

UNITED STATES DEPARTMENT OF AGRICULTURE



CRP Land:
It's in
your hands

NATURAL RESOURCES CONSERVATION SERVICE

Alternatives to Cropping CRP Land—Maximizing Diversity

CRP is considered cropland, however not all cropland is created equal in terms of erosion and yield potential. In fact, many of the acres in CRP may be best suited to other land uses such as grassland, hay, pasture and wildlife habitat.

Steeper portions of CRP land may be best suited to stay in CRP or used for pasture and hayland with some renovation and investment. Lower yielding areas where you may have planted trees or shrubs could continue to provide excellent wildlife habitat and add diversity to your farm.

Land coming out of CRP also presents a unique opportunity to be certified for organic farming production.

It's a good idea to take a look at your soils and consider these land use alternatives before making any decisions.

More than likely the decision you make will depend on a variety of factors:

- Personal goals and interests
- Profitability
- Soil types
- Rental rates
- Family situations

Your choices will impact the local economy, landscape and environment. Review the text below to quickly compare different land use alternatives.

On the next several pages you can review more details about these options and land use alternatives available to you. In this brochure we look at the following options on the same 120-acre tract:

- All in CRP, page 5
- All in cropland, page 6.
- All in pasture, page 7
- Mixture of cropland, pasture or CRP, page 8.

This brochure examines these issues from several perspectives:

- Producer/Tenant
- Local landowner
- Absentee landowner

Use this brochure to explore the options on our 120-acre CRP contract. Learn more about the considerations of each land use so you can match your goals with the needs of the landscape.

Option 1: CRP, Page 5

This option considers the impacts of enrolling the entire tract into CRP. This option is dependent on your EBI score. It can provide excellent erosion control, soil quality enhancement, water quality improvements and wildlife habitat. The benefits generated by this option are directly related to your management plan and how well you implement it. Landowner income is about \$11,400, or more if leased for fee-hunting. This land wouldn't be eligible for the Conservation Security Program.



Option 2: Cropland, Page 6

This option considers the impacts of using the entire tract for row crop production. It poses the greatest risks to soil quality, water quality and wildlife. Conservation practices, from terraces to no-till, will be required to meet compliance. Based on crop budgets and soil types, the tenant would lose an average of \$5.60 an acre. The landowner would receive \$120 per acre in rent—or \$14,400. Because of the soil losses with this option, it will be difficult to make it all eligible for CSP.



Option 3: Pasture, Page 7

This option considers the impacts of using the entire tract for pasture. If properly managed, it provides excellent benefits for soil quality, water quality and wildlife. Rotational grazing is the best system, economically and environmentally. But it would likely require some up-front, set-up costs for fencing and water. Grazing systems on typical lower producing CRP soils show more profit potential than row-crop production. If basic requirements are met, these acres could qualify for CSP.



Option 4: Diversity, Page 8

This option combines row-crop production with CRP and/or pasture. It focuses attention on using the best soils for crop production and using the lower yielding soils for permanent cover—either CRP, pasture, hay or even biomass production. This option results in the most profit for the tenant, because crop production is limited to the most productive soils. Tenant income is estimated at \$1,508. Landowner income ranges between \$13,050 and \$14,178 depending on land use choice.



About Our Current CRP Contract

Our CRP contract consists of 120 acres, which is outlined in yellow on the map to the right. The contract is set to expire in 2007. The CRP contract is currently worth \$91/acre or nearly \$11,000 per year.

The farm has a road for the east boundary and part of the north boundary. The remaining north boundary is a drainage way beginning in the northeast part of the farm and running to the west.

Tree-lined fences mark the south and west boundaries. The farmstead is on the east side. Tree-lined fences, by the pond, separate the fields. There is a terrace in the southeast corner of the farm above the grove of trees and drainage way. There are three drainage ways flowing south in the south central portion of the farm.

Soils Information

Soil types include floodplains, foot slopes, side hills and ridge tops.

Moderately productive Shelby soils are located on steep side hills. These soils have silty clay loam surface texture.

The low-yielding Adair, Lamoni, Mystic and Shelby soils are locat-

ed on the side hills. The surface texture is clay loam or silty clay loam. The higher clay contents and bulk densities in the soil restricts rooting depth causing lower crop yields

Soil quality has improved during the last 10 years of our CRP contract. Improved soil quality is reflected by higher organic matter and good soil structure. These can mean higher yields, improved drainage, less runoff and better root development.

Good soil quality is also necessary to achieve a high Soil Conditioning Index (SCI) score. High SCI scores are key for Conservation Security Program (CSP) eligibility and contract payments. No-till is needed to preserve this soil structure, CSP eligibility, and the other benefits of a healthy soil structure.

General Assumptions

When financially comparing our land use options, we've made some basic assumptions.

1. Crop prices were set high enough to account for the price of the grain and the impact of USDA payments.
2. All crop budgets eliminated labor and interest costs.



