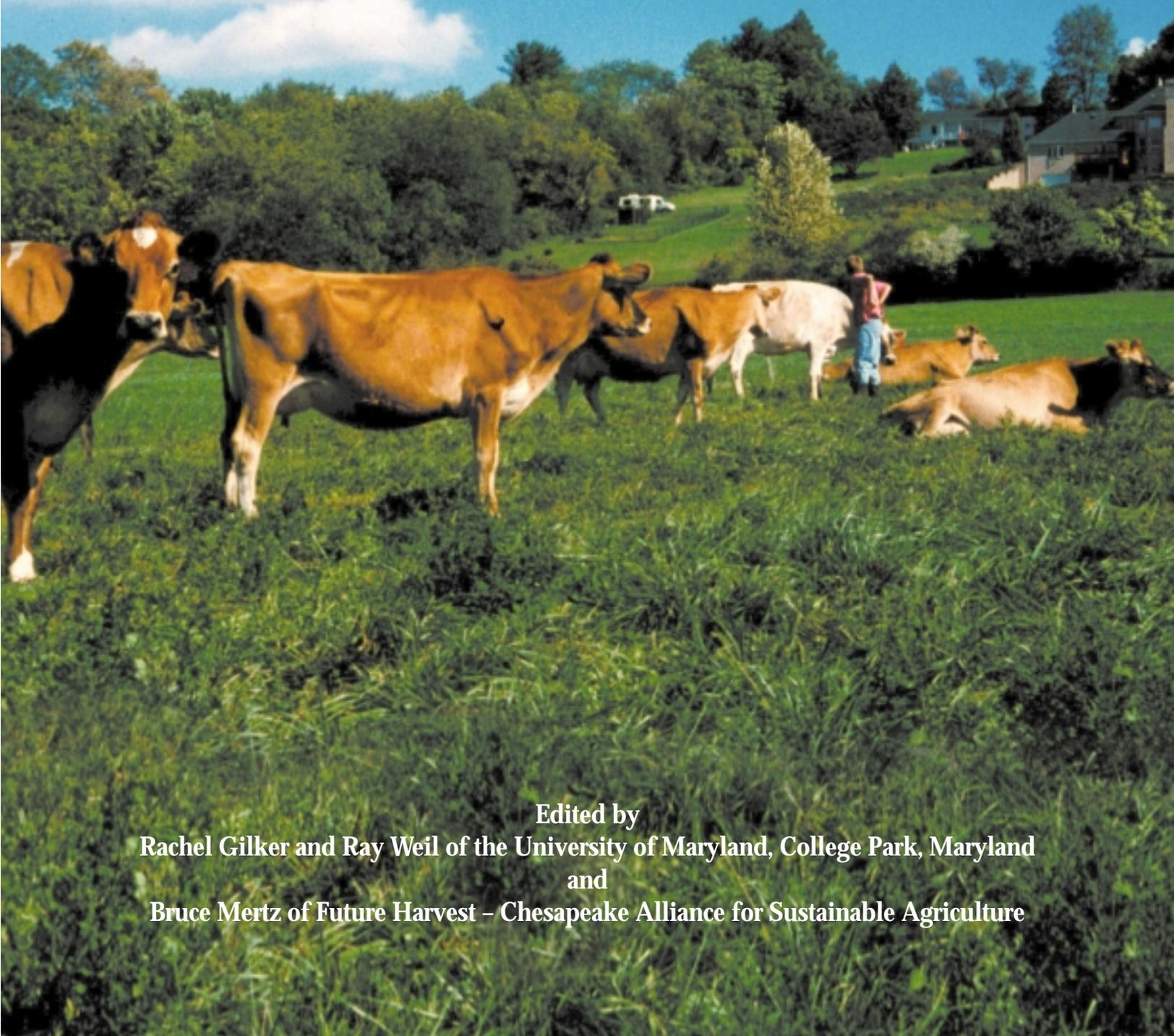


# *Making the Switch:*

**Two Successful Dairy Graziers Tell Their Stories**

**by Ron Holter and Bobby Prigel**



**Edited by**

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and**

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Some nine to ten years after they began to use grazing instead of confined feeding for their milk cows, two successful Maryland dairymen sat down for leisurely interviews on how they changed to grazing and how grazing changed their lives. What follows are their stories in their own words, edited only minimally for readability and brevity.

By the time Rachel Gilker conducted these interviews, she had developed a close rapport with both farmers during the three years she had been studying the groundwater quality under their pastures. Much of the factual information given in the sidebars throughout this booklet is taken from her investigations into the nutrient balance and economics of these farms.

