

Brookings Township

44.35000, -96.85000 · radius 0.2 mi · area 0.1 mi² · South Dakota, United States

Northern hemisphere | Saved data · Oct 4, 2026

IN THIS REPORT

The land
2. Site overview
3. Survey grid location
4. Existing use and improvements
5. Crop history
6. Access and infrastructure

Soil and ground
7. Soil
8. USDA productivity ratings
9. Rangeland production
10. Ecological site and forage group
11. Terrain
12. Frost pockets and cold air

Climate and weather
13. Climate
14. Climate year by year
15. Wind and exposure

Water
16. Rainfall, water balance and irrigation outlook
17. Soil moisture
18. Drought history
19. Water: proximity, streams and ponds
20. Wetlands

Risks
21. Natural hazards
22. Pest and disease
23. Crop disease risk
24. Contamination and neighbors

Nature and protected land
25. Public and protected land
26. Protected species habitat
27. Wildlife sightings

Rules, rights and value
28. Land values and rents
29. Local rules and permits: who to ask
30. Rights, restrictions and programs

What the land can produce
31. Pasture and grazing capacity
32. Which crops suit this land
33. Field shape and machinery

AgLand Profile models
34. Crop fit
35. Livestock fit

1. Land profile

Fit column: Maize (corn)

FACTOR	VALUE	BAND	FIT FOR MAIZE (CORN)	DETAILS
Land cover Satellite land cover · ESA WorldCover	Cropland 68%	Mostly farmland	n/a	Site overview ↓
Survey grid location Township, range and section at the plot's center · BLM PLSS index	SE¼ of the NE¼, Section 8, T110N R50W	Located	n/a	Survey grid location ↓

FACTOR	VALUE	BAND	FIT FOR MAIZE (CORN)	DETAILS
Buildings on the plot Mapped buildings · OpenStreetMap	None mapped nearby	Bare land	n/a	Existing use and improvements ↓
Cropland history (USDA) Crop history · USDA Cropland Data Layer, 2021 to 2025	Farmed in 5 of 5 years	Cropped	n/a	Crop history ↓
Road access Nearest public road · OpenStreetMap	A public road touches the plot (28th Avenue West), unpaved	Touches	n/a	Access and infrastructure ↓
Topsoil organic matter Top 30 cm · SoilGrids, plus the USDA survey in the US	4.3% · USDA 2.4%	Good	n/a	See section ↓
Sand Top 30 cm · SoilGrids, plus the USDA survey in the US	27% · USDA 34%	Moderate	Good	See section ↓ Crops that suit this ↓
Soil pH Top 30 cm · SoilGrids, plus the USDA survey in the US	6.9 · USDA 7.4	Neutral	Good	Soil ↓ Crops that suit this ↓
USDA productivity index (NCCPI) Crop productivity index · USDA soil survey, rated on 100% of the plot	0.49 of 1.00	Moderately low	n/a	USDA productivity ratings ↓
Rangeland production (USDA) Plant growth in a normal year · USDA soil survey	3,872 lb/acre, normal year	High	n/a	Rangeland production ↓
NRCS ecological site Natural plant community of the main soil · NRCS soil survey	Sandy (R102DY009SD)	Rangeland site	n/a	Ecological site and forage group ↓

FACTOR	VALUE	BAND	FIT FOR MAIZE (CORN)	DETAILS
Elevation Elevation tiles · AWS Terrain Tiles	1621 ft, relief 49 ft	Moderate	n/a	See section ↓
Slope Mean slope over the plot · AWS Terrain Tiles	4% mean	Gentle	n/a	Terrain ↓
Frost pocket (cold air) Shape of the ground within 1.5 km · AWS Terrain Tiles, AgLand Profile index	Not indicated	Low	n/a	Frost pockets and cold air ↓
Summer heat Climate history · ERA5, 1991–2020	82 °F	Warm	Good	See section ↓ Crops that suit this ↓
Hardiness zone Climate history · ERA5, 1991–2020	4b	Very cold winters	Good	See section ↓ Crops that suit this ↓
Rain Climate history · ERA5, 1991–2020	28 in	Moderate	Good	See section ↓ Crops that suit this ↓
Humidity (warm season) Climate history · ERA5, 1991–2020	69%	Moderate	n/a	See section ↓
Frost-free season Climate history · ERA5, 1991–2020	158 days	Moderate	Good	See section ↓ Crops that suit this ↓
Growing degree days Climate history · ERA5, 1991–2020	1,441 (Winkler II)	Base 10 °C, Apr–Oct	Marginal	See section ↓ Crops that suit this ↓
Late-spring frost Climate history · ERA5, 1991–2020	100% of years	High	Poor	See section ↓ Crops that suit this ↓
Extreme heat days (35 °C or more) Climate history · ERA5, 1991–2020	1.1 per year	Low	Good	Climate ↓ Crops that suit this ↓

