular areas. Birds are vulnerable to predation.

The comparative value of the various poultry systems depends on the vision you have for your operation. Seek experienced advice and make use of the wealth of information listed in “Resources” on p. 16.

Different from conventional systems, Label Rouge enterprises offer independence, use lower densities of birds per housing unit, allow flock access to yards, discourage routine medication, and feature longer life spans – 12 weeks – for broilers and other meat birds to reach market weight. The longer life of the birds has become a chief marketing point, along with a flavor Label Rouge proponents claim is superior.

“What affects taste is the genetics of the bird,” said Stevenson of Wisconsin’s Center for Integrated Agricultural Systems. Because the Label Rouge bird is not a typical American Cornish Cross breed, because it lives longer and because, after processing, it is cooled through air chilling, people consistently notice a taste difference, he added.

Air chilling after birds are dressed, rather than placing carcasses in chilled water, holds a number of advantages for producers as well as consumers, according to Dr. Randall Westgren, a University of Illinois professor of agribusiness management who has conducted research into the viability of establishing a Label Rouge marketing system. Air chilling discourages potential cross-contamination because carcasses are hung and chilled separately rather than lying in contact in a water bath, and flavor is not compromised by chlorine, typically added to chill water in poultry processing plants to kill bacteria and other microbes.

While a farmer may not be able to produce as many of these flocks per season, charging considerably more for each bird boosts profits. French farmers who want to raise birds year-round provide substantial housing.

Poultry specialists at the University of Illinois Agriculture Extension Service have looked into the feasibility of importing Label Rouge techniques to the United States.

Some promising aspects of the Label Rouge model include:

- Potential for profit as a primary, rather than supplemental, enterprise
- A coordinated network of support services, from start-up services (hatchery, feed mill) to post-production (processor, distributor)
- Marketing strategies: playing up the “premium” product, humane treatment or birds’ age
- Opportunities to cooperate with rather than compete against other producers
- Contact ATTRA, (800) 346-9140, for more information on Label Rouge, or go to <http://attra.ncat.org/attra-pub/labelrouge.html>

## PART 2 Potential for Profit

SARE-FUNDED RESEARCHERS AT WISCONSIN'S CIAS STUDIED five farms that raise poultry on pasture and found that the systems, while highly variable, yielded a significant profit for growers who fold poultry into diversified farms. Employing a pastured poultry model and moving pens containing 75 chickens once each day brought the farmers, on average, a net return of \$2.43 per bird. Researchers found a wide range, however – varying from -\$2.82 to \$7.05 – depending on feed costs, experience and whether producers strove for profit as a primary goal.

“People are making it work best at lower numbers,” around 1,000 birds a season, Stevenson said, but cautioned that the learning curve is about five years for a grower to become experienced. “By then, people know what they’re doing, their pastures are in shape, and they have figured out their equipment needs.”

Most pastured poultry farmers sell all of the birds they raise even before processing them. Murial Barrett, a poultry producer who raises 10,000 birds a year on pasture in Nebraska, receives about \$1.50 a pound for her pastured birds, 61 cents more than grocery store prices.

“It all gets down to the customer,” said Paul Swanson, a Nebraska extension educator specializing in sustainable agriculture who sees growing interest in pastured poultry. “To sell your product, you need a customer and a growing number of people who are interested in better-tasting, higher-quality chickens and don’t like the current system.”

In north central Ohio, Molly Bartlett, who along with her husband operates a Community Supported Agriculture project near Cleveland, charges \$2.75 per pound for 800 to 1,000 broilers each season. “We’ve been doing it long enough, and we do so few, we never have a problem selling all we have,” Bartlett said.

CIAS researchers recommend a 1,000-bird supplemental enterprise. At that size, an experienced producer will net about \$3,000. Given the dearth of small processors and the need to process on farm, it’s realistic to handle 1,000 birds a year, Stevenson said.

Most farmers who have worked with Swanson on poultry enterprises already had crop farms, and many of them had beef cattle, too. They diversified to improve profits. “Chickens are a size that people don’t hesitate to purchase directly, as opposed to a quarter or half of beef,” Swanson said. “It’s an opportunity for farmers to try something without a very large investment.”

Many direct-market producers find that poultry is a real lure that brings customers onto the farm, and many of them will buy more than just chicken or turkey when they are there.

Laura Rogers raises 300 to 400 chickens every year in Woodbine, Ky. While her husband works off the farm, she is a significant contributor to the family’s income. She finds she has no trouble selling chickens for \$6 and \$7 to her neighbors and others in her rural community; her main problem comes in reserving enough birds for her family of four.

“I put them in a field that runs along the side of the road,” said Rogers, who has received two SARE farmer grants, “so the neighbors drive by and see them so they know when they’re getting big enough. Sometimes I have to tell them that some of the birds they see are sold so we can get some.”

**Annual Gross and Net Returns per Bird from Pastured Poultry, Four Farms**

	Farm A		Farm B		Farm C		Farm D	
	1997	1998	1997	1998	1997	1998	1997	1998
<b>Gross Return</b>	\$6.70	\$8.47	\$6.38	\$3.80	\$12.00	\$5.61	\$9.36	\$7.05
<b>Net Return</b>	\$3.81	\$3.64	-\$0.05	-\$2.82	\$2.39	\$1.33	\$7.05	\$4.08
<b># Birds Sold</b>	2,898	2,100	633	420	1,110	2,174	700	986

Center for Integrated Agricultural Systems  
University of Wisconsin

### PRODUCTION BASICS

**Housing.** The least expensive approaches are the chicken tractor and the portable field pen models described by Andy Lee and Joel Salatin, though most producers concede they also demand the most time and labor.

The “tractor” model, which Lee designed – and describes in his book, *Chicken Tractor* – calls for small numbers of birds to control weeds and insect pests and increase fertility in garden plots. Simple and inexpensive, the “tractor” may be the best way for someone with limited farming experience to begin raising poultry outdoors, although it is intended primarily to work in concert with vegetable production.

Salatin’s model also holds promise for producers who wish to raise poultry with low initial costs. The simple-to-build pens are made of inexpensive wood, sheet metal or plastic, and chicken wire. Making a 10-foot by

*opposite page*

**Paul Ehrhardt maneuvers a flock across pasture at his Sun Prairie, Wis., farm as part of the diverse Community Supported Agriculture enterprise he runs with his wife, Kay Jensen.**

– Photo by Wolfgang Hoffmann

12-foot pen – suitable for up to 80 mature chickens – should cost no more than \$200, plus labor. Nest boxes for layers may cost more, but can fit into the same pen designed for broilers.