As would be the case for any two farmers, their stories are at the same time distinctly different and strikingly similar. We hope that these stories will inspire others to explore the possibilities of grazing, while perhaps helping others to avoid or better deal with some of the struggles these dairymen experienced along the way.

Rachel Gilker  
 Bruce Mertz  
 Ray Weil  
 October 2004



Ron Holter



Bobby Prigel

## Two Farms at a Glance (2001 - 2003)

Farm	Holterholm Farm	Bellevue Farm
Farmer	Ron Holter	Bobby Prigel
Farm Size, Acres	210	180
Soil Type	Fauquier and Myersville silt loams, (both well drained Alfisols)	Glennville loam, a somewhat poorly drained Ultisol with a fragipan.
Farm Location	Frederick Co., Maryland	Baltimore Co., Maryland
Switched to Grazing	1995	1994
Herd Size	105	150
Average Cow Weight, lbs.	800	1100
AU <sup>1</sup> /acre	0.38	.89
AUD <sup>2</sup> /acre	140	327
Vegetation	Pasture: 8% legume	Pasture: 24% legume
Milk Production per AU, lbs.	11,066	9,080
Profit, \$/CWT	6.99	4.34

<sup>1</sup>AU = animal units of 1,000 lbs.

<sup>2</sup>AUD per ha = days of grazing by milk cow herd.

# How did you learn about grazing?

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## Ron:

In the winter of 94/95 I took the Pro-Farm course at the University of Maryland, and it taught me how to think and set goals and priorities. Family was a priority. Also not having to manage people was a priority for me.

I also learned about grazing at that time. When I first heard about it, I thought, “grazing sounds too good to be true—There’s no way that something that sounds that good can work.” But after setting my goals and my priorities, it became very clear to me what I needed to do. As I prayed about it, the Lord showed me that grazing was what he wanted me to do. So, I decided to switch to grazing.

For me, the most difficult part of switching was not knowing what to do. Nobody in this area was doing it. It was not talked about; no major dairy magazines, which were the only ones that I got at the time, had anything about it.

Soon I began reading magazines like *The Stockman*, *Grass Farmer* and *Graze*. I’m still learning a lot from those. I also got several books that helped, especially *Greener Pastures on Your Side of the Fence* by Bill Murphy (of the University of Vermont). I went to several pasture walks in Pennsylvania, which was quite a benefit, seeing it actually being done.

I relied heavily on Maryland Cooperative Extension dairy agent Stan Fultz for guidance to set up paddock size and determine where to put fences. We decided on a 3-wire perimeter fence along the road, and a 2-wire along the trees. The cows seem to respect the fence. It’s not a problem at all. But we had a lot of fence posts. We just put them where we needed them, no set distance apart. We used fiberglass posts or whatever we could find to hold the wire up. You always put the gate on the inside, toward the barn, because the cows always gather that way.

## Bobby:

I had a cousin who went to New Zealand back in the mid-70s. I guess that’s where I first heard about grazing. But I wasn’t interested in it really at that point. It was in the mid-to late- 80s when Seedway put on a conference in Pennsylvania and that’s when I really started looking into it.

In 1989 we took out some of our corn fields and planted them in grass. But, we did everything wrong the first two years. We had just put in a new computerized feeding system, and of course, if you spend the money on a computerized feeding system, you have to use it. We wanted the cows to have access to the computerized feeder, so we didn’t fence them in the paddock. They could come and go as they wanted. We didn’t even have water in the paddocks. When the weather warmed, we would run the cows out to the paddock, and they would beat us back into the barn. It just didn’t work.

I was convinced that grazing didn’t work, so in 1992 we went back to conventional dairying. We did that for 2 years. But it was in those years that my father gave me the checkbook. When I had to pay the bills it didn’t take me long to realize that we really did need to do something different.

During that time, *Hoard’s Dairyman* magazine did an article on Dave Forgey out in Indiana. I was really interested in that, because it sounded like he was making a success of it. That was the first person I’d ever heard of in the United States that really had success grazing. So my wife, Pam, and I flew out there and visited him.

We then realized that it could be done in the United States. That winter, I read everything that I could on grazing, and visited many farms as I could, including the Patterson brothers down in Virginia. I asked about the basics, what kind of grass do you use, what kind of cows do you have? How’s your paddock set up? Visiting other farms, that’s where I’ve gotten the majority of good ideas; seeing people that are successful and seeing ideas that worked and those that didn’t work.

Then we planted everything in grass.

That was in 1994.

# Why switch from confinement feeding to grazing?

## Ron:

The main consideration was definitely lifestyle — how I wanted to live and farm. Economics was never the issue; we were making money before we switched to grazing.