FACTOR	VALUE	BAND	FIT FOR MAIZE (CORN)	DETAILS
Wind and exposure Hourly wind at 10 m · ERA5, 2011–2020	16 km/h average, mostly from the S	Windy	n/a	Wind and exposure ↓
Drought history County drought maps · US Drought Monitor, 2000 to 2026	21.3% of weeks in drought since 2000	Moderate	n/a	Drought history ↓
Proximity to water Nearest mapped river, canal or lake · OpenStreetMap	Big Sioux River, 3.4 km	Medium	n/a	Water: proximity, streams and ponds ↓
Mapped wetlands Mapped wetlands · US Fish and Wildlife Service, photos from 1984	3.8% of the plot	Minor	n/a	Wetlands ↓
Hazards Highest hazard rating · AgLand Profile bands on ERA5, GloFAS and USGS data	Late spring frost, Flooding (FEMA flood map)	High	n/a	See section ↓
FEMA flood zone Flood zone · FEMA, effective 2025-04-23	11.6% in the 100-year floodplain	Medium	n/a	Natural hazards ↓
Disease pressure (leaf wetness) Warm-season leaf-wetness hours · ERA5, 1991–2020	558 h	Medium	Marginal	Pest and disease ↓ Crops that suit this ↓
Contamination and neighbors Registered sites and neighbors · EPA, USGS	None on record nearby	None on record	n/a	Contamination and neighbors ↓
Public & protected land Public and protected land · USGS PAD-US 4.1	Nearest: Wetlands Reserve Program (WRP), Brookings, SD, 1.7 mi	Nearby	n/a	Public and protected land ↓

FACTOR	VALUE	BAND	FIT FOR MAIZE (CORN)	DETAILS
Critical habitat (USFWS) Critical habitat · US Fish and Wildlife Service	None mapped within 3.1 mi	None mapped	n/a	Protected species habitat ↓
Wildlife reported (GBIF) Reported sightings · GBIF, 2016 to 2026	233 bird and mammal species, 2016 to 2026	Well recorded	n/a	Wildlife sightings ↓
Cash rent, non-irrigated cropland Average cash rent · USDA NASS	$220 an acre (2025, county average)	Benchmark	n/a	Land values and rents ↓
Field shape and machinery Size, width, shape, slope and obstacles · AgLand Profile model	Well suited	Good	n/a	Field shape and machinery ↓
Crop fit AgLand Profile model · climate, soil, terrain and water	Maize (corn) 82	Strong fit	n/a	Crop fit ↓
Livestock fit AgLand Profile model · climate, water, soil and terrain	Beef cattle, temperate breeds 79	Workable with changes	n/a	Livestock fit ↓

The land

2. Site overview

OPENSTREETMAP ESA WORLDCOVER USDA NAIP

IN PLAIN WORDS

This site is near Brookings Township, South Dakota, United States, about 1621 ft above sea level.

Land cover: cropland 67.6%, grassland 31.8%. Farming is common here.

Water: Big Sioux River is 2.1 mi away, a lake 2.4 mi; access rated medium. Being beside water does not give pumping rights, so check permits.

Elevation: gently undulating, 1604 ft to 1654 ft.

Slope: gentle, 4% on average, with 0% steeper than 15% (harder for machinery); slopes face W.

Slope %: Meters of rise over 100 meters of distance.

AERIAL PHOTOGRAPH



USDA NAIP aerial photograph, taken August 2022. The white line is your plot. About 54 cm per pixel.

This photograph is about 4 years old. Buildings, clearing, crops and water may have changed since.

LOCATION

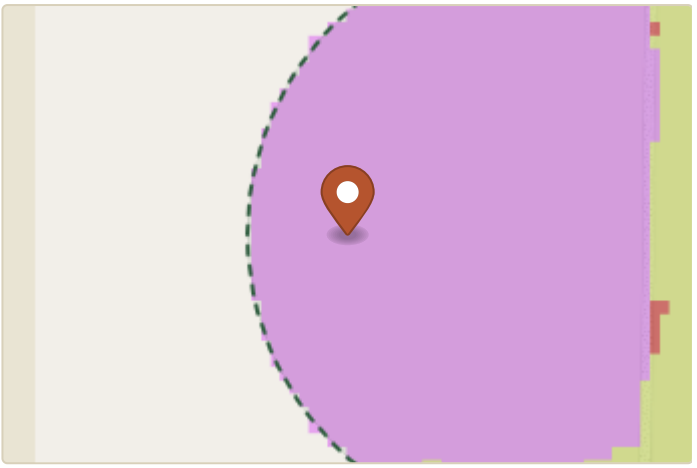
Place	Brookings Township, Brookings County, South Dakota
Hemisphere	Northern

Land cover

LAND COVER WITHIN THE AREA

Site point: Cropland

Cropland	67.6%
Grassland	31.8%
Built-up	0.6%



LAND COVER (ESA WORLDCOVER 2021)

Cropland Grassland Built-up

Map data © OpenStreetMap contributors. The dashed outline is the analyzed area.

3. Survey grid location

US BUREAU OF LAND MANAGEMENT US CENSUS BUREAU

Township, range and section, from the BLM survey index

SURVEY GRID LOCATION

The center of the plot is in SE¼ of the NE¼, Section 8, T110N R50W, 5th Meridian, Brookings County, South Dakota.

Township and range	T110N R50W
Principal meridian	5th Meridian
Section	8, SE¼ of the NE¼
County	Brookings County, SD

The outline touches 2 sections: Section 8, T110N R50W; Section 9, T110N R50W.