3. Costs and profits for cropland are an average of a two-year corn-soybean rotation.

4. Fixed costs were not adjusted based on farmed acres.

5. Soils were divided into three yield classes (Fig. 3 on page 4):

High Yield:

165 bu/acre corn and 48 bu/acre beans

Intermediate Yield:

138 bu/acre corn and 38 bu/acre beans

Low Yield:

100 bu/acre corn and 30 bu/acre beans

6. New CRP rental rate for the entire farm is assumed to be \$95/acre. We also assumed a cropland cash rental rate for the whole farm at \$120. We increased the cropland cash rental rate for our diverse option to \$150. This is because only the most productive soils are cropped, maximizing return for the tenant.

These maps indicate three characteristics based on soil types. Each of these characteristics—erosion risk, corn suitability rating, and corn yield—indicate the productivity and erosiveness of the soils on our CRP contract area.

The green areas indicate the highest producing areas (generally the ridge tops and bottom lands) while the red areas are the poorest producing and most erosive soils (generally the steep side hills).

Before finalizing your land use decisions for expiring CRP ground, you might want to consider evaluating these same characteristics for your farm. It will also help you determine fair cash

rental rates for your crop ground. If you need assistance generating these maps for your CRP contract, please contact your local NRCS field office.

Number	Soil Name	% Slope
5B	Colo/Ackmore	0-5
8B	Judson	2-5
24E2	Shelby	14-18
93D2	Shelby/Adair	9-14
286B	Colo/Judson/ Nodaway	0-5
370D2	Sharpsburg	9-14
430	Ackmore	0-2
470D2	Lamoni/Shelby	9-14
570C2	Nira	5-9
570D2	Nira	9-14
592D2	Mystic	9-14
822C2	Lamoni	5-9
822D2	Lamoni	9-14

Fig. 1: Erosion Risk

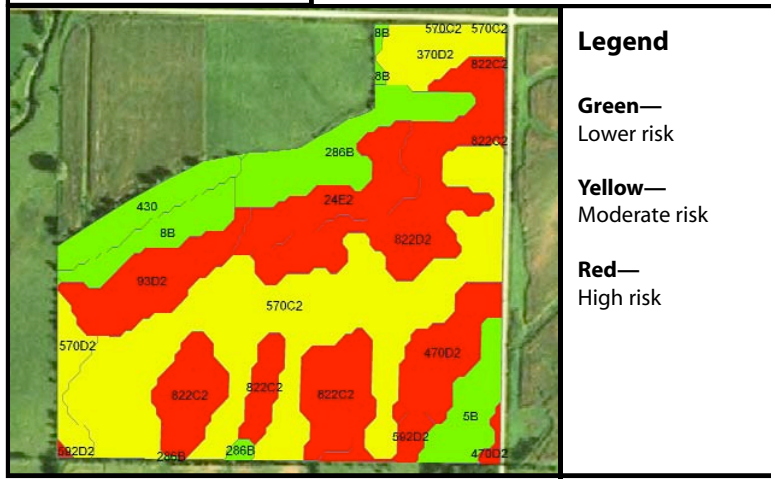
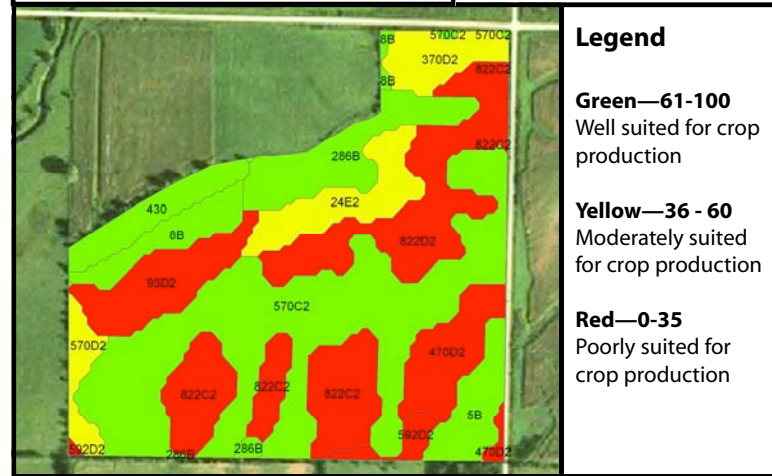
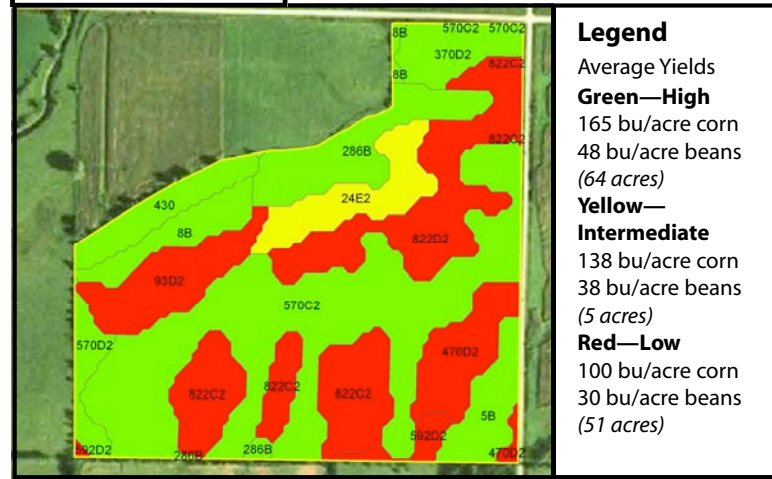