We had 100 cows and 3 to 4 fulltime employees for our confinement operation. But my dad was getting close to retirement, and I didn't want to manage people.

We were getting up at quarter to three in the morning, and usually we were working until at least six in the evening. We'd stop and eat breakfast and lunch. Dinner was usually at six, and sometimes we'd go out after dinner and work too.

We were getting done just what was necessary, keeping our heads above water as far as keeping the equipment running, that kind of stuff. We were never ahead. There were always 25 things we knew should get done, that weren't getting done.

My father basically gave me the reins and said he was willing to help, you know, and so we got it done. Most of my neighbors thought I was going under; they thought the only reason anybody would put cows out on grass was because he was going bankrupt and couldn't afford to do anything else.

And after the first year, my father said, "Boy, this is the best thing I've ever had in my life—I'd never go back to farming the other way."



*Cows stand on concrete in a conventional confined feeding system.*

## Bobby:

Economics, that was the driving reason. Also the lifestyle; we were always working right on the edge. Farming just wasn't fun anymore.

Like the frog in the frying pan, you don't realize where you are until you are out of it, and can look back. I have a friend who gets up at midnight to feed his cows and gets up again at 4 o'clock to milk them — all just to make a buck to pay the bills. That's what we were doing. We were paying bills but we weren't getting anywhere. Dad and I were both working 16 hours a day and we were only getting done what had to be done that day.

Also, at the time we had been relying on corn silage for 40 years. Some of the fields had been in corn for forty years, and we just weren't getting the yields that we had been getting. And cow health wasn't what we felt it should have been. We just couldn't get our production up. No matter what we did, we just couldn't get the cows to produce more milk. You know, if you are feeding a cow for 80 lbs of milk, she better be producing 80 lbs of milk, and not 50 lbs of milk. We couldn't afford the standard rations if the cows were only going to give 50 lbs of milk. So we decided we better feed them for 50 lbs of milk, and do it in a way we could make a profit.



*Cow grazing fresh pasture after each milking in a MIG system.*

# How did you establish your pastures?

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## Ron:

Basically, in the spring of '95 we put all the land that would have gone to corn into grass. The majority of fields were planted using a seed mixture we developed, but had some monocultures. We used endophyte-free tall fescue, perennial ryegrass, Puna chicory, common white clover and some New Zealand white clover. Some well drained fields were planted in alfalfa orchardgrass mixtures. We used reed canarygrass in wet fields and some bromegrass in other places.

We depended largely on University research, but I wouldn't have done it that way, if I had it to do over. Nearly all the university research at that time was on hay crops. There was none on grazing. Today we have more information on species for grazing. I'd love to have 25 different species of grasses and legumes in my pastures. I'd like to have 30-50% legumes to supply nitrogen to the grass. Diversity is much healthier than a monoculture — for the soil and for the cow.

We have water in every paddock. We have a 1 1/4 inch water line lying on top of the laneway, buried just at the gates. There's a hydrant at each gate. We have two 30 gallon water barrels, each with a full-flow float valve. We provide one of these barrels at opposite corners of the paddock, so some boss cow can't come up in front of the one, and not let anyone else drink. Also, with two water barrels, the cows keep moving and stay more spread out.

We have an electric walk-through fly zapper. So when the cows come in for milking, and when they leave, they have to walk through this fly-zapper in the summertime. It has brushes that knock the flies off when they walk through and a grid that has lights on the sides, so I don't have to use insecticides, but it removes the annoyance of the flies.

A key to setting up a grazing farm is patience. Those pastures aren't going to look good till year four or five. Don't lose heart. Persevere. The land is very forgiving, unless you destroy it continuously. You can't expect to go in a year from confinement to the kind of sod and herd health that you'd find on a farm that's been in grazing for 30 years. The land needs time to heal.

## Bobby:

There's no blueprint to follow. You know, it's like you are making your own trail. If you make a mistake, you pay for it. You can't blame anybody else.

We chisel plowed our fields, then broadcast orchardgrass and clover on most, with reed canary in wet spots. To keep the legumes in we frost-seed clover. Just spin it on top of the ground in February and let freezing and thawing just draw it into the ground.

To provide cow drinking water in paddocks we laid black plastic pipe all over the farm. There's a 100 gallon water tub that we move around with the cows — this is a must, as far as I'm concerned.

Lanes are important. I'd put money in a lane if I had to. When cows have to drag themselves through mud, then there's a cost in terms of milk production. Cow health would suffer. But if it's just a little muddy on the surface, then I wouldn't put money into it.

We put the lanes in, but we didn't have to put any major money into them because my cousin in the tree business gives us woodchips for free. So on lane areas that had high traffic, I put wood chips down and it didn't cost anything. That made a big difference in startup costs.