This is the survey grid's index at the point and outline you drew. It is not a survey or a legal description of the parcel: the deed and a licensed surveyor give that.

4. Existing use and improvements

OPENSTREETMAP

What is already on and around the plot

EXISTING USE AND IMPROVEMENTS

No building is mapped on the plot or within 300 m of it.

Only what volunteers have mapped in OpenStreetMap appears: a building that is not on the map may be there, a mapped one may be gone, and a well may be mapped without a record of its depth or yield. Check the aerial photograph (section 2) and the crop history (section 5), then walk the land. Irrigation equipment, fences, tanks and wells are best confirmed with the seller.

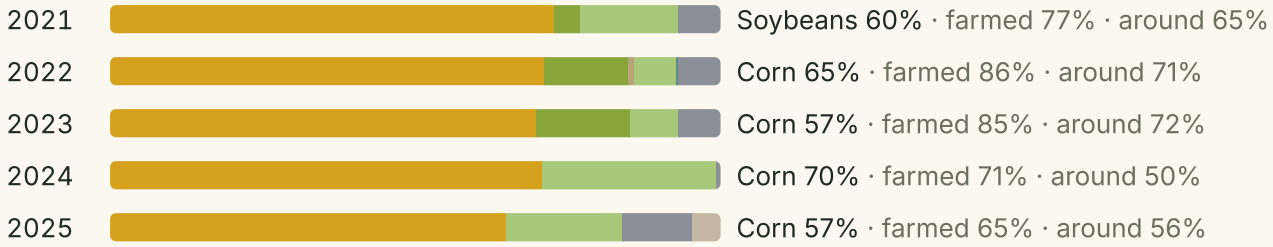
5. Crop history

USDA NASS CROPLAND DATA LAYER · CROPSCAPE

CROPLAND HISTORY

Mostly farmed (crops, hay or fallow) in 5 of 5 years, 2021 to 2025.

The largest crop was corn in 2022, 2023, 2024 and 2025 and soybeans in 2021. The largest crop changed over the years, which is what a rotation looks like.



"Around" is the farmed share of the land within 1 km of the plot's bounding rectangle, outside the plot. The map reads each year at 30 m cells, so a plot of 50.1 acres covers about 222 cells.

Second source: CropScape (a different service, run by George Mason University) was asked to read the plot's bounding rectangle and agrees with USDA's service in 5 of 5 years.

The newest map is 2025; the seasons since are not in it. Each year's map is published about a year after the growing season.

This is a satellite classification, not a record of what a farmer planted. It is accurate for the big crops (corn, soybeans, wheat, cotton) and weaker for hay, pasture and small plantings, and a field's edge can fall in a cell of the neighboring crop. Use it as evidence of what the land has been used for, then ask the seller for the crop history. It is not a record for crop insurance, farm programs or certification. Planting records of enrolled farms are held by the county Farm Service Agency office.

CROPLAND: ESA WORLDCOVER SATELLITE MAP VS USDA CROPLAND DATA LAYER

ESA WorldCover is a worldwide 10 m satellite classification for 2021. The USDA Cropland Data Layer is a yearly 30 m crop map of the lower 48 states, built from satellite images and checked against farm reports.

MEASURE	SATELLITE LAND COVER (ESA WORLDCOVER)	USDA CROPLAND DATA LAYER — REPORT GOES BY THIS	
Cropland on the plot	67.6%	64.9% (crops, hay or fallow)	Close
Largest class	Cropland	Corn	
Map year	2021	2025	

The satellite land-cover map (67.6%) and the USDA crop map (64.9%) agree on how much of the plot is cropland. The report goes by USDA Cropland Data Layer.

6. Access and infrastructure OPENSTREETMAP

Roads, towns, power and rail

ACCESS AND INFRASTRUCTURE

A public road touches the plot: 28th Avenue West (minor public road) on the E side, unpaved.

Nearest public road	28th Avenue West, 7 ft E	Nearest power line	high-voltage line, 69 kV, 10 ft S
Nearest paved road	209th Street, CR 46, 0.7 mi NW	Nearest substation	unnamed, 2.6 mi SE
Nearest main road	US Highway 14, US 14, 1.5 mi S		
Farm track or service road	2198 ft NE, may be private		
Public roads within 500 m	3		
Railway	1.3 mi away		

NEAREST PLACES

Brookings city, about 18,802 people	3.7 mi SE
Flandreau town, about 2,314 people	24.3 mi SE
Volga village, about 1,460 people	4.2 mi SW
Sunnyview hamlet	3.2 mi E

From OpenStreetMap, which volunteers map: rural roads, surfaces and power lines can be missing or out of date, and distances are in a straight line, not by road. A road beside the plot is not a legal right to use it: ask the county for the road's status and whether an easement is recorded, and ask the electric company how far service would have to run and what it would cost. Broadband, water and gas are not in this reading.

Soil and ground

7. Soil

USDA SOIL SURVEY · SOILGRIDS (SCIENTIFIC MODEL)

IN PLAIN WORDS

The topsoil is a clay loam, which holds a lot of water and nutrients, but can be heavy and slow to drain. Its pH of 6.9 is close to neutral. This suits the widest range of crops. Organic matter is good at about 4.3%, which is a healthy sign for fertility and water holding.