Fig 2: Corn Suitability Rating



Corn Suitability Ratings provide a relative ranking of all soils mapped in Iowa based on their potential for intensive row crop production. The CSR is an index that can be used to rate one soil's potential yield production against another over a period of time.

Fig. 3: Crop Yields



Option 1: CRP

This option may not be available to all producers. Availability will depend on the EBI (Environmental Benefit Index) score. Based on this score, some producers will be allowed to re-enroll their entire contract or may choose to re-enroll only a portion of their contract; others will be allowed to only extend the contract, or a portion of the contract.

This option can provide some of the best environmental benefits. It promotes good soil and water quality. Soil erosion is also reduced to a minimum when CRP acres are properly managed.

Wildlife could also benefit, especially when food plots, diverse grass seedings and habitat management are included in the CRP contract.

The CRP option limits the producer's flexibility to manage the land. There are restrictions on when and how CRP land can be managed and it is likely these restrictions will continue.

Other Considerations

Re-enrolling these acres into CRP also idles the productive areas on the bottomland and ridge top. This reduces the demand for seed, fertilizer, fuel, fencing and other inputs.

Balance Sheet

CRP rental rate for the entire 120 acres would be about \$95/acre, generating \$11,400 in total landowner income. However, there could be additional income from fee-based hunting.

If you select to manage CRP acres for wildlife, the costs associated for that work need to be included when considering the bottom line.

There would be no tenant, so there would be no tenant income.

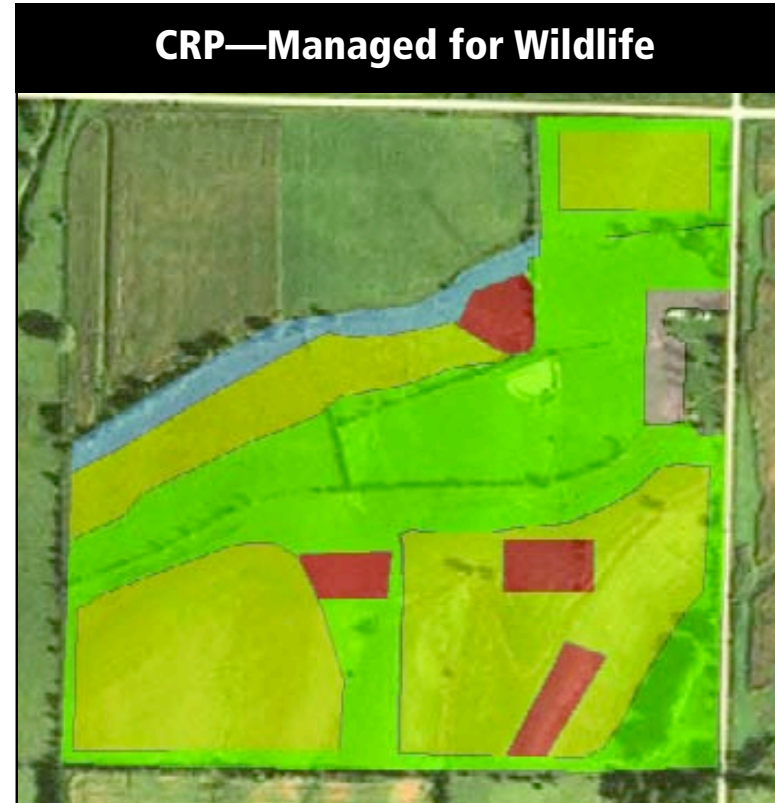
The Map

The map shows one option for managing this contract area for wildlife benefits—primarily for upland birds.

If you are interested in a wildlife plan for your CRP contract area, please visit your local NRCS field office. Plans can be developed to meet varying degrees of management intensity—from fairly simple to extremely intense.

Considering CSP

CRP acres can't be enrolled in the Conservation Security Program. But a producer could take credit for the environmental benefits which result from the CRP ground.