At the other end of the spectrum are the portable houses favored by many farmers involved in day range or free-range poultry production. Typically much larger and made of sturdier materials, they can cost more. Tim Shell, a range poultry farmer and breeder in Virginia's Shenandoah Valley, estimates the costs for one of his portable "hoop houses," made from PVC plastic pipes, metal rebar, wood and polymer sheeting, at nearly \$1,000, including labor.

"It holds more birds and provides a lot more protection from weather and predators than a field pen," Shell said. He expects his structures to last nearly twice as long as a field pen designed and built to Salatin's specifications. Over a few years, he has even experimented with brooding chicks in them, which would eliminate the need and expense of a separate brooder.

Lee designed and built structures he calls "mini-barns" for his day range operation. They are made from lumber, plywood, corrugated tin and fiberglass, and have wooden runners, or "skids," at their bases that allow them to be dragged with relative ease by tractor to fresh stands of pasture when needed.

Systems like Shell's and Lee's usually depend on portable fencing. Most producers favor electric fencing designed for poultry, called poultry netting, or feather netting. It costs about \$160 per 165-foot roll (including step-in posts, not the power source). Shell, who has written a manual about range netting, recommends at least two rolls for an average flock of about 500 birds.

**Brooders.** Secure boxes in which newly hatched chicks can live until sufficiently feathered to live outdoors, brooders are made of plywood, lumber and chicken wire. They contain warming lamps, drinking water containers, feeders and litter. A basic brooder that holds as many as 250 chicks can cost as little as \$100 to construct.

**Feed and Water Delivery.** Beyond a brooder and field pen, producers only need containers for feed and water. They can be simple and inexpensive, even home-made. Ensure that any feeder or watering unit, whether made at home or purchased from a commercial source, does the job properly. For example, improperly anchored or poorly designed feeders and watering units can be tipped over or clogged, increasing opportunities for spoilage and contamination as well as inducing unnecessary stress or endangering the lives of a flock. (Look for poultry equipment suppliers in "Grit!," the American Pastured Poultry Producers Association (APPPA) newsletter. See p. 16.)

**Once Tom Larson decided to diversify his former Nebraska grain farm, he tried a host of new ventures, such as raising birds on pasture, and focused both on their place in his rotation and their potential in the marketplace.**

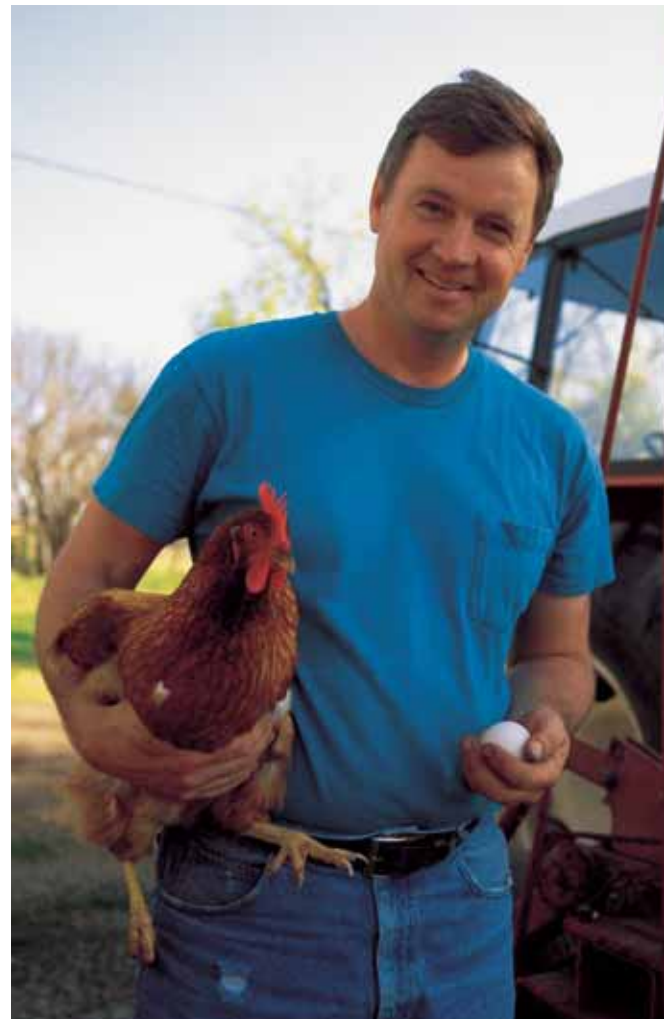
– Photo by Tom Wolff

### **Want Funds to Research Profitable Poultry Systems?**

SARE sponsors research and education projects that advance agricultural systems that are profitable, environmentally sound and good for communities. Since 1992, SARE also has funded small grants for farmers and ranchers to run on-site research experiments.

SARE's portfolio of projects is diverse. Of more than 3,000 projects funded since the program's inception in 1988, more than 200 concern alternative poultry production and processing systems. Visit [www.sare.org](http://www.sare.org) to download calls for proposals, check deadlines and learn about grant requirements. (Click on "Funded projects" to access the national projects database.) If you do not have on-line access, call (301) 504-5230.

When writing an application, be sure you understand SARE's goals and objectives. Find a qualified collaborator and follow instructions.



## FEED

MOST POULTRY DIETS CONTAIN CORN FOR ENERGY, SOYBEANS for protein, and vitamin and mineral supplements. In pasture systems, producers do not include medications. (Look for poultry feed suppliers in “*Grit!*,” the APPPA newsletter. See p. 16.)

Some range poultry producers mix their own feed. Recipes can be found in books, World Wide Web sites and Internet listservs dedicated to pastured and range poultry operations.

Other producers work with local mills to design the right custom mix. David Bosle, who raises birds with no antibiotics in the feed, has found a cooperative local mill that offers ingredients specifically for him and other poultry producers around Hastings, Neb., who market meat under a “natural” label.

Whatever route you take – purchasing ready-mixed feed, or preparing your own blend – the cost will likely range between nine and 18 cents per pound. Meat birds will ingest roughly 10 pounds of feed apiece before reaching market weight, which means the cost of feeding each commonly used Cornish Cross bird will range from 90 cents to \$1.80 during its seven- to eight-week lifetime (or longer for other breeds). Layers ingest similar amounts, but their useful life spans are much longer.

