Fragile agricultural lands are tilled or pastured lands that are prone to water, tillage or wind erosion. Examples of fragile land are:

- Steeply sloped croplands
- Lands that are prone to standing water
- Floodplains
- Areas where groundwater is recharged

Effects of farming fragile land

Agricultural production on fragile lands has limited potential for profit, degrades soil structure, and can negatively impact the environment and water quality.

- Continual farming of row crops on steeply sloped croplands will result in the loss of fertile soil, which decreases crop productivity and can affect water quality.
- Areas that experience standing water are often too wet for machinery and are subject to soil compaction.
- Agricultural production in floodplain results in soils being washed away, along with pesticides and fertilizers, which affects water quality.
- Farming land in areas that serve as groundwater recharge areas opens the possibility of polluting groundwater.

Consideration should be given to permanently retiring or semi-retiring fragile agricultural land.

This sloped area of the field has been retired from agricultural production and planted with trees.
Benefits of retiring fragile land

Taking fragile land out of agricultural production and planting permanent vegetation offers many benefits.

• Permanent vegetation reduces soil erosion by stabilizing the site.
• Keeping soil and nutrients on the land and out of local waterways improves water quality.
• Planting native trees, shrubs, grasses and wildflowers creates habitat for pollinators and other wildlife.
• Creating a wetland in areas that experience standing water will help to store water so it can slowly drain away, and pollution will be filtered out by the wetland vegetation.
• Retiring fragile cropland may be cost effective if crop yield is less than the cost of farming that area.

Retirement options

• Permanently retiring fragile lands entails taking the land completely out of agricultural production and planting permanent vegetation, such as trees or a prairie meadow.
• Semi-retiring fragile land could involve:
  • Growing a permanent hay crop or a forage crop of native grasses on steeply sloped lands, to help hold soil on the slope.
  • Using floodplain as pasture land. To protect water quality, keep livestock out of the pasture when it is really wet, and install a fence to restrict livestock from entering the watercourse.

Planning retirement of fragile land

Taking land out of agricultural production can be a difficult decision. A cost analysis that compares the average gross production with the average fixed cost of farming fragile areas may reveal that it is more economical to retire the land. Another factor is the negative impact that continued farming of the fragile land may have on the environment. If you’re considering taking your fragile land out of agricultural production, contact your local conservation authority for technical assistance and options on retiring the land.