Map Legend

- 8-Row Shelter Belt
- Riparian Forest Buffer
- Cool Season Grasses
- Food Plot
- Warm Season Grasses

Option 2: Cropland

Of all the options available, this one creates the greatest risks to the environment. Even with the required conservation measures installed to meet compliance, erosion rates will greatly exceed those on CRP. This option will provide minimal wildlife benefits.

Considering Compliance

All fields released from CRP which are designated as highly erodible land (HEL) by NRCS will need soil erosion reduced to the minimum level acceptable for compliance. This would require conservation practices like no-till, terraces, field borders, grassed waterways, contour buffer strips, meadow rotations and others.

Costs for installing some of these practices range from \$400 per acre for terraces to \$10 per acre for contour buffer strips.

The cost of establishing many of the grass-based practices can be reduced if you use the existing CRP grass stands in the new practice. Additionally, many of these practices can be enrolled in the Continuous CRP, reducing the costs to the landowner and producer.

Balance Sheet

Cash rental rate for the entire

tract is assumed to be \$120/acre. As a result, total income for the landowner would be \$14,400.

Based on crop budgets examples on page 9 and soil types, this scenario will result in a loss of \$81/acre on the poorest producing 51 acres. This represents a loss of \$4,131 for the tenant on these acres.

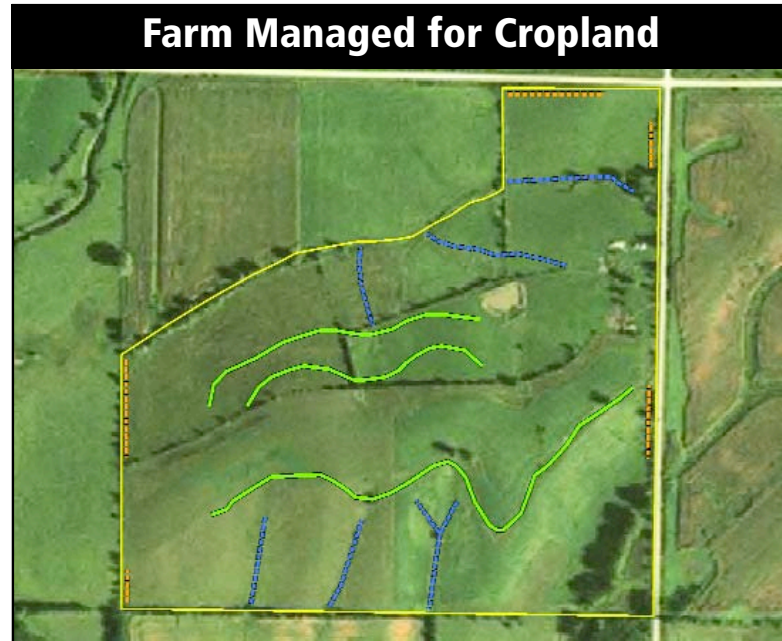
There would be a loss of \$9/acre on the five acres of soils with intermediate yield potential, for a loss of \$45.

The remaining 64 acres, the most productive soils, would provide a profit of \$56/acre for a tenant income of \$3,584. Overall this results in a net loss of \$672 for the tenant.

Acres	Tenant Income
51	-\$4,131
5	-\$45
64	\$3,584
120	-\$672

The Map

This map shows this land best managed for a continuous corn-soybean rotation. In addition to the conservation practices shown, this farm would require 56 acres of no-till to remain in compliance.



Map Legend

- Field Border
- - - - - Grassed Waterway
- Terrace

Considering CSP

Because of the soil losses created by using this land for producing row crops, it would be difficult to make all the acres in this option eligible for the Conservation Security Program.

Option 3: Pasture

The pasture option allows land owners to take advantage of the existing forage stand. With good management, the environmental benefits gained with CRP can be maintained or improved with pasture.

As with any land use change there will likely be some costs. The current forage may need to be improved. Many tracts will need improved fencing. There will likely be other expenses related to providing water. Some of these expenses include constructing farm ponds, providing controlled access to streams, water pipeline and connecting to rural water.

The most profitable use of pasture land is a rotational grazing system. And it also provides the best environmental benefits. The actual level of management intensity will depend on the producer's objectives. A system that rotates livestock an average of once per week during the growing season will provide many benefits.

The Map

The grazing system shown is divided into eight paddocks. This would allow for moving live-

stock at least once per week.