The USDA soil survey adds a second opinion for this US land: it describes the map unit as a loam, with a pH of 7.4 and 2.4% organic matter. The two sources differ on the texture, so a lab test is worth more than either.

The land is gentle (average slope 4%, from 1604 ft to 1654 ft elevation), with 0% steeper than 15%, the point where machinery gets harder to use. Slopes mostly face W.

pH: How acidic or alkaline the soil is. 7 is neutral, lower is acidic, higher is alkaline. It controls which crops can take up nutrients.
Organic matter: Decayed plant and animal material. It feeds crops and helps soil hold water.
Texture: The mix of sand, silt and clay. It decides how fast water drains and how many nutrients the soil holds.

Soil layers

Sand, silt and clay in each layer of the topsoil, and the topsoil figures overall, from the SoilGrids model and the USDA soil survey.

0–5 cm

SoilGrids
sand 27.1% · silt 46.1% · clay 26.7% · pH 6.7 · organic carbon 4.07%

USDA
sand 33.8% · silt 42.4% · clay 23.9% · pH 7.2 · organic carbon 1.66%

5–15 cm

SoilGrids
sand 26.9% · silt 46.4% · clay 26.7% · pH 6.8 · organic carbon 2.69%

USDA
sand 33.8% · silt 42.4% · clay 23.9% · pH 7.2 · organic carbon 1.66%

15–30 cm

SoilGrids
sand 26.3% · silt 45.7% · clay 28% · pH 7 · organic carbon 1.84%

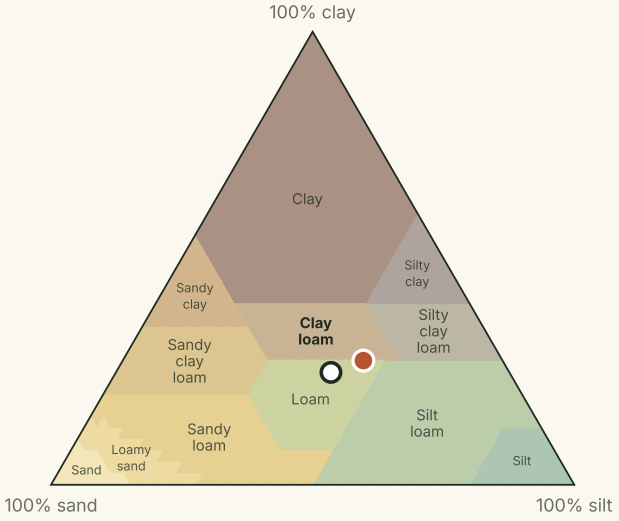
USDA
sand 34.4% · silt 39.8% · clay 25.8% · pH 7.5 · organic carbon 1.13%

Sand Silt Clay

Topsoil pH 6.9 · USDA 7.4

Texture triangle Clay loam

Where the topsoil sits between sand, silt and clay. Each shaded region is a soil class.



SoilGrids: Clay loam · 26.6% sand, 46% silt, 27.4% clay

USDA survey: Loam · 34.1% sand, 41.1% silt, 24.8% clay

▶ Learn more about soil types



4 acidic 6.5 to 7.3 neutral 9 alkaline

SoilGrids 6.9 USDA survey 7.4

TOPSOIL, 0–30 CM

	SOILGRIDS	USDA SURVEY
Organic matter	4.3%	2.4%
Texture	Clay loam	Loam
Sand	26.6%	34.1%
Silt	46%	41.1%
Clay	27.4%	24.8%
pH	6.9	7.4
Cation exchange capacity	26.7 cmol/kg	19.7 cmol/kg
Coarse fragments	0.8%	6.2%

One 250 m cell at the site point.

TOPSOIL: SOILGRIDS MODEL VS USDA SOIL SURVEY

SoilGrids is a 250 m computer model that works anywhere. The USDA soil survey was mapped in the field by soil scientists, and the values here are for the map unit at your site, 0–30 cm.

MEASURE	SOILGRIDS	USDA SURVEY	
Texture class	Clay loam	Loam	Differs
Sand	26.6%	34.1%	Close
Silt	46%	41.1%	Close
Clay	27.4%	24.8%	Close
pH	6.9	7.4	Close
Organic matter	4.3%	2.4%	Differs
Cation exchange capacity	26.7 cmol/kg	19.7 cmol/kg	Differs
Coarse fragments	0.8%	6.2%	Close

WHAT THE SOIL SURVEY ADDS

Map unit	Buse-Barnes loams, 9 to 20 percent slopes (BgD)
Survey area	Brookings County, South Dakota
Main soils	Buse 50%, Barnes 40%
Land capability class	6e: unsuited to cultivation: pasture, range or woodland, mainly the risk of erosion (54% of the map unit)
Farmland class	Not prime farmland
Natural drainage	Well drained
Hydrologic group	C: slow infiltration
Water the top meter can hold	6.7 in
Flooding	None
Depth to bedrock	not found in the survey depth
Seasonal water table	49 in
Average slope of	13%

The two sources are close on 5 of 8 measures. On texture, the model says clay loam and the survey says loam. Where they differ, the survey is usually the better guide in the US, and a lab test settles it.

the map unit

Each value describes the whole mapped soil area, which usually holds several soils. It is not a measurement at one spot.