When considering what feed to provide, consider:

- Organic feeds are available from specialty suppliers. Expect to pay up to five cents more per pound for them.
- Some feeds are medicated to combat coccidiosis, which is particularly devastating to chicks. Producers who want to attach “natural” labels to their products may want to avoid medicated feeds.
- Feeds can be ordered in various forms, such as cracked, mashed and pelletized. Healthy debate rages as to which form is better utilized by pastured birds. One point of agreement, however, is that chicks can choke on feed that is too finely cracked or flaked.
- For more information see “Pastured Poultry Nutrition.” Request a free copy from ATTRA, (800) 346-9140.

## BREEDS

MOST PASTURE POULTRY PRODUCERS HAVE ADOPTED THE same breed as their confinement counterparts: the Cornish/Rock cross breed of broiler (commonly called the Cornish Cross). Developed for its large breast, large appetite and rapid development, the Cornish Cross also boasts a mild flavor that is familiar and appealing to most consumers.



Virginia farmer Harvey Ussery and his wife are experimenting with hardier varieties of birds, such as Rhode Island Reds and Plymouth Rocks. Even though those varieties take longer to reach market weights, the meat boasts more flavor. Ussery wants to educate consumers about alternatives to Cornish Cross. He says the fast growth of the Cornish Cross strains their hearts, digestive systems and bones. Moreover, birds more suited to foraging eat less supplemental feed.

Ussery, writing in *Grit!*, the APPPA newsletter, details the problems he encountered with the Cornish Cross variety. Cornish Cross chicks from nearly all hatcheries in the country come from the same stock. The variety, he argues, is ill-suited for raising outdoors because it has been bred for confinement. Properties that make for good and efficient foragers, he says, have been “selected out” because they are not needed.

The only appeal of the Cornish Cross, he says, is its ability to arrive at market weight in a period of about seven weeks. Emphasis on that single quality has neglected other important factors, such as flavor, texture, and a bird’s ability to take full advantage of all the benefits available to it on pasture.

Some efforts are underway to make the Cornish Cross a heartier bird for range poultry production. Hatcheries such as Shady Lane Poultry Farm, Inc., in Winchester, Ky., provide day-old chicks bred to succeed on pasture. Farmers like Matt John, owner of Shady Lane, raise Cornish Cross birds as parent stock, then select offspring that are better adapted to forage. Those chicks are said to perform well in outdoor settings. See “Poultry Genetics for Pastured Production” at [http://attra.ncat.org/attra-pub/poultry\\_genetics.html](http://attra.ncat.org/attra-pub/poultry_genetics.html).

**Layers.** There is no overwhelmingly favored variety of laying hen for range poultry production. Several breeds, including Rhode Island Reds, Leghorns and Plymouth Rocks supply reliably large numbers of eggs. The Cooperative Extension Service can help beginners determine the best varieties for the type of operation they envision,

**By adding flax to hen rations, some producers have capitalized on the ability to enrich eggs with omega-3 fatty acids, which lower cholesterol and thus have been linked to reduced risk of heart disease in humans.**

– Photo by Ken Schneider

**Raising turkeys often proves more profitable than chickens because farmers can charge up to \$3 per pound. Many growers stock fewer turkeys in pens because of their wide wingspans.**

— Photo by Edwin Remsberg

and put them in contact with nearby hatcheries.

**Turkeys.** The “Cornish Cross” of turkeys is the Broad Breasted White. Again borrowed from the confinement industry, the Broad Breasted is a fast-growing bird that takes about four months to reach market weights of about 18 to 22 pounds. Many who have raised turkeys say they are more manageable in many ways than broilers, and that they convert forage to meat much better than chickens.

Joleen Marquardt, a field pen poultry producer in Pine Bluff, Wyo., said she and her children were at first intimidated by the sheer size of their turkeys at processing time, but found them more docile than broilers.

“The weight gets to be a little much after a full day, but it’s not nearly as bad as I anticipated,” she said.

Turkeys are generally more resistant to illness than broilers, says Chuck Smith, and are better foragers. Moreover, turkeys are even easier to market. “We’ve never once had a problem selling every turkey we produce, and most of the time way in advance,” he noted. “Chickens are gravy, but turkeys are dessert.”

The “Label Rouge” of turkeys are the heritage breeds. Heritage breeds take longer to grow and develop a flavorful, moist carcass. Varieties include the Bourbon Red, Spanish Black, the Bronze and the Royal Palm. More are listed, along with useful information about turkey production, on the web site of the American Livestock Breeds Conservancy, in Pittsboro, N.C. (See “Resources,” p. 16.)

## MORTALITY AND PREDATION

EVEN MORE IMPORTANT THAN THE BREED OF BROILER, LAYER or turkey is an assurance that you will receive healthy chicks from the hatchery. Much of that hinges upon delivery times, with more than a day being undesirable.

Joleen Marquardt has been marketing about 5,000 broilers per season since she started her business five years ago. Since then, she has mastered the management skills required and says she knows how to recognize problems. But the premature mortality rates in her 2001 flocks were the worst she has seen, reaching nearly 20 percent. (Beginners should expect to lose 10 to 15 percent.)

“The biggest problem was a particular batch that my hatchery sent early in the season,” Marquardt said. “They didn’t tell me, but they ran out of Cornish Cross stock and had to get mine from a hatchery in Michigan. That meant they were in transit for at least two days, and I think that just took a lot out of them.”

Marquardt came out each morning the first week after the delivery to find 20 to 30 dead chicks. The whole flock failed to gain market weight. “I wasn’t even sure they were Cornish Crosses, they were so scrawny,” she said.

The hatchery eventually replaced most of the flock, but she nonetheless lost time and money because of the weakened birds.

When buying stock from hatcheries, remember:

- ☛ Choose a hatchery nearby.
- ☛ Arrange for overnight deliveries.
- ☛ Get guarantees from the hatchery that chicks arriving dead or obviously weakened by stress will be replaced at no cost.
- ☛ Realize that airline companies may further curtail the already limited flights that ship live chicks as mail and seek high-quality hatcheries within a day’s drive.
- ☛ Learn as much as possible about the parent stock.