After the first year, I was convinced we had done the right thing. So far it's worked out. For 8 or 9 years now, we haven't changed anything major—although we probably will in the future. Looking back, I see things I should have corrected earlier than I did, but I don't see that we made any really major mistakes. But I've certainly learned a lot along the way!

I would not spend a lot of money on anything until you have done it long enough to know you really want it. I believe in keeping debt to a minimum. There're lots of people out there who selling things. You need to know what things to put money into, and what things you shouldn't put money into.

There's a learning curve and there are there are expenses too. Some farmers get into grazing because they are financially strapped, but you should get into grazing before you're broke.

We cash-flowed everything like the water system, cow lanes and fencing. We didn't borrow any money to do any of that.



*Layout of Ron Holter's pastures showing main fencelines and lanes. The aerial photo background shows the crop fields present prior to the switch to grazing.*



*One of the main lanes on Bobby Prigel's farm.*

## *How do you manage nutrients and manure?*

### *Ron:*

We had good soil fertility on our farm, so we really didn't have to put any fertility down when we started grazing. A grass-legume mixture is what I'd like to have—30 to 50% legume, to supply N for the grass. But you've got to keep the nutrient levels of your soil in balance. I like the Albrecht method of soil analysis and soil cation balancing better than I do the University's (nutrient sufficiency) approach. And actually, in the last 8 years, I've only put down some calcium as lime or gypsum. Also, we have tried a little trace mineral mix, which we make available free-choice all the time in the paddock. It's a mix of kelp, natural-trace mineral salt, a little bit of soft-rock phosphate and a little selenium.

As far as the manure goes, the cows spread that for me. I just make sure they do a good, even job of it. For instance, when the NRCS folks helped me set up my cow lane, they thought the cows would keep it covered with manure. But I learned that when I wake up the girls in the morning, I should give them a few minutes to answer the call of nature before letting them out to the lane. So the manure stays scattered on the pasture and hardly any gets on the lane.

There is a small amount of effluent from the milking parlor. We just spread the effluent on the fields with a "big gun" type irrigation system. It really doesn't get out there heavy enough to even see any difference in the grass. It's really just a way to get it out without having to use a manure pit, or big heavy equipment.

### *Bobby:*

Basically, we rotate the cows year-round, largely with the aim to rotate the manure. We have to be careful to spread the nutrients evenly when feeding hay. Certain parts of the paddock receive more nutrients than others during the grazing season, especially parts closer to the cow lane.

I will sometimes fertilize the paddocks. I may put down 40 pounds of nitrogen around June, just to get some good growth going into the summer. If I do fertilize, I'll also put out a pound of boron, and 25 pounds of sulfur.

We used to do soil tests every year. Now we do them every 3 years. Our soil pH stays pretty level. The last time we limed was 4-5 years ago; we applied about a ton/acre.

# How do you manage your grass, stocking rate, and

## Ron:

We're buying all of our grain now, but we're bringing in much less than we did before - a third to a half less than we did prior to grazing.

Generally during the milking season, the cows get 1% of their body weight in grain daily. Now that we're milking Jerseys, that comes out at 8 lbs of grain per head per day. We knew that in New Zealand they can get 50 cows per acre per day. But we knew that our cows were bigger and our pastures weren't as developed as theirs. Especially when paddocks are newly seeded and the sod isn't dense yet, the cows might go in and tear up a paddock in wet weather.

So we backed off to about 33 cows per acre, per day. We made all the paddocks three acres and put 100 cows on the pastures — and it's worked well. Every time the cows come out of the milking parlor they are on new grass.

[Ron has since moved to the smaller Jerseys and has more established paddocks. He has plans to increase herd size and feels his farm will continue to support a larger herd.]

I'm thinking right now that we can support about 125-130 cows. With that many cows, we're going to have to buy some hay, but we'll still make the majority from the farm. As far as I'm concerned, hay we make on the farm is better quality than hay that comes from off the farm — because of the balance we have in our soils.

Once I started actually measuring grass, the grazing system worked a lot better than it did in the first year when I just estimated growth by eye. Now, I walk and measure dry matter in paddocks once a week using an Alistair-George PastureGauge Junior— a battery powered capacitance meter. You put the gauge down into the grass periodically as you walk a zig-zag pattern across the pasture. When you get to the end, and push the button, it tells you how many pounds of dry matter you have.

Using the pasture gauge, I can tell what my grass growth is for the week, for the whole farm. It might be 25 lbs per acre dry matter, or 75 lbs, or in the summer time as low as 3 lbs per day. As I walk the pastures I also look at the maturity level of the grass, what needs to be made into hay, what we can graze. These measurements and observations help me plan my grazing schedule for the next week or 10 days. I walk the pastures and set up my grazing schedule about every week.

