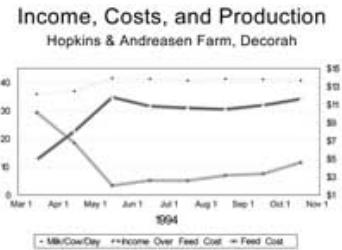


Forage Quality and Returns from Grazing

Figure 10. Milk production, feed cost, and income after feed cost throughout the 1994 grazing season, Hopkins/Andreasen farm.
 Top (left)--Milk/cow/day. Middle (L)--feed cost. Bottom (L)--income over feed cost



Steve Hopkins and Sarah Andreasen milked a small herd of Jerseys near Decorah the last several years. In October, they moved their cows to a farm near Newton, but not before wrapping up a project documenting their pasture-based approach to dairying. The effort began in 1993 with support from the Leopold Center for Sustainable Agriculture and PFI Sustainable Projects. In 1994, Steve and Sarah became PFI cooperators.

Figure 10 shows that, as in 1993, milk production improved somewhat and income over feed cost improved dramatically in the spring when pasture became available. Income and cost are expressed here per hundredweight of milk sold. Typical feed costs for well-managed dairies are \$5-6 per hundredweight of milk. During most of the time the cows were in the paddocks in 1994, feed costs were around \$3 per CWT milk sold. From May to July, daily feed costs were less than one dollar per cow.

Figure 11. Forage analysis over the 1994 grazing season, Hopkins/Andreasen farm.
 Bottom (Left)--non-fiber carbohydrate
 Middle (left)--relative feed value
 Top (left)--crude protein %

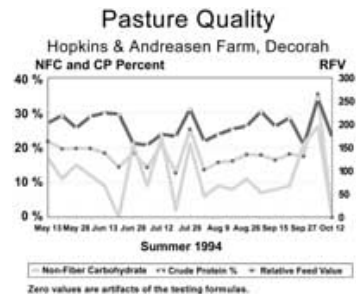


Figure 11 shows the result of weekly forage sampling. In 1993, Steve and Sarah were surprised to see a mid-summer slump in non-fiber carbohydrate (NFC), an important measure of feed energy content. In 1994, forage energy fluctuated, reflecting the different paddocks in which the cattle grazed. Depending on paddock NFC, the cows were fed 10-16 lb. corn in the barn. Steve says that what impresses him is that crude protein levels were more than adequate throughout the season. He notes that this is the result of grazing grass in the leaf stage. His working theory is that, while crude protein is a function of grass height, NFC reflects both the growth stage of the grass and the fertility status of the soil. Steve and Sarah are looking forward to new pastures that aren't quite so steep and a grazing season just a bit longer than those in northeast Iowa.