It’s common, especially among inexperienced pen producers, for birds to be crushed or injured when field pens are moved to a new stand of grass. This is less of a concern for producers using one of the systems that do not require moving the housing so frequently. As producers become more experienced, and as a flock matures, crushing becomes less of a concern because the birds become accustomed to frequent movement of their pens and learn to walk with them.

The other major factor in premature loss of birds is predation. Flocks raised in a field pen system tend to be safer from daytime predators such as dogs, hawks and the occasional eagle because they are securely







## Processing Regulations

Small, independent producers who want to process poultry themselves and sell directly to customers can take advantage of provisions in federal laws that allow them to be exempt from inspection. Some states use the federal laws while others have their own state laws.

**Fewer than 1,000 broilers** – In many states, if you do not sell meat across state lines and you do not market poultry from other farms, you can raise and process up to 1,000 birds a year and be exempt from federal inspection rules. Check with officials in your state department of agriculture or health before processing to clarify the exemptions allowed.

**Between 1,000 and 20,000 broilers** – If the processing facility used and practices employed meet federal sanitation standards and you do not sell meat across state lines, you can be exempt from federal inspection rules, although some states (such as Kansas) may impose stricter rules. Check with officials in your state department of agriculture or health before processing to clarify the exemptions allowed.

Direct marketing rules for fresh eggs also vary by state.

Labeling claims are tightly regulated. Contact USDA's Food Safety Inspection Service for more information, (202) 205-0623.

Consult "The Legal Guide for Direct Farm Marketing" (see "Resources," p. 16) for further explanation of processing regulations.

enclosed. Nocturnal predators such as raccoons, foxes, coyotes and skunks, however, will exploit even the smallest opening in the pen. Even most experienced producers say they have lost a few birds.

Other range poultry producers, on the other hand, are much more vulnerable to avian predation. Alabama Day Range producer Charles Ritch, for example, says hawks and owls are "a big, big problem, and they have been ever since I started." He pegs his predation losses at about 5 percent each season.

Most producers expect some premature loss from each flock despite working to reduce mortality. To minimize loss:

- Provide sufficient warmth, water and feed, especially in the crucial first days after you receive your shipment of chicks.
- Place pens well inside pastures rather than along wooded fence lines because many predators will be reluctant to travel across open territory.
- Consider installing electric fences or using a trained dog.
- Check the ongoing dialogue among producers subscribed to the Internet listservs listed in "Resources," p. 16.

### ON-FARM PROCESSING

CONSIDER SLAUGHTERING AND PROCESSING ARRANGEMENTS early on because commercial processors that handle small numbers of birds are hard to find. If you want to sell through

grocery stores or to restaurants, you must process in a government-approved facility, but those who sell directly to the public may be able to slaughter on farm.

Tom Delahanty, the New Mexico farmer, cautions that a fledgling poultry producer be sure to have lots of help with strong stomachs.

"You can't do it alone, and if any members of your family or people you hire are going to have a problem with the pace of the work or with killing, plucking and gutting chickens, you'd better know about it before you ever get started in the business."

For a typical on-farm dressing operation, you will need:

- Kill cones
- A scalding tank (to loosen feathers) purchased or constructed from a stainless steel drum and a two-burner gas cook stove
- A plucker to remove feathers
- Stainless steel tables for eviscerating
- Running water for washing
- Plastic tubs or a stainless steel tank to chill carcasses prior to packaging
- Supplies such as sharp knives, ice and bags

Joel Salatin and his family continue to process nearly 10,000 broilers each year outside, a practice that has worked well for other farmers. Using equipment similar to what's listed above, Salatin works on a concrete slab beneath a simple corrugated fiberglass roof. Salatin's waste water is then pumped to the farm's vineyards for nutrient-rich irrigation.

**Mississippi farmer Rosa Shareef's goal is to process 1,000 chickens a month, which, at \$1.50 a pound, nets about \$2.25 per bird. "Good product at a good price tends to sell itself," she said.**

– Photo courtesy of Heifer International

“My family and I have worked out the best way for us to do this, and we’ve got it down to a science,” he said.

The most important judges of the quality of his dressing operation, Salatin said, are those who help him do the processing, and his customers. “Our customers pick up their orders from a site right next to where we do the processing, so they can see for themselves how clean it is,” he said. “If they don’t like what they see, they won’t come back.”

If he has a good work crew, David Bosle can butcher as many as 400 chickens a day using a mobile processing unit he purchased with three other farmers. He processes three times a year.

**Disposal of Solid Wastes.** Salatin composts the feathers, guts, heads, feet and blood of the broilers he processes. He admits it takes some skill and experience, but says he is able to manage his compost piles so that odors and pests aren’t a problem, even at the height of summer.

Oregon farmer Robert Plamondon, who raises about 800 free-range layers and 200 broilers outside the town of Blodgett, does the same, sprinkling hydrated lime on his compost heap after each addition to both reduce odors from the decaying organic matter and to repel pests such as flies, raccoons, even other chickens. Both Salatin and Plamondon use the compost to amend the soil in their garden plots, as well as to help fertilize their pastures.

Other producers who live close to metropolitan areas with upscale and ethnic restaurants can sell feet and heads to chefs who use them to make soup stocks.

### COOPERATIVE MOBILE PROCESSORS

TO PROVIDE FARMERS WITH AFFORDABLE ALTERNATIVES TO on-farm poultry processing, groups around the country are bringing slaughtering to the farm.

Twelve farm families in Michigan collaborated on a mobile processing unit in a project partially supported by SARE. The unit, built in 1999, cost about \$20,000 and called for about 360 hours of labor.

Rick Meisterheim, of Michigan’s nonprofit Wagbo Peace Center coordinated the project. He reports that the 12 producers contributed together about \$11,000 toward the cost of the unit and agreed to a yearly membership fee of \$25 and a 25 cents per-bird charge.

With three other Nebraska growers, David Bosle bought a mobile processing trailer in a cooperative effort. The farmers and others in the community share a trailer equipped with killing cones, a scalding tank, a feather picker, a scale and an evisceration area. The processor, purchased with help from Nebraska’s Center for Rural Affairs, which received a SARE grant, allows the four farmers to share the cost of processing. They also rent out the mobile unit to other farmers or, at a discount, to community groups like 4-H.