SOIL MAP UNITS IN YOUR AREA

9 soil map units meet your area. The largest 8 are shown. SoilGrids reads one 250 m cell and cannot show this spread.

SOIL MAP UNIT	SHARE OF AREA	TOPSOIL TEXTURE	LAND CLASS	DRAINAGE
Maddock-Egeland sandy loams, coteau, 2 to 6 percent slopes	28%	Sandy loam	3e	Somewhat excessively drained
Marysland loam, 0 to 1 percent slopes, occasionally flooded	15%	Loam	4w	Poorly drained
Buse-Barnes loams, 9 to 20 percent slopes At your site	14%	Loam	6e	Well drained
Lanona-Swenoda sandy loams, 2 to 6 percent slopes	12%	Sandy loam	3e	Well drained
Barnes clay loam, 2 to 6 percent slopes	10%	Clay loam	2e	Well drained
Divide loam, 0 to 2 percent slopes, occasionally flooded	10%	Loam	3s	Somewhat poorly drained
Egeland-Embden complex, coteau, 0 to 2 percent slopes	7%	Sandy loam	3s	Well drained
Vienna-Buse complex, 6 to 9 percent slopes	4%	Silt loam	3e	Well drained

Land class is the USDA non-irrigated capability class, from 1 (few limits for crops) to 8 (no crop use), with a letter for the main limit: e erosion, w excess water, s soil limits in the root zone, c climate.

Which crops suit this soil ↓ See section 32 for every crop, factor by factor.

8. USDA productivity ratings

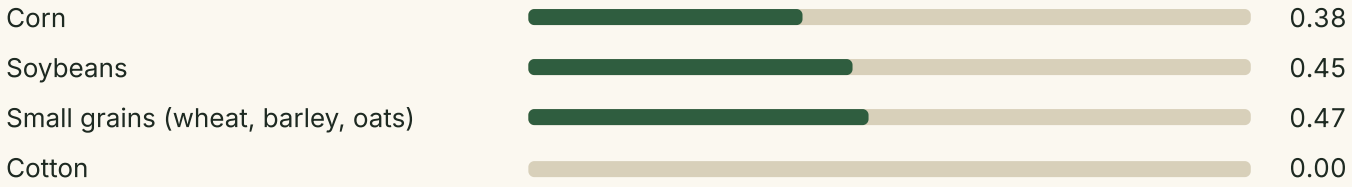
USDA NRCS SOIL SURVEY

USDA PRODUCTIVITY RATINGS FOR YOUR PLOT

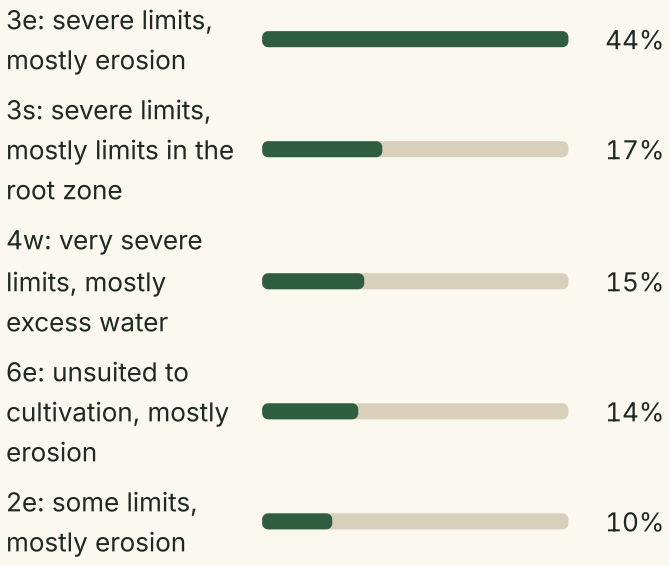
0.49
out of 1.00

National Commodity Crop Productivity Index (NCCPI)
USDA's wording for the main soil: moderately low inherent productivity.
USDA rated all of your plot.

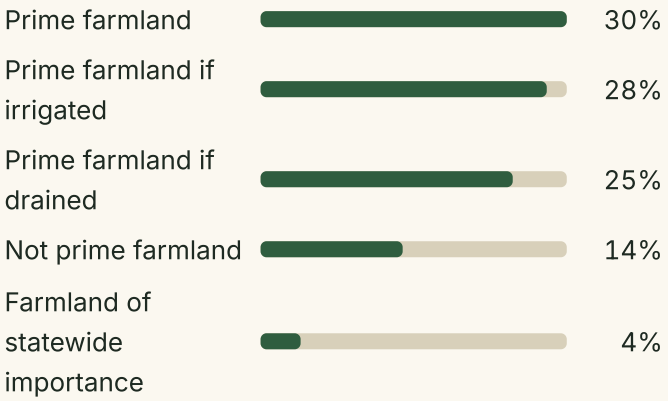
BY CROP GROUP



LAND CAPABILITY CLASS, BY SHARE OF THE PLOT



FARMLAND CLASS, BY SHARE OF THE PLOT



Worked out from the soil map units across your plot, each counted by its share of the area. NCCPI is USDA's own rating of how well a soil grows corn, soybeans, cotton and small grains without irrigation. It says little about pasture, trees, orchards, vineyards or specialty crops, and low values on range or forest land are expected. It is a separate, official measure: the crop scores in section 34 are our own judgment from climate and soil, and are not USDA ratings. Ratings are for mapped soil areas, not for your exact spot.