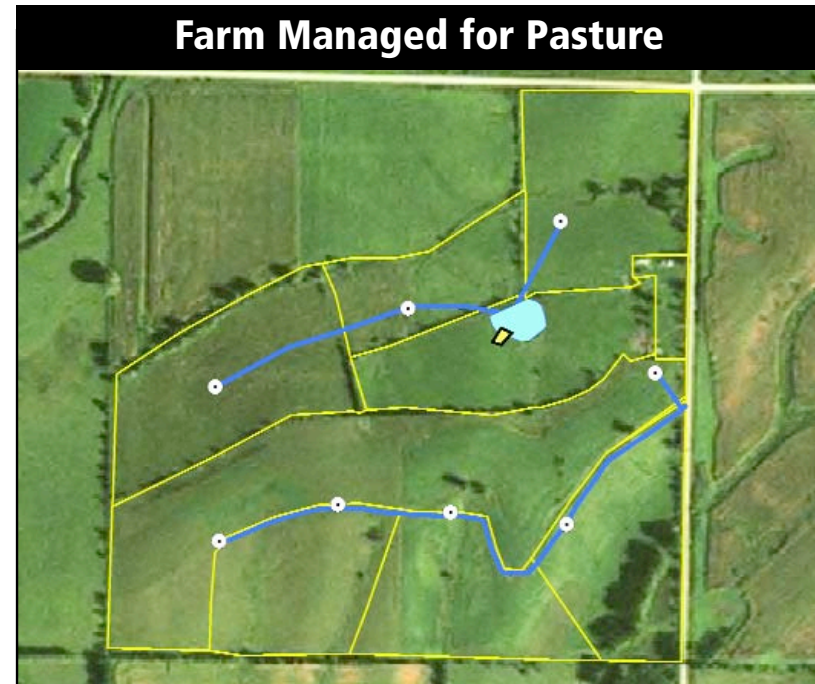
A more intensive grazing system, moving livestock twice a week, could allow the owner to increase the number of grazing animals and the productivity of the land. T.

The system, when fully implemented, should provide adequate forage to graze and provide hay for 47 beef cows and calves for 9 1/2 months. The system includes both a cool season grass/legume mix and warm season native grasses. Livestock would graze corn stalks from another farm.





Balance Sheet

Pasture land can be a very good economic land use choice, especially on lower producing marginal side hill soils (Shown as the yellow and red areas in Figures 1, 2 and 3 on page 4). Information from actual grazing systems on typically poor producing CRP soils, show more potential for profit per acre than row crop production.

Landowners without grazing livestock can develop rental or lease arrangements with livestock producers to achieve a system that is beneficial to both



Map Legend

	Livestock water access		Water tanks
	Pond		Water lines

parties. Landowners with wildlife and recreation as land use objectives can improve habitat with a managed grazing system.

Considering CSP

All the acres in this option, which meet the minimum pro-

gram eligibility requirements, could possibly receive Conservation Security Program payments.

Option 4: Maximizing Diversity

This option is the best example of good land use planning. The key is combining cropland with some type of permanent cover. It includes a combination of cropland, CRP and/or pasture.

The key to maximizing diversity is how you use the areas of intermediate and lower yielding soils. (In our CRP contract these are the red and yellow areas in Figures 1, 2 and 3 on page 4.)

Your decision on how to use these poorer producing acres on your farm will depend less on profitability and more on your personal goals and interests.

A cattle producer might consider using those areas for pasture. If you rent the ground, you may re-enroll the most marginal ground in CRP or rent it for pasture to a livestock producer.

The key is selecting a land use that is most suited to the soils and fits within your goals.

The Map

The map shows which areas are best suited for crop production and which should stay in permanent grass cover—based on soil characteristics. It also incorporates features needed if using the grass cover for grazing cattle.

Balance Sheet—

This option involves cash renting the high yielding areas and re-enrolling the remaining acres into CRP. Cropland rental rate is increased to \$150/acre to account for the increased productivity. Annual landowner income from these 58 acres would be \$8,700.

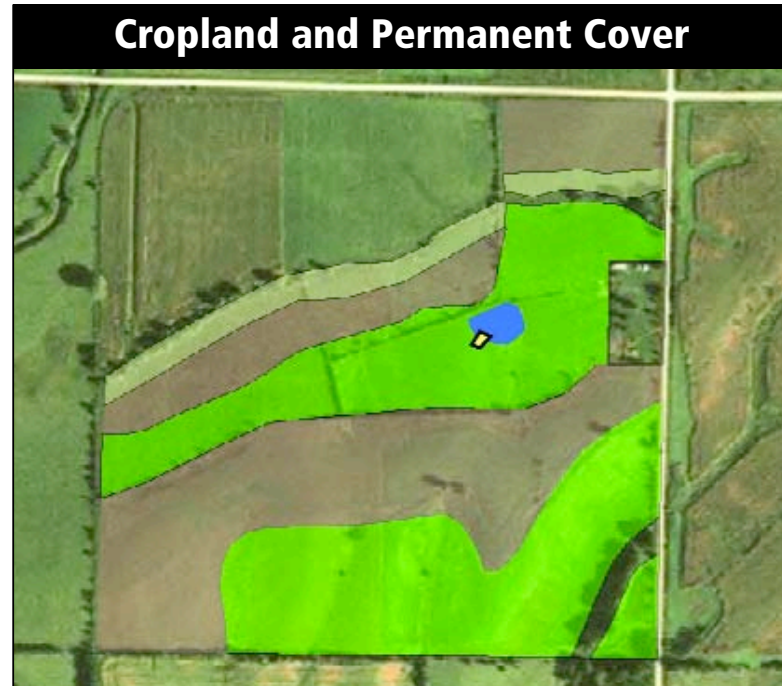
CRP rental rates for six acres of filter strips enrolled under the continuous CRP would be \$165/acre. General CRP rental rates for the remaining 56 acres are reduced to \$80/acre to account for lower value soils.