## ***In Kentucky, Poultry Growers Share Processor to Comply with Restrictive Laws***

In Kentucky, a group of farmers, consumers, nonprofit organizations, university scientists, and health and agriculture department officials have jointly constructed a mobile processing unit – about the size of a large horse trailer – that can be hauled by truck to different locations. It contains the scalding, plucking, washing and packaging equipment each farm family needs to process broilers and turkeys.

One of the key players in the coalition is Heifer International (Heifer), a nonprofit organization that helps farmers with limited resources launch pastured poultry and other enterprises. Heifer applied for SARE funds, which, combined with major support from the Kentucky Department of Agriculture, financed the \$75,000 mobile unit. Participating farmers helped design the unit, and Steve Muntz, Heifer’s Appalachia program manager and coordinator of the poultry project, said they are satisfied with their initial experiences.

“There was no alternative for the farmers,” Muntz said. “There is not a single federally inspected poultry processing plant in the state that will take birds from an independent producer, and selling live birds to individuals is the only other way, given the state restrictions.”

The USDA has exempted the unit from federal inspection, and the state has licensed it for both poultry and shrimp processing. Birds processed in the unit, the only legal method for independent Kentucky farmers to sell processed poultry, can be sold anywhere in the state.

The unit, which must be paired with a docking station equipped with potable water, electric and sewer connections, is located in Frankfort. To reach greater numbers of farmers and to minimize the per-station expense (estimated at \$4,000 to \$5,000), organizers expect to see another station constructed in eastern Kentucky.

Meanwhile, Heifer and its partners continue to seek a broader customer base for pastured poultry in the state. They also hope to establish a range poultry cooperative to meet the demand for the product and locate docking stations close to co-op members.

“We hope the mobile processing unit will provide a path to a new small-scale poultry industry in Kentucky,” Muntz said. “As agriculture has gotten bigger and bigger in this country, the doors to the marketplace have been closed to small farmers. The unit is one key available to Kentucky farmers to unlock those doors.”

## PART 3

# Environmental Benefits

POULTRY CAN DO A LOT TO REMEDY PROBLEM SOIL AND control both insect pests and weeds – while supplying a new revenue stream for the farm.

### SOIL

POULTRY BIRDS FREE TO ROAM ACT AS MINIATURE MANURE spreaders that fertilize the soil. They turn and mix soil and manure as they scratch for insects and worms, increasing organic matter and improving fertility. Take care not to keep birds too long in one area or in high concentrations, or you risk denuding and compacting the soil.

Steve Stevenson of Wisconsin's CIAS worked with farmers who raise other livestock in addition to poultry on pasture. In each case, the chickens followed the larger animals, from dairy sheep to beef cattle. "We heard again and again that chickens do wonders for soil quality and nutrients," he said.

In Louisiana, SARE-funded researchers studying the benefits of integrating vegetables with broilers or layers found that vegetables grew best when planted 14 days after birds were moved across the plot.

"We found significant improvement in plant performance 14 days after birds were on the land," said James McNitt, a researcher at Southern University, who tested for the optimum time to plant cucumbers, summer squash, mustard greens and collard greens after pastured poultry.

Mark and Robin Way of Cecil County, Md., appreciate the extra nitrogen their flocks give to their hay fields. They move seven pens at a time across one of their four hay fields, and rotate to a new field each year.

"We've had soil tests, and we're right where we should be," Robin Way said. "The animals do well on the fields. They pick out bugs, and what they give back is extra nitrogen."

Tom Delahanty's birds help him overcome an obstacle endemic to New Mexico: poor soil. His birds are building a layer of rich organic matter atop the sandy desert ground to the point that he is considering expanding into organic produce.

"Between the rye and oats I plant both as cover crops and forage, and the scratching the birds do that works their manure down into the ground, I'm getting fertility like they've never seen around here," he said. "I've got grain farmers coming from all over the valley to look my pastures because they stay green all year long."



### FORAGES

RESEARCH, ALONG WITH THE OBSERVATIONS OF MANY producers, suggests that birds and pasture offer mutual benefits. Planting diverse forages that improve soil quality by fixing nitrogen or adding organic matter makes good sense, even though poultry producers sometimes debate how much grass or other forage meat birds and layers actually eat, and how much benefit they get from it. Birds are not true ruminants and cannot digest the cellulose in most plants very efficiently (though turkeys and geese are better at it than chickens), but they do get some nutrients.

Joel Salatin has established what he calls a "permanent polyculture" of clovers and grasses in his pastures, with varieties, such as native grasses, broadleaves, clovers, chickories, oats and rye that mature at different times of the season. His chickens will, "eat almost anything as long as it's not too tall and not too tough," he said.

Oregon egg producer Robert Plamondon has found that pasture research from the early 1900s still applies. "Everything I've read points to oats as the ideal cool-season green feed," he said, "while ladino clover, alfalfa, and to a lesser extent other clovers are better summer

**Paul Ehrhardt, who raised 2,500 chickens in 2001, grows a dense combination of clover and grass to pasture his birds and improve the soil on his Sun Prairie, Wis., farm.**

– Photo by Wolfgang Hoffmann

feeds. My own experience with oats has been very favorable.”

Salatin maintains that his broilers get enough nutrition from forage, insects, and grubs that they need 30 percent less feed than broilers raised under the industrial confinement model.

#### ANIMAL HEALTH

PASTURED FLOCKS ARE GENERALLY RESISTANT ENOUGH TO disease and infections that many producers forego the use of antibiotics or medicated feed. Pastured poultry producers often use that aspect of their operation as a marketing tool. Few, if any, pastured or range producers report significant problems with cannibalism, so the practice of beak trimming is uncommon.

By contrast, chickens raised in confined houses remain at risk for a host of respiratory illnesses because of air quality marred by dust made up of excrement, ammonia, litter, skin and feathers. To guard against illnesses such as bronchitis and necrotic enteritis, confinement chickens receive routine inoculations and antibiotics.

Pastured birds, however, are more susceptible to weather-related stress. They can get too cold, too hot, be rained upon or be injured by predators or pen walls. Wildlife can transmit disease-causing microbes.

Diseases such as coccidiosis can occur. Use frequent rotations and allow pasture plots time to rest to knock back pathogens. Clean pens and brooders regularly between flocks to keep harmful microbes in check.