You know you want to get your cows in at 2400 to 2700 lbs dry matter and get them off at 1300 lbs dry matter. So 100 cows on a 3 acre paddock gets us where we want to be.

Because I didn't have that pasture gauge till '97 or '98, first couple of years I wasn't measuring the amount of grass on the paddocks, and the cows were either getting too much or too little grass. I didn't realize what was going on in the fields. The cows were going into some paddocks, and running out of feed. I wasn't seeing it, so milk production was dropping.

Fallow is a major management technique for my pastures. By fallowing, I mean letting the pasture go to seed, then grazing off the mature growth with heifers. We fallow fields every seventh year, thus we fallow 1/7th of the farm every year. Then every seven years you know the whole farm has been fallowed. Fallowing increases plant diversity, increases the organic matter, and just does beautiful things with the soil and the life of the farm. Long-term, I want this farm to be like this...I don't want to reseed another pasture.

The most difficult part of switching to grazing was learning how to do it.



Measuring devices include (from left): Alistair George Pasture Gauge Junior, Filip's Folding Plate Pasture Meter, West Virginia Falling Plate Meter, a yard stick, and clippers (center) like those used in research trials.

## Bobby:

In the growing season, cows feed predominantly on grass with a small grain supplement—usually about 8 lbs of grain per head per day. The average dairy farmer would be feeding more like 22 lbs of grain, plus silage.

When the grass is growing, we walk the pastures every few days to determine which paddock or paddocks are ready to graze. We don't use any tools, we just eyeball. We plan our grazing for the next few days based on what we see, but we also need to be thinking ahead two to three weeks.

I don't think we need to make hay any more. I'll buy hay, but I won't do any harvesting. That will save a lot of time, help our lifestyle, and there will be more profits. Buying hay allows you to control the quality. We're selling off all our haying equipment. Basically, my machinery is down to a mower and a manure spreader.

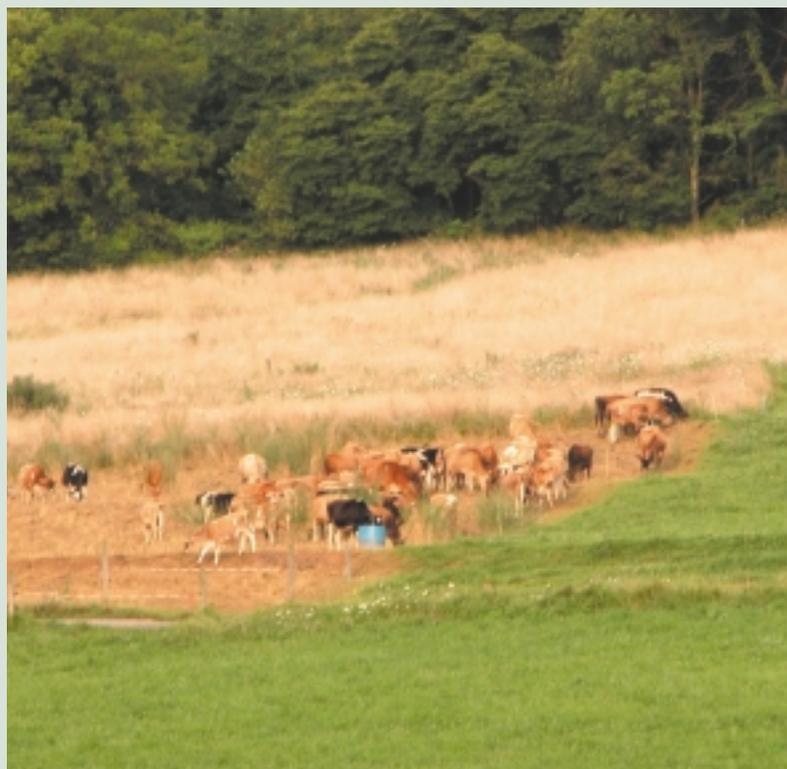
Maybe you have 5 paddocks ready to graze in May; maybe some of them need to be dropped from the rotation. That's when you might make hay. What we do now is just leave it to grow and go to seed. Then we come back in mid-June and graze it once with cows, and then put heifers in to clean it up. So it may go into the rotation in July or we may let it go to seed. Those are decisions we make in grass management.

We like to keep legumes in our pastures by frost-seeding clover. We will also have a sacrifice paddock that we use on real muddy days. We put a hay bale in that paddock if the wet weather continues too long.