In this cropland/CRP option, total landowner income would be \$14,170.

The tenant would earn an average \$26/acre on 56 acres. The average rotation profit on high yielding soils is \$56/acre, but this is reduced in this option because rent is increased from \$120 to \$150/acre. This profit would equal \$1,508 total tenant income.

Cropland/CRP Option

Acres	Landowner Income
6	\$990
56	\$4,480
58	\$8,700
120	\$14,170



Map Legend

 Livestock water access	 Permanent Vegetative Cover
 Pond	 Row Crop
 Riparian Forest Buffer	

Acres	Tenant Income
58	\$1,508
Cropland/Pasture Option	
Acres	Landowner Income
6	\$990
56	\$2,520*
58	\$8,700
120	\$13,050

*rental rate set at \$45/acre

Considering CSP

Selecting a diverse land use option increases your chances for the Conservation Security Program. CRP acres would not be eligible for payment.

Crop Budget Sheets

Blank versions of these crop budget worksheets can be found online at www.extension.ias-tate.edu/agdm. These are meant to be an example. Your costs will be different and you are encouraged to run these worksheets with your own numbers.

No-till Corn, Low Yielding Soils—100 bu/acre at \$2.40 bu

Cost per Acre				
	Fixed	Variable	Total	Your Costs
Preharvest machinery				
Apply nitrogen	\$3.96	\$3.63	\$7.59	
Plant	\$4.63	\$3.24	\$7.87	
Cultivate	\$0.00	\$0.00	\$0.00	
Spray	\$0.92	\$0.80	\$1.72	
Custom Hire/Other	\$0.00	\$0.00	\$0.00	
Total per Acre	\$9.51	\$7.67	\$17.18	
Seed, Chemicals				
Seed		\$34.84	\$34.84	
<i>cost per 1,000 kernels (\$1.34)</i>				
<i>kernels per acre (26,000)</i>				
Nitrogen		\$36.00	\$36.00	
<i>price per pound (\$0.30)</i>				
<i>pounds per acre (120)</i>				
Phosphate		\$18.15	\$18.15	
<i>price per pound (\$0.33)</i>				
<i>pounds per acre (55)</i>				
Potash		\$8.10	\$8.10	
<i>price per pound (\$0.18)</i>				
<i>pounds per acre (45)</i>				
Lime (annual cost)		\$6.00	\$6.00	
Herbicide		\$34.70	\$34.70	
Crop insurance		\$7.00	\$7.00	
Misc.		\$7.00	\$7.00	
Interest on preharvest costs		\$0.00	\$0.00	
Total per Acre		\$151.79	\$151.79	
Harvest Machinery				
Combine	\$12.00	\$10.76	\$22.76	
Haul	\$3.00	\$2.57	\$5.57	
Dry (LP \$1.00/gallon)	\$3.00	\$15.00	\$18.00	
Handle	\$1.70	\$0.75	\$2.45	
Custom hire	\$0.00	\$0.00	\$0.00	
Total per acre	\$19.70	\$29.08	\$48.78	
Land/Labor				
Operator/Hired	\$0.00	\$0.00	\$0.00	
Land (Cash rent equivalent)	\$120.00		\$120.00	
All costs				
Per acre	\$149.21	\$188.54	\$337.75	
Per bushel	\$1.49	\$1.89	\$3.38	
Gross returns per acre				
\$240 (income) - \$337.75 (total costs) = -\$97.75				