## PART 4 Quality of Life Issues

MOST PRODUCERS FIND ALTERNATIVE POULTRY SYSTEMS make economic sense because the cost of establishing them is low while the potential for significant and steady income is high. However, much of the growing interest is because these new systems also promote values such as family cohesion, a clean environment, an outdoor lifestyle and independence for farmers.

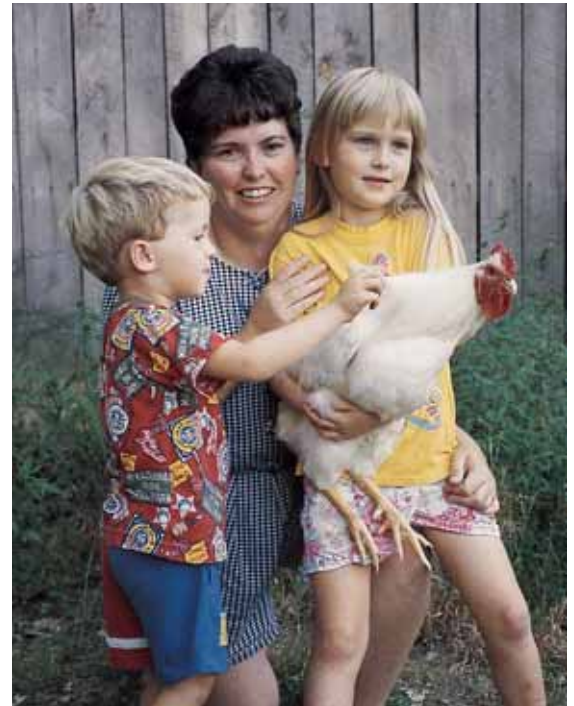
#### FAMILY AND LIFESTYLE BENEFITS

JOLEEN MARQUARDT, THE WYOMING PASTURED POULTRY producer, held down a variety of jobs off the farm, but realized a few years ago that she was missing out on too much of her children’s lives. She and her husband, Greg, who operate a dryland wheat farm, were juggling child care with her various jobs.

“I like to work and contribute to the upkeep of the family,” she said, “but I felt I was losing contact with the kids.” Her pastured poultry venture changed all that.

“I kept one of my jobs because I can do it in the winter months when we can’t raise chickens outdoors, but I focus on broilers right up through Thanksgiving,” she said. She can also focus on sons James and Jordan, and daughter Jessica, because they work right alongside her now instead of waiting for her to come home from town every evening.

“That’s the biggest benefit,” Marquardt declared. “I work with my kids, and see them learn how to take care of the chickens and work with customers.”



Considering what she used to spend on babysitters and travel, “I didn’t sacrifice anything by starting this business at home. In fact, in a couple more years I’ll probably be making more than I could have any other way.”

Marquardt’s lifestyle resembles that of many other range poultry farmers. Some stages are so labor inten-

**Sarah and William Rogers help their mother, Laura, by filling poultry water containers and tallying income and expenses, making the Kentucky operation a true family endeavor.**

– Photo by Gwen Roland

sive they can't be done in isolation, and families provide the most ready workforce. Children with sufficient training can handle even the most difficult parts of the process, including moving field pens or relocating larger portable shelters with a tractor. They also can help dress and package broilers, or collect and wash eggs.

Children provide help that is not only valuable to their parents but also teaches them about careful treatment of animals and reward for labor. Sarah Rogers, 10, and her seven-year-old brother, William, handle watering chores for their mother, Laura Rogers, in Woodbine, Ky., every day after school. While Laura Rogers moves the poultry pens, the kids fill five-gallon buckets with water. They also check on the chickens, gather them when needed and ensure pen doors are closed each evening.

"They know we have to work on the pens every day, just like homework," said Laura Rogers, who has taught them how to keep accounts using money they've earned from poultry proceeds. "Best of all, they are learning that a family works best when it works together."

## LABOR

WISCONSIN'S CIAS RESEARCHERS, TRACKING LABOR ON FIVE pastured poultry farms, developed a model where farmers spend 20 to 22 hours per week handling a 1,000-bird supplementary enterprise, raising chickens from chicks through slaughter at eight to 14 weeks.

As a 5,000-bird primary enterprise, annual net returns would average more than \$18,000 by the 10th year, involving a 35- to 42-hour work week for six months of production.

Ohio farmer, author and lecturer Herman Beck-Chenoweth believes farmers routinely undervalue the cost of their own labor.

"They should keep track of everything, from building pens to reading and learning more about the process, to marketing, and if it isn't paying, they should do something else," he said, adding that it is important to ask a fair price for meat and eggs while minimizing the amount of time spent on poultry chores.

## FOOD FOR THE FAMILY

ANOTHER POSITIVE ASPECT OF RAISING POULTRY ON PASTURE is the assurance growers and their families have of eating well.

"I haven't bought meat from a grocery store in years," Kentucky farmer Chuck Smith said, "and I hope I never have to." He knows exactly what his animals eat and is assured – because he and his family do it themselves –



that the animals are processed humanely.

"I know what we are feeding our family when we pull a chicken or a steak from the freezer, and there aren't a lot of people who can say that anymore," he said.

In a manual intended as a decision-making guide for farmers, Anne Fanatico from the National Center for Appropriate Technology summarizes the experiences of 35 southern farm families who participated in a pastured poultry education project funded by SARE. Between 1996 and 1999, the families enrolled in a Heifer International course geared at helping limited resource farmers earn profits and achieve a better quality of life.

After training, each family received funds to help them get started with the new business. The farmers recorded income and expenses for the project – as well as the system's impact on their lives. Partly because the new pasture-based system allows them to work directly with animals outside, earn modest profits and provide food for the family, 27 of the project's 35 participants continue to raise range poultry for home use and for sale to growing customer bases.

"Not only did we make a few dollars, but I am very happy that we can open the freezer and see 40 chickens we can eat," said a Kentucky producer quoted in the NCAT manual, available from ATTRA at <http://attra.ncat.org/attra-pub/pasturedpoultry.html>.

## COMMUNITY BENEFITS

AT LEAST SIX FAMILIES IN A TRADITIONALLY LOW-INCOME community in Illinois have re-charged their finances by

**John and Ida Thurman, shown with Merrill Marxman of USDA's Farm Services Agency (left), received a SARE grant to test whether raising poultry would stimulate profits and create jobs. "We have found that the more people doing these types of chickens, the more people know about them, and the better the market gets," John Thurman said.**

– Photo by Ken Schneider

***“I didn’t sacrifice anything by starting this business at home. In fact, in a couple more years I’ll probably be making more than I could have any other way.”***

– Joleen Marquardt, Wyoming

adding range poultry enterprises to their farms. Farmers in Pembroke Township in north central Illinois were so inspired by their experiences testing alternative poultry systems that they formed the Pembroke Farmers Cooperative to share poultry pens, a refrigerated truck, a live-stock trailer and, not least, production information.