Because of the way our farm is situated, on two sides of a county road, we graze the herd on the barn side overnight and then switch them to the opposite side after milking in the morning. So that has to be part of our grass management plan, too.



*Healthy grass legume mixture in one of Ron Holter's paddocks.*



*Heifer's graze in part of one of Ron Holter's fallow paddocks in which the forage plants were allowed to go to seed.*

# What about going seasonal?

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## Ron:

It took us three years before we went to seasonal grazing. In the fall of 97 we went seasonal and sold about 50 cows. I bought 20 or so Jerseys then, added some more Jerseys the next year, and a few more the year after. But we haven't bought any for the last several years now. The Jerseys are much more fertile and a much nicer cow to work with.

How do we manage with no income for two months? We just save when we can. We've always had enough to go the winter, until the next spring. Some winters are better than others. It was tough the first year, because it takes you a year or two to realize that you don't get a milk check for January. It was rough one year when our cow numbers were down and the milk price was down. Yes, it's tight at times, but it's been a blessing. I wouldn't dare go back to conventional dairy farming.



*Dry cows and heifers in a winter paddock.*

## Bobby:

It was actually harder to go to seasonal than to switch to grazing. Seasonal dairying was a huge step for us. There was only one guy in MD who was seasonal before we were. But it just makes sense because you're matching the cow's production curve to the grass growth curve. You know we have no grass in the winter, so that's the time a cow should be dry.

Probably the trickiest thing we do today is getting the cows bred back and make improvements every year. But we had to switch to a whole different breed of cows. We went through a herd of cows in the process because the Holsteins didn't handle the system. We have one pure Holstein left. Anything else is either Jersey or Jersey cross, we also have a couple Swiss crosses. These animals are smaller, easier on the ground, more efficient, and a lot more fertile.

It wasn't easy to get the cows in a close enough calving window that we could actually shut down. It took us three years to do it. Maybe I wouldn't be in as much of a hurry to do it, if I had it to do over again.

What I should have done was sold every cow that we had and gone out and bought Jerseys. At that time I could get three Jerseys for two Holsteins. Probably the biggest mistake that I've made was not selling the cows when I started.

Our finances improved greatly when we went seasonal. It's not like I'm selling less milk. I'm still selling 12 months worth of milk, I am just doing it in 10. And I'm making milk out of grass, not expensive feed. I have lost a lot of milk production since we've been grazing...but it's still more profitable.

How do we manage with no income for two months? Some years have been easy, some have been hard. Our expenses are way down those months and that helps a lot. We just plan so there's money saved up.

# How has grazing changed your work day, lifestyle and plans for the future?

## Ron:

Basically, it's been doing most of everything myself. A typical day, when I'm not making hay, I get up at about 3:30 to milk, I come in, I'm in by 6, or 6:30, and I usually get a nap, half hour to an hour nap, whether it's before breakfast or after. Milking time is actually about an hour, but there's a lot of other stuff to do. Then I go out after breakfast, and move the heifers, and check this, or that or the other thing. One day a week I'll be walking pastures, takes me about 3 hours to walk over the whole farm. But if there's not something else to do, which it seems like there always was, most years I'm in for a couple of hours, maybe from 11-2 or something like that. Depending on what needs to be done...and then I'm back out and start milking from 3-3:30 in the afternoon, and then I'm back in non-hay season, and then I'm done for the day.

I actually have a normal home life, now. I go to all my kids' activities and school events. I go on field trips with the school.

If I hadn't switched, I'd probably still be farming— but I'd be an unhappy farmer, that's for sure. I look at farming differently now than I did back then. The switch is the best thing to ever happen to this farm, and to the family. From the health of the farm to my level of stress, it's a blessing. The environmental health benefits are just tremendous. Right now, I look out here and the possibilities seem limitless.

I'd like to see more direct marketing, but we can't sell raw milk to the public and we have no way to market our milk as organic. We do sell some beef in the fall through a local butcher.

I plan on living here till I die. In a lot of ways, I feel the farm's too big. At least, after a good rainfall year, I thought it was too big. The year of the big drought, I wished I had a hundred more acres. But, making hay on large acreage can be a challenge.

I'm just really that small diversified farm at heart. I would feel, even though I've got a parlor that would milk 200 cows in a couple hours, I don't want to do that. I'd rather have more diversity all over the farm, and go more with the natural-type situation than bumping production up to 200 cows and pushing the land for everything that we can. I don't think that's the right way to do it.

I think diversity is a key. Diversity in what's growing on the land, as well as diversity of livestock. Actually, we don't have much livestock diversity right now.