No-till Corn, High Yielding Soils—165 bu/acre at \$2.40/bu

Cost per Acre				
	Fixed	Variable	Total	Your Costs
Preharvest machinery				
Apply nitrogen	\$3.96	\$3.63	\$7.59	
Plant	\$4.63	\$3.24	\$7.87	
Cultivate	\$0.00	\$0.00	\$0.00	
Spray	\$0.92	\$0.80	\$1.72	
Custom Hire/Other	\$0.00	\$0.00	\$0.00	
Total per Acre	\$9.51	\$7.67	\$17.18	
Seed, Chemicals				
Seed		\$34.84	\$34.84	
<i>cost per 1,000 kernels (\$1.34)</i>				
<i>kernels per acre (26,000)</i>				
Nitrogen		\$36.00	\$36.00	
<i>price per pound (\$0.30)</i>				
<i>pounds per acre (120)</i>				
Phosphate		\$18.15	\$18.15	
<i>price per pound (\$0.33)</i>				
<i>pounds per acre (55)</i>				
Potash		\$8.10	\$8.10	
<i>price per pound (\$0.18)</i>				
<i>pounds per acre (45)</i>				
Lime (annual cost)		\$6.00	\$6.00	
Herbicide		\$34.70	\$34.70	
Crop insurance		\$7.00	\$7.00	
Misc.		\$7.00	\$7.00	
Interest on preharvest costs		\$0.00	\$0.00	
Total per Acre		\$151.79	\$151.79	
Harvest Machinery				
Combine	\$12.00	\$10.76	\$22.76	
Haul	\$3.00	\$2.57	\$5.57	
Dry (LP \$1.00/gallon)	\$3.00	\$15.00	\$18.00	
Handle	\$1.70	\$0.75	\$2.45	
Custom hire	\$0.00	\$0.00	\$0.00	
Total per acre	\$19.70	\$29.08	\$48.78	
Land/Labor				
Operator/Hired	\$0.00	\$0.00	\$0.00	
Land (Cash rent equivalent)	\$120.00		\$120.00	
All costs				
Per acre	\$149.21	\$188.54	\$337.75	
Per bushel	\$0.90	\$1.14	\$2.05	
Gross returns per acre				
\$396 (income) - \$337.75 (total costs) = \$58.25				

Land Use Decision Checklist

Before deciding what to do when your land is released from CRP, it is important to consider several factors: soil types, past yields, commodity prices, production costs, conversion costs and other required investments.

To help guide you through the decision process, please review the following questions. Some are more general in nature. Others are specifically related to the land use(s) you may be considering. Feel free to discuss any of these questions or issues with the staff at your local NRCS field office.

CRP

1. What is the Environmental Benefit Index score on the acres in your CRP contract?
2. Will you be offered a contract extension or renewal?
3. How many years will your contract be extended?
4. What is your current CRP rental rate?
5. What is your new CRP rental rate?
6. What improvements will be needed if the land remains in CRP? (i.e.—improved seeding, tree and brush removal, mid-contract management, etc.)
7. Do you have a current soil test?

Cropland

1. What are your yield expectations?
2. Do you know where the more productive and less productive soils on the farm are located?

3. What conservation practices will be required for compliance?
4. Is cost-share available to help implement these practices?
5. Do you have access to equipment required for no-till?
6. Do you plan to farm or rent the ground for cropland?
7. Would your tenant be willing to pay more for the more productive ground?
8. Are all fields accessible?
9. Do you have a current soil test?
10. Do you plan to apply herbicide the fall before planting?

Pasture

1. If you don't own livestock would you consider leasing the pasture to another operator?
2. Would you need additional cattle to make a grazing system economical?
3. Is there an adequate source of water available?
4. Would you use any of the pasture for hay?
5. What type of fencing would you use? Are current fences adequate?
6. Is there a noxious weed problem (thistle)?
7. What is the current forage on the property?
8. Is there a brush problem?
9. Do you have a current soil test?

Wildlife

1. Do you plan to rent the ground for hunting?
2. Is the ground for your personal use only?
3. Do you plan to build a home on the site someday? Or another shelter?
4. What type of wildlife do you want to support?
5. How much of an investment are you willing to make?
6. Is cost-share available for some of the wildlife practices?
7. Managed grazing can enhance the area for wildlife. Would you consider allowing livestock to graze on this area?
8. What improvements are needed to make the land more desirable for the species of your choice?
9. Do you have a current soil test?

General

1. Do you plan to apply for the Conservation Security Program in the future?
2. Do you or a family member intend to manage this farm? And do you have the time and experience to devote to a higher level of management?
3. Are you interested in helping a young or beginning farmer expand his or her operation with the land in your expiring CRP contract?

Diversity in Practice

There's a little bit of everything on the Allen farm in Union County, Iowa. There is a little row crop, a few ponds, filter strips, field borders—and a lot of pasture for a lot of cows.

Allen farms with his wife Vicki and their son James. His operation includes 100 acres of row crops, 500 acres of pasture and some hay ground. Their operation supports 210 cow-calf pairs.

“We really enjoy the cattle,” said Allen. “It is a lifestyle choice for us.”

It is a lifestyle that blossomed after the couple started farming Vicki's family farm with her grandfather in 1983. They bought

Tony Allen, of Diagonal, (below) runs a diverse operation including a cow-calf herd, 100 acres of row crops and 500 acres of pasture. His operation features several conservation practices including CRP filter strips and the contour buffer strips, (right), installed through EQIP.



the farm in 1991, but didn't start raising cattle until they sold off their 120 sows in 1998.

They started out with 40 cows. In just seven years, the Allens have increased their herd by more than 500 percent.

To help support the herd, the Allens opt to pay back 20 percent of their CRP filter strip payment. This allows them to use these strips for grazing.