Jump-started by two SARE grants, awarded as part of North Central SARE’s efforts to target funds to underserved groups, the Pembroke farmers experimented with both free-range and pen methods. “Through this project, I learned how to raise a healthier chicken in a process that is more economically beneficial,” said Irene Seals, a producer grant recipient. “Raising pastured poultry is now a major part of our operation.”

With help from the Kankakee County USDA-Farm Service Agency director, they located a small-scale processor to slaughter and package their birds, complete with the co-op label. With processing secured, the families are able to sell their product within the county or, for an even better premium, in Chicago.

“It’s a system that I felt really fits their lifestyles and the community,” said Merrill Marxman, the FSA director. “We started it as a USDA outreach effort to what we saw as an impoverished community, and now the co-op has its own headquarters.”

After perfecting his pastured poultry system, partly

with help from a SARE producer grant, David Bosle set up an apprentice program for aspiring chicken farmers in Nebraska. He taught them everything, from how to build pens to how to butcher the birds – and got help processing his chickens along the way. Over the last few years, he has hosted between four and 10 farmer apprentices every processing day.

“After getting the SARE grant, the least we can do is share information with people,” he said. “The information is free, but they help me kill chickens.”

Bosle is also designing an Internet course on raising pastured poultry for his central Nebraska community college.

The Ways of Conowingo, Md., enjoy farming and raising livestock, from poultry to rabbits to beef cattle, on pasture. Robin Way says the family also finds merit in attracting customers from their community to experience an integrated farm.

“People are losing small, diversified farms,” she said. “We try to manage the farm like its own little community, and we invite people to come see what we do – how the animal was raised and how it’s processed. We’re proud of what we have and how we raise them.”

Not only do customers pick up meat right at their farm, but the Ways hosted 3,000 people during their county’s “Family Day at the Farm.”

## PART 5 Marketing Options

THE EXPERIENCE OF PRACTICALLY EVERY RANGE POULTRY producer bears this out: *Marketing your product will take as much time and energy as the actual task of raising and processing your product.*

In a survey, 80 percent of APPPA members cited direct marketing as a top sales method. For most, the best way to reach family, neighbors and others in the community was word of mouth, posting flyers on local bulletin boards, selling products at farmers markets and contacting customers often.

### MARKETING TIPS

**Newspaper Stories.** Mary Berry-Smith doesn’t consider herself a marketing genius, but she managed in one year to have her pastured poultry operation featured twice in the Louisville *Courier-Journal*. Each time, she received a flood of orders that led to people

reserving every one of her broilers and turkeys well before the 2001 season was complete.

Marketing is all about capitalizing on advantages. The key lies in what some call “relationship marketing.” Berry-Smith worked with a newspaper editor to explain the benefits of the system, and that made the editor more willing to try, and to be impressed by, the product. Joel Salatin and his farm were profiled in the national *Smithsonian* magazine, as well as on ABC News.

Farmers who have received ink in newspapers or magazines report that when people read about their product – and the philosophy and practices behind pasture-based poultry systems – their phones, in Chuck Smith’s words, “ring off the walls.”

**Pre-Orders.** David Bosle of central Nebraska prints a newsletter every winter for his customer list of close to 300. He includes a self-addressed, stamped envelope to

take orders, by month, for the season.

“That’s a must,” he said. “The biggest cost is to get the customer on the belt, and once you’ve got them there, it’s stupid to let them fall off.”

Bosle takes advantage of the short growing time for chickens and clusters his flocks around spring, summer and fall holidays, including Memorial Day and Labor Day. With the pre-ordering system, he generally sells his birds prior to growing them.

**Samples.** Robin Way not only praises the virtues of investing in a colorful, easy-to-spot farm sign, but also recommends giving out free meat. “If they take the trouble to drive down our lane, I’ll give people freebies,” she said. “Maybe they’ll never show up again, but may be they’ll be one of our best customers.”

When they first starting raising poultry on pasture, the Ways would bring chickens to auctions and meetings and make donations. All of the meat was accompanied by their farm business card.

**Selling with Other Products.** Delahanty, the New Mexico grower, markets his organic meat under a “Real Chicken” brand that commands varying premium prices – as high as \$5 per pound at some upscale groceries in Albuquerque and Santa Fe. Next, he plans to sell organic vegetables he expects will flourish in the manure-rich soil aided by his flocks.

“I’ve already got the contacts at farmers markets, groceries and restaurants all up and down the valley,” he said, “so selling them vegetables the chickens help grow should be easy.”

One grower who works with James McNitt at Southern University garners \$2.25 a pound for chicken partly because she already has a dedicated list of customers lining up for her organic blueberries. “And people are pushing her to do more,” McNitt said.

Molly and Ted Bartlett offer chickens as an extra option for members of their Community Supported Agriculture (CSA) enterprise in northeast Ohio. When joining their farm for the season, customers decide whether to buy a poultry package. “We offer them 10 birds for \$90,” Molly Bartlett said, “and they can take them all at once, or over the course of a year. It works well, it helps the cash flow, and it provides more variety to offer our customers.”

### THE EXTRA HEALTHY EGG?

SOME PRODUCERS ARE TRYING TO CAPITALIZE ON THE ABILITY to enrich eggs with omega-3 fatty acids, which lower cholesterol and thus have been linked to reduced risk of heart disease in humans. Flax, commonly grown as



an oilseed, can be added to hen rations at about 15 percent. Researchers at the University of Nebraska have found that so-called “Omega eggs” can reduce saturated fat by one-third.

With help from a SARE grant, Waterman, Ill., farmer Joel Rissman began growing flax to feed to his 60 laying hens. He swaths the flax, lets it dry, then adds it to live-stock feed. “If we were selling eggs off the farm, I could easily get a big premium,” Rissman said. “Because our eggs are all picked up by customers at the farm, which saves us time, we charge a modest amount that allows for a fair profit,” about \$2 a dozen.

For more information about feeding flax to layers, see “Resources,” page 16.