## Bobby:

On an average day when we're milking, I get up around 4 o'clock and milk. Usually we are finished by 6:00 or 6:30. Then we get the cows out and we go in to eat breakfast and take a nap. Depending on the time of year, if we need to, we'll mow some pastures. I may mow just to keep the grass trimmed, but I won't mow for hay anymore. And then, there's always stuff to do until we milk again at 3 o'clock in the afternoon.

Up until now, my father and I alternate each week; I'll do mornings, and he'll do afternoons. Then we'll switch the next week. Soon I may start alternating with my nephew, Scott, instead.

The family loves the change to seasonal grazing.

It's been a huge life change for me since switching from year 'round confined feeding. You know, I have time now to go on field trips with my kids, especially in winter.

My nephew, Scott, has never experienced the conventional side, so he has no idea—which is a shame, because he can't appreciate the benefits of grazing as much. I would quit dairy farming before I went back to conventional. It would be like going back to horse and buggy, working with horses.



*A single electric wire keeps the Holsteins in line on Bobby Prigel's farm.*

## How has the switch affected your herd?

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*Ron:*

Our herd health has improved dramatically. We went from having two herd checks a month to not needing that anymore. Milk fever and acidosis problems are greatly reduced. On occasion we have something dramatic that's beyond me...but other than that, we do three pregnancy checks in the fall, but that's the only time we see the vet. We used to trim feet about 4 times a year, the hoof trimmer would come in and do 15-20 cows a day, so we were trimming probably 80 cows' hooves a year. Now the hoof trimmer hasn't been out to our farm since 1996, when we went to pasture.

Starting the calves on the NZ starter nipples ensures that calves are in the proper position for nursing. If calves drink out of a bucket with their head down, some of that milk just rots in the rumen, and doesn't get used. Since we've gone to the NZ nipples, we haven't had any sick calves and they're used to being in groups outside, just the way God intended it to be.

*Bobby:*

Our vet bill is probably less than 25% of what it was. Cow health is the area of biggest improvement with grazing. We used to have a vet check every 2 weeks or a month on a regular schedule. Now we have only one or two pregnancy checks a year. We hardly ever have a sick cow... they just don't get sick. And we used to trim hooves at least every year. The past fall I had a hoof trimmer in to do a couple cows—that was the first time in 9 years. And most of the cows that needed trimming were cows we had recently bought.

They [the cows] look happy to me. All you have to do is just stand out in the pasture and watch the cows graze, and that's where they ought to be. They're content. Which I guess maybe they are on other farms, too. You know, they last twice as long. I went through a lot of cows early on, partly because they were Holsteins. That's part of why we switched to Jerseys.

## Any final advice to others?

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*Ron:*

It's very meaningful to be able to show somebody who's never seen this, that there is a different way and better way. Because we are so locked into our paradigms, we think there's just no way of doing something other than the way we're doing it. It's very rewarding to talk to people and to see that light go on that says "wow, I never knew it could be done this way." Then, when I see a few farmers switch over to grazing, I think maybe it's because of something I said or that they've seen here.

Advice? First, I believe that you shouldn't go into debt for anything, except buying a house, or buying land. Second, find a mentor, somebody who's grazing and doing it the way you want to do it. Third, set your goals.

Go on pasture walks. Find somebody on one of these pasture walks to talk to that has the same goals, attitudes, morals and holistic thinking. When I am a mentor, I don't expect someone to pay me to go see their farm, because it thrills me to pieces to be walking on somebody else's farm and seeing the grasses that are growing and helping design things. It helps me learn what I can do here better too.

To me there are two kinds of grass farmers. One is sustainable and balanced. You're thinking not only profit, but also of the big picture—environmental health, human health and cow health. More diversity in the pasture species and hopefully, more diversity of the animals grazing. Following pastures to rejuvenate them.

The other type of grazing farmer aims to maximize cow numbers and relies on herbicides, pesticides, and all kinds of fertilizers to grow as much grass as possible to maximize milk production and profit. Pastures under this option last maybe five years, and must be replanted because high levels of production destroy the pastures and the land. This grazing philosophy has been taught since the forties and fifties and in my opinion is hard on the land, the cows, and the farmer.

## Bobby:

There're different philosophies on how to graze, and I don't want anybody telling me how to do it. That's why pasture walks are important—because you can hash ideas around, glean stuff. You'll reject part of somebody's management and pick up on another part. But that's good.

We're about maxed right now. We will have to continue to grow because the farm needs to support at least two families. The price of milk will probably stay the same, but the price of everything else will continue to go up. What I would hope is that land is available next to us, so that we can grow. Just looking at the situations around me makes me think. If we can't buy or rent more land, we might have to sell and go somewhere else. I could rent the land next to me now, but I'd have to take it from a neighbor. I won't do that.