“Pasture is hard to come by,” he said. “I really like the strips because you can graze them, but

still do your part to protect water quality.”

In addition to filter strips, the Allens' operation includes contour buffer strips and several ponds built with the help of Environmental Quality Incentives Program (EQIP) cost-share and technical assistance from the NRCS. The ponds feed the pasture water tanks, which are installed on gravel pads.

The Allens also practice minimum and no-till for their corn and soybean ground. Pasture

seedings are minimum tilled and harrowed until smooth, to help with mowing and bailing.

Because of their diverse land use choices, the Allens are very successful at balancing the needs of the land with the need to support their lifestyle choice.

Considering CSP

Based on the diversity of his operation and use of conservation practices, Allen has a good chance at meeting the eligibility requirements for the Conservation Security Program.



NRCS Can Help



From financial assistance through the Environmental Quality Incentives Program (EQIP) to technical assistance for conservation planning and practice implementation, the USDA-Natural Resources Conservation Service is here to help you make decisions about your land in expiring CRP contracts.

Completing a conservation plan is an important step when making your land use decisions. It will help you evaluate your objectives for your operation, as well as the natural resource issues on the land in your CRP contract. Local NRCS certified planners can help develop a plan for your expiring CRP contract.

Some of the assistance available from NRCS is explained below. Other federal, state and

local cost-share assistance may be available. Contact your local office for more information.

Conservation Technical Assistance

Purpose: To assist landusers plan and install resource management systems that will improve and protect natural resources.

Systems: Include many different practices to reduce soil erosion; improve soil, water and air quality; improve and restore wetlands; enhance fish and wildlife habitat; improve pasture and rangeland; reduce upstream flooding; and improve woodlands.

Eligibility: All landusers may receive technical assistance from the NRCS. Landusers are encouraged to work through their local Soil and Water Conservation District (SWCD) to become district cooperators.

Environmental Quality Incentives Program (EQIP)

Purpose: To provide technical and financial assistance to landowners to develop and implement conservation plans that address specific natural resource concerns.

Practices: Livestock manure management, grazing land management, soil erosion control, and water quality improvement practices are eligible for cost-share statewide. Assistance for other practices is available in selected priority areas.

Eligibility: Agricultural producers on agricultural land are eligible.

Wildlife Habitat Incentives Program (WHIP)

Purpose: To develop or improve fish and wildlife habitat on privately owned land through the application of a conservation plan.

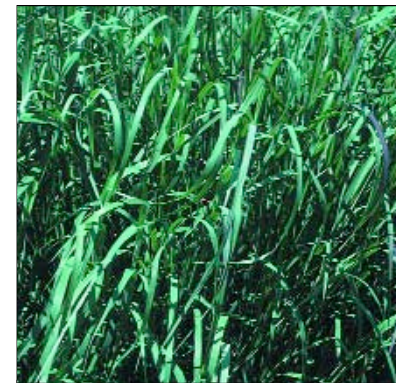
Practices: Seeding, tree and shrub plantings, fencing, instream structures and prairie restoration.

Eligibility: Almost any type of land is eligible, including agricultural and non-agricultural land, woodlots, pastures and streambanks.

Technical Tools

There are many technical tools at the NRCS website (www.ia.nrcs.usda.gov) that provide valuable information you

can use during your decision making process. One of these tools, the online Web Soil Survey, (websoilsurvey.nrcs.usda.gov/app/) can help you identify the unique characteristics of your operation. There are also links to information about conservation programs and practices.



Considering Biomass

Another possible use for permanent grass cover is biomass fuel production. Across the state there is a growing demand for the use of biomass fuels at coal-burning power plants. Biomass fuel production could be incorporated into several of your land use options—including pasture.

Conservation Practice Photo Glossary



Contour buffer strips

Strips of grass or legumes in a contoured field, which help trap sediment and nutrients.



Fencing

Protecting a stream or water source by excluding livestock. Fencing is also a crucial tool for establishing a rotational grazing system.



Field borders

A strip of grass or legumes at the edge of a field, used in place of end rows.



Filter strip

A strip of grass or legumes along a stream or body of water to filter sediment from runoff.



Forage management

Proper management of forages to produce quality hay and maximize environmental benefits.



Grassed waterway

Shaping and establishing grass in a natural drainage-way to prevent gullies from forming.



Heavy use protection area

Limiting livestock access to water sources to minimize threats to water quality.



Native grasses

Establishing stands of native grasses provides excellent protection from soil erosion and is a valuable source of wildlife habitat.



No till

Leaving last year's crop soil surface by eliminating tillage and using special planters.



Pond

A pool of water formed by a dam or pit, to supply water for livestock, recreation and wildlife and to control gully erosion.



Terrace

An earthen embankment around a hillside that stops water flow and stores it or guides it safely off a field.



Watering system

Developing alternative water sources for livestock in a rotational grazing system can protect existing streams and ponds.



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