9. Rangeland production

USDA NRCS SOIL SURVEY

RANGELAND PRODUCTION (USDA)

About 3,872 lb/acre of plant growth a year in a normal year, from 2,985 lb/acre in a poor year to 4,758 lb/acre in a good one, across the 100% of your plot that USDA rates.



BY SOIL MAP UNIT (NORMAL YEAR)

Maddock-Egeland sandy loams, coteau, 2 to 6 percent slopes	28%	3,300 lb/acre
Marysland loam, 0 to 1 percent slopes, occasionally flooded	15%	6,160 lb/acre
Buse-Barnes loams, 9 to 20 percent slopes	14%	3,314 lb/acre
Lanona-Swenoda sandy loams, 2 to 6 percent slopes	12%	3,349 lb/acre

This is the total yearly growth of all plants the soil can support when the range is in good condition (USDA's "potential" production, in air-dry pounds), not what is growing there now. Not all of it is forage animals will eat, and overgrazed, burned or weed-invaded land produces less. Use it as a starting point and check the local NRCS ecological site description.

10. Ecological site and forage group USDA NRCS SOIL SURVEY

NRCS ECOLOGICAL SITE AND FORAGE GROUP

NRCS classes the main soil here as Sandy (R102DY009SD).

RANGELAND ECOLOGICAL SITE · covers about 100% of your plot

Sandy	R102DY009SD	47%
Loamy	R102DY010SD	18%
Linear Meadow	R102DY002SD	14%
Limy Subirrigated	R102DY006SD	10%
Thin Upland	R102DY012SD	9%

FORAGE SUITABILITY GROUP · covers about 100% of your plot

Loam	G102AY100SD	31%
Droughty Loam	G102AY120SD	17%
Sand	G102AY300SD	16%
Wet	G102AY900SD	13%
Subirrigated	G102AY700SD	11%

An ecological site is NRCS's name for a kind of land, by the plants it naturally supports ("P.Z." is the precipitation zone in inches). Its description lists the expected plants, the production in good condition and the stocking rate NRCS recommends. Look an ID up in NRCS's ecological site catalogue or ask the local NRCS office. A forage suitability group sorts soils by how well they grow cultivated pasture and hay.

The class describes the soil's natural plant community, not what the land is used for now: farmland can sit on a prairie site. Shares are by soil map unit and are approximate, and the survey fills these records in unevenly across the country, so a missing group says nothing about the land.

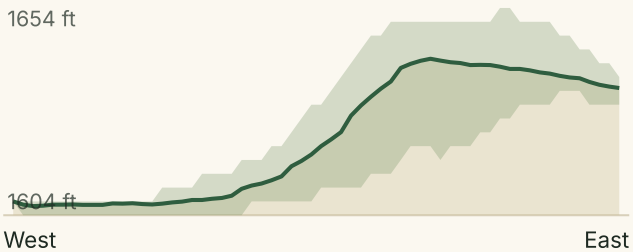
11. Terrain AWS TERRAIN TILES

TERRAIN WITHIN THE AREA

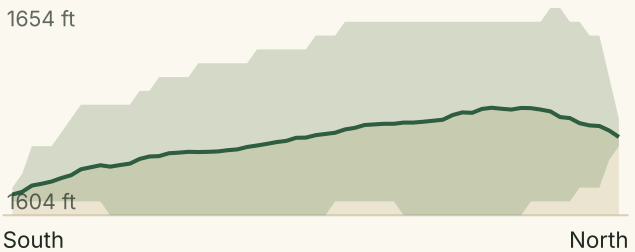
Elevation (min / mean / max)	1604 ft / 1624 ft / 1654 ft
Slope at the site	5.8%
Mean slope / steepest 10%	4% / 9.2%
Area steeper than 15%	0%
Dominant slope direction	W

LAND SHAPE

HEIGHT, WEST TO EAST



HEIGHT, SOUTH TO NORTH



The line is the average height at each position, and the shaded band is the lowest to the highest ground there. Both profiles use the same height scale, so they can be compared. The vertical scale is stretched to make the shape visible.

HOW STEEP THE GROUND IS



Flat (under 3%) 49% Gentle (3–8%) 37% Moderate (8–15%) 14% Steep (15–25%) 0%

Very steep (over 25%) 0%

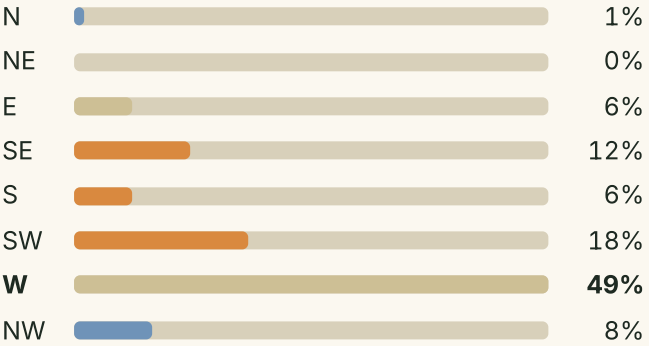
The largest share of the ground is **flat** (under 3%): easy for any machinery. The class limits are common rules of thumb for machinery and erosion, not a legal or engineering standard.