Advice? Grazing will not save you...it all comes back on the decisions you make. There's plenty of people who fail at grazing—people who don't do the homework before they get into it or just don't get the idea. I think a lot of guys think "you open a gate; you turn the cows out on the grass." But there's a whole lot more to it than that.

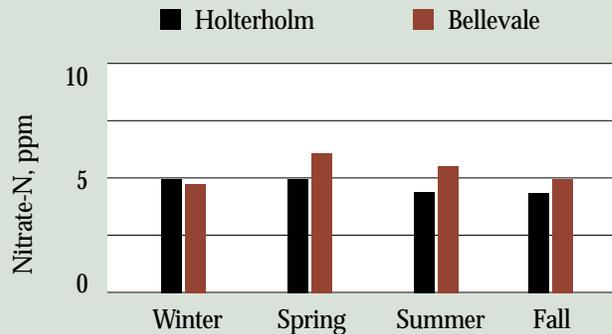
Keep debt to a minimum. There're lots of people out there selling things. You need to know what things to put money into, and what things you shouldn't put money into.

You can't make somebody graze. They have to want to. It's management intensive. It's simple, but not easy.



*A portable waterer with float valve in one of Holter's paddocks. Placement of the two waterers in each paddock helps control grazing and manure distribution.*

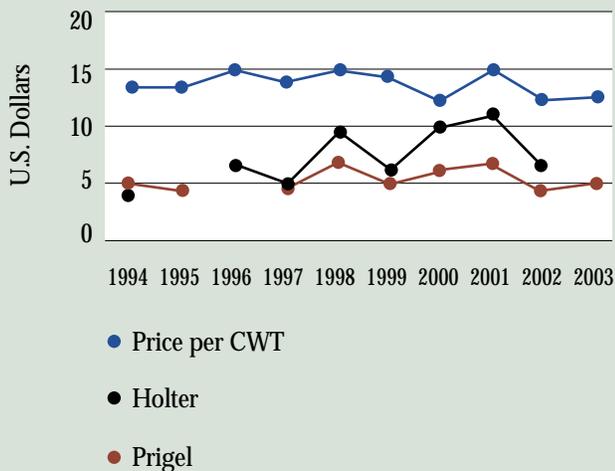
## Water Quality on The Farms



*After more than 2 years of regular groundwater sampling, average nitrate-nitrogen concentrations in shallow groundwater under both farms has consistently been lower than the 10 ppm limit set by the US EPA. Previous research had suggested that nitrate leaching could be a serious environmental risk of grazing, but this does not appear to be the case. University of Maryland research.*



*Fishing and grazing are both good on Bobby Prigel's farm. A stream crossing for cattle protected by white rocks can be seen in the background.*



Ron switched to grazing in 1995, and Bobby switched in 1994. Their profits per CWT (hundredweight of milk) did not decrease under grazing. Bobby's profits remained relatively constant, while Ron's increased somewhat. Profits were calculated by subtracting farm expenses from farm income, and dividing the resulting net farm income by the CWT of milk produced.



With a good herding dog and well-motivated cows, it takes only a few minutes for Bobby's herd to cross the county road separating some pastures from the milking parlor.

## How Much Grass is Out There?

Stanley W. Fultz  
 Extension Agent, Dairy Science  
 Maryland Cooperative Extension

Successful graziers are good grass managers. Knowing how much grass is on the farm is critical in developing the grazing plan for the days, weeks and even months ahead. Methods of measuring the availability of grass in a paddock range from a simple boot height comparison to sophisticated electronic capacitance meters.

Commercially available capacitance and raising plate meters, home-made plates (which is actually a falling plate meter), and yardsticks have been compared in research trials to clipped samples. The results have been variable. The key to measuring grass production and availability on your farm is consistency and experience of watching both the grass and animal behavior over the growing season. The advantage of using a measuring device to determine the amount of available forage is that it forces you to walk all your paddocks on a regular basis.

For more information:

**Estimating Forage Mass with a Commercial Capacitance Meter, Rising Plate Meter, and Pasture Ruler.** 2001. *Agronomy Journal*. Vol. 93. pp. 1281-1286. <http://agron.scijournals.org>

**Estimating Available Pasture Forage**  
<http://www.extension.iastate.edu/Publications/PM1758.pdf>

**Estimating Pasture Forage Mass From Pasture Height**  
<http://www.wvu.edu/~agexten/forglvst/passmass.pdf>

**A Falling Plate Meter for Estimating Pasture Forage Mass**  
<http://www.wvu.edu/~agexten/forglvst/fallplate.pdf>





*Bobby's border collie brings the cows in from the pasture for milking.*