### NICHES WITHIN A NICHE

THIRTY-ONE PERCENT OF THE RESPONDENTS TO A RECENT APPPA survey raise turkeys along with pastured broilers. Sixty-nine percent raise layers. Many also report raising varieties of poultry other than chickens and turkeys, including ducks, guinea fowl and pheasant hens. Some market two-year-old stewing hens.

Specialty fowl such as ducks can be raised with as little effort as is required for broilers and layers, but can bring in much more money per pound. Their rareness also tends to make the job of marketing easier. Restaurants offer good markets for exotic fowl, and if regulations in your state allow direct sales to restaurants, it’s worth contacting the chefs at every upscale establishment in your area.

**Investing in an eye-catching farm sign and an easy-to-read label helps bring repeat customers.**

– Photo by Edwin Remsburg

# Alternative Poultry Resources

## GENERAL INFORMATION

### *Sustainable Agriculture Research and Education (SARE) program*

USDA, 1400 Independence Ave., SW, Stop 2223, Washington DC 20250-2223 (301) 504-5230; sare\_comm@sare.org; www.sare.org  
SARE studies and spreads information about sustainable agriculture via a nationwide grants program. See research findings at www.sare.org/projects

### *Appropriate Technology Transfer for Rural Areas (ATTRA)*

P.O. Box 3657, Fayetteville, AR 72702, (800) 346-9140; http://attra.ncat.org  
Provides assistance and resources free of charge to farmers and other ag professionals. Request a copy of "Sustainable Poultry: Production Overview," a detailed discussion of range poultry production systems, including pros and cons of each, and "how-to" information about fencing, water and feed delivery, etc.

### *Alternative Farming Systems Information Center (AFSIC)*

USDA National Agricultural Library, Rm 132, Beltsville, MD 20705 (301) 504-6559; afsic@nal.usda.gov; www.nal.usda.gov/afsic  
Provides on-line information resources, referrals and database searching, with specialized information on organic production.

SARE works in partnership with Cooperative Extension and Experiment Stations at land grant universities to deliver practical information to the agricultural community. Contact your local Extension office for more information.

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### *American Livestock Breeds Conservancy*

P.O. Box 477, Pittsboro, NC 27312; (919) 542-5704; www.albc-usa.org

### *Flax-Enriched Eggs*

To learn more about feeding flaxseed to layers and enriching eggs with omega-3 fatty acids, contact: Mary Van Elswick, OmegaTech, Inc., 5766 Central Ave., Boulder, CO 80301-2895; (303) 442-0047 or Nancy Lewis, University of Nebraska Department of Nutrition and Health Sciences, Lincoln, NE 68588; (402) 472-4633.

## PUBLICATIONS

### *The Breeders Directory*

by the Society for the Preservation of Poultry Antiquities, lists breeders of rare and antique poultry, their stock and delivery methods. \$8 to the SPPA (or free with a \$12.50 one-year membership). Contact Charles Everett, 122 Magnolia Lane, Lugoff, SC 29078; crheverett@bellsouth.net

### *Chicken Tractor*

by Andy Lee and Patricia Foreman. \$22.95 + s/h to Good Earth Publications, (800) 499-3201; www.goodearthpublications.com

### *Day Range Poultry: Every Chicken Owner's Guide to Grazing Gardens and Improving Pastures*

by Andy Lee and Patricia Foreman. \$22.95 + s/h to Good Earth Publications, (800) 499-3201; www.goodearthpublications.com

### *Free-Range Poultry Production & Marketing*

\$39.50, to Back 40 Books, Nature's Pace Sanctuary, Hartshorn, MO 65479, (573) 858-3559.

### *A Guide to Raising Chickens*

by Gail Damerow. \$18.95 + \$4 s/h to Storey Books, 210 MASS MoCA Way, North Adams, MA 01247; (800) 441-5700.

### *Grit!*

American Pastured Poultry Producers Association newsletter. APPPA, PO Box 73, Hartselle, AL 35640, (256) 751-3925; grit@apppa.org; www.apppa.org. \$30/year membership includes a *Grit!* newsletter published 6 times/year.

### *The Legal Guide for Direct Farm Marketing*

by Neil Hamilton. \$20 to Drake University Agricultural Law Center, Des Moines, IA 50311; (515) 271-2947. Volume discounts available.

### *The New American Farmer 2<sup>nd</sup> Edition*

A collection of in-depth interviews with farmers across America, including diversified poultry farmers. \$16.95 + s/h to Sustainable

Agriculture Publications, (301) 374-9696; www.sare.org/publications/naf

### *Pastured Perfect*

by Jo Robinson. Why grass-fed meat and dairy products are safer, healthier, and more beneficial for you, the animals and the environment. \$14.95. (866) 453-8489; www.eatwild.com

### *Pastured Poultry Profits: Net \$25,000 in 6 Months*

by Joel Salatin. \$30 + \$3.50 s/h to ACRES U.S.A.; (800) 355-5313; www.acresusa.com/books/books.asp?pcid=2. (\$50 video features step-by-step pen construction.)

### *Stockman Grass Farmer*

This monthly magazine is devoted to the art and science of turning grass into cash. \$32/year. To subscribe or for free sample, contact: The Stockman Grass Farmer, PO Box 2300, Ridgeland, MS 39158; (800) 748-9808; sgf@stockmangrassfarmer.com.

### *Range Poultry Housing*

http://attra.ncat.org/attra-pub/PDF/poulthous.pdf



## ON-LINE SOURCES

### *Pastured poultry discussion group*

http://groups.yahoo.com/group/PasturePoultry/

*Eat Wild*, by Jo Robinson. www.eatwild.com

### *Pastured Poultry – A Heifer Project International Case Study Booklet*

http://attra.ncat.org/attra-pub/pasturedpoultry.html  
Summarizes the experiences of 35 Southern farm families participating in pastured poultry project.

### *Pastured Poultry Q & A*

Center for Integrated Agricultural Systems, University of Wisconsin, www.cias.wisc.edu/archives/2001/10/01/raising\_poultry\_on\_pasture/index.php

### *Poultry Your Way – A Guide to Management Alternatives for the Upper Midwest*

Minnesota Department of Agriculture. Provides an overview of poultry production systems and management options for Midwestern farmers. www.cias.wisc.edu/pdf/poultryway.pdf



– Photo by Ken Schneider