WHICH WAY THE SLOPING GROUND FACES



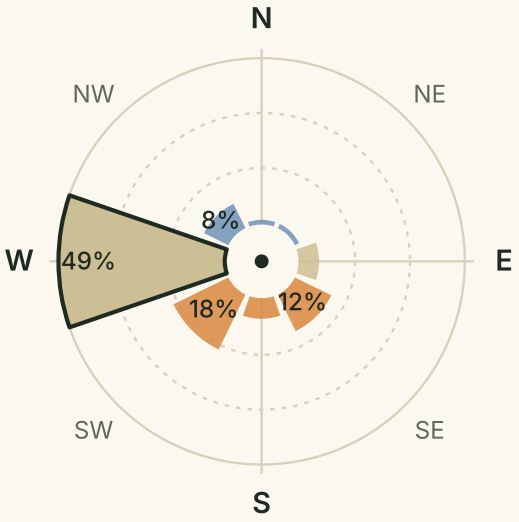
Sunnier side 36% East and west 55%

Shadier side 9%



Share of the sloping ground (steeper than 3%). In the northern hemisphere the sun sits in the south, so slopes facing south are warmer and dry out sooner, while slopes facing north are cooler and hold frost longer.

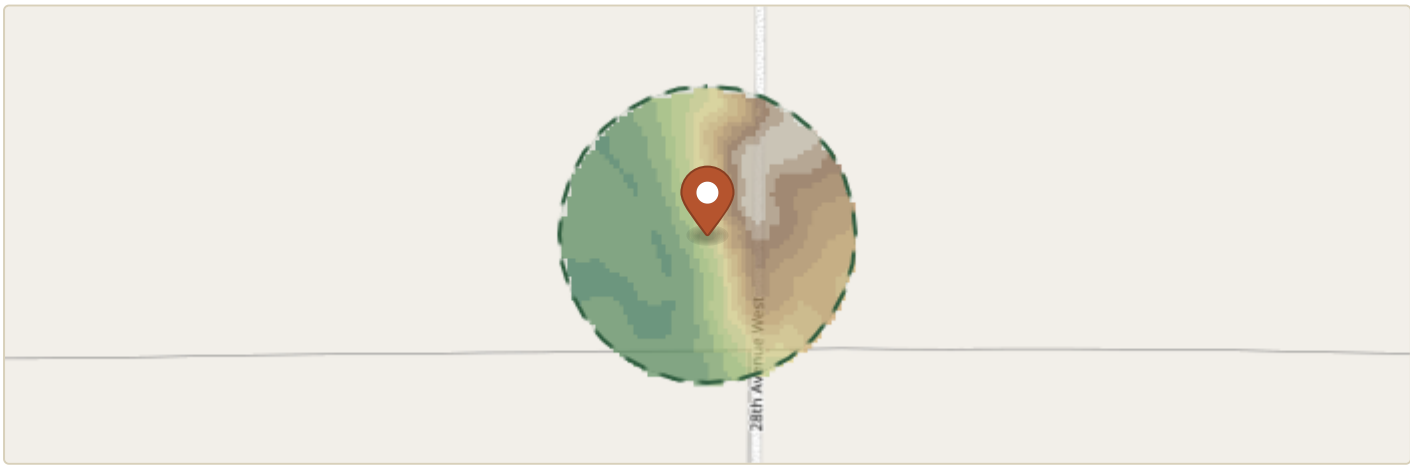
SLOPE DIRECTIONS ON A COMPASS



Sunnier side East and west Shadier side

Longer petals mean more of the sloping ground faces that way.

Elevation

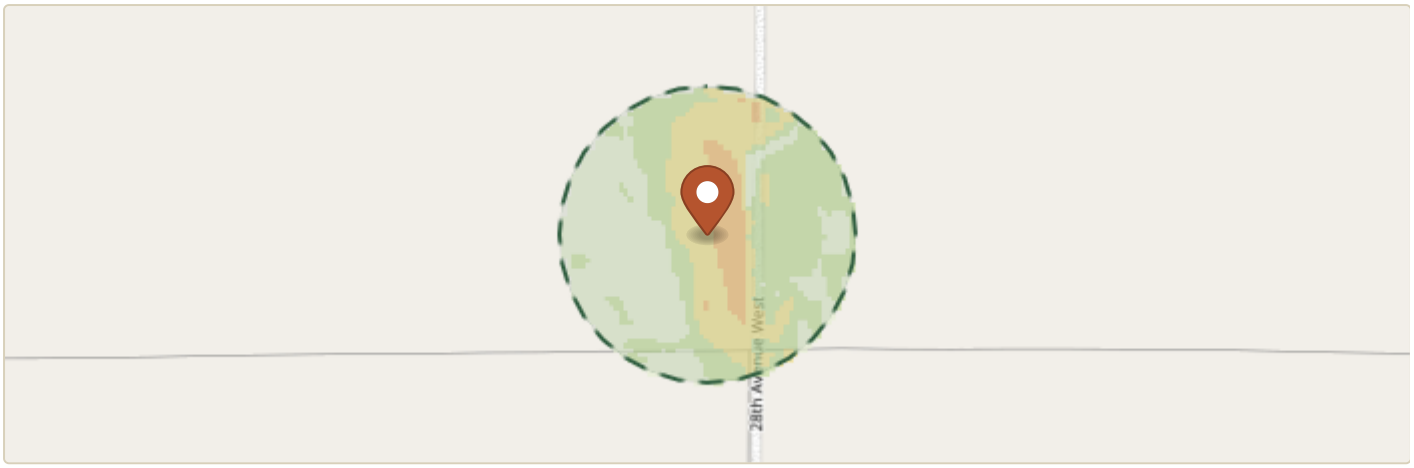


ELEVATION (METERS ABOVE SEA LEVEL)

489 m 493 m 497 m 500 m 504 m

Low to high, left to right.

Slope



SLOPE (HOW STEEP THE GROUND IS)

Flat (under 2%) Gentle (2–5%) Moderate (5–10%) Sloping (10–15%) Steep (15–25%)

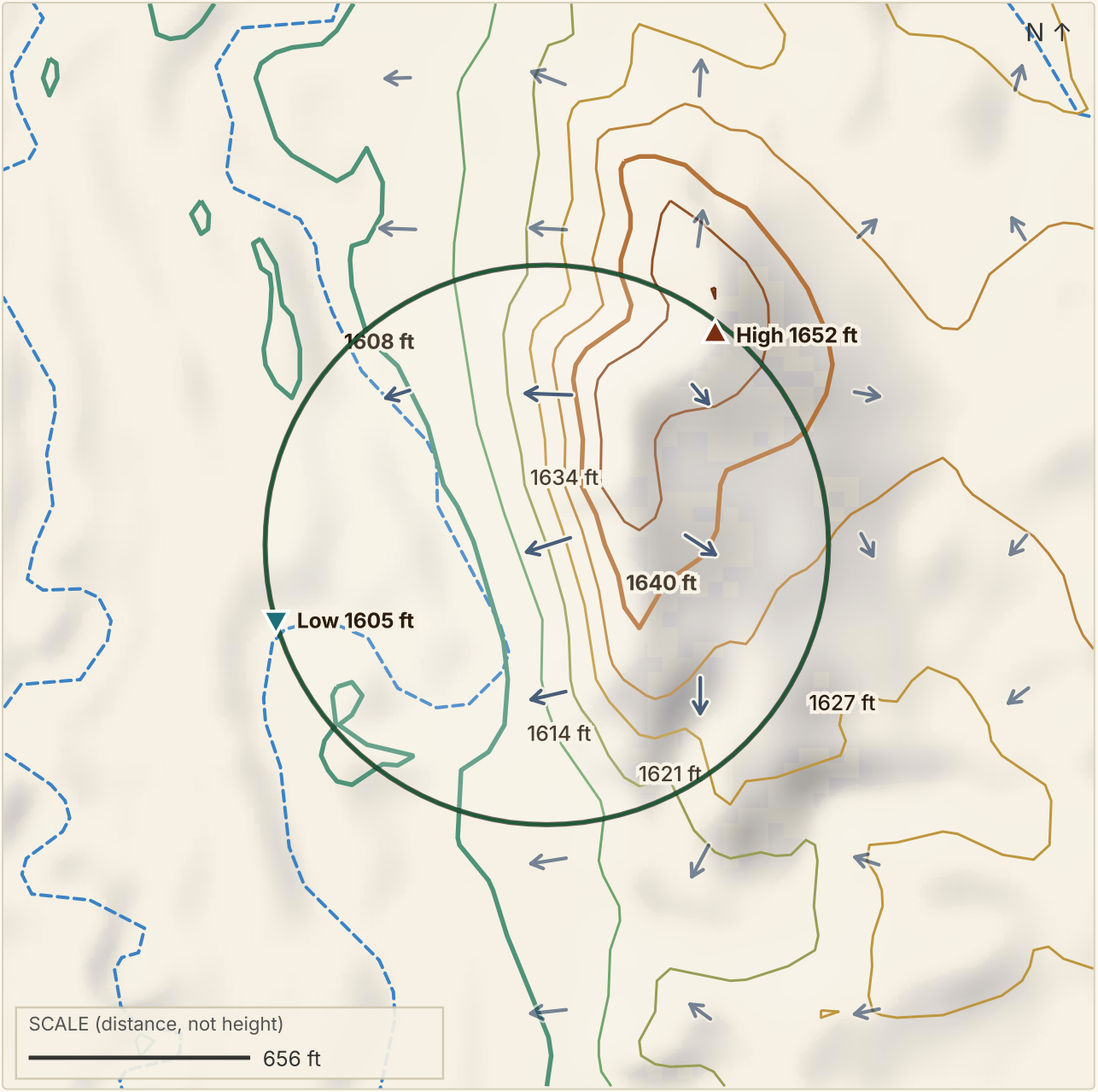
Very steep (over 25%)

Machinery gets harder to use above about 15%.

Map data © OpenStreetMap contributors. The dashed outline is the analyzed area.

CONTOUR MAP

Contour lines every 6.6 ft (2 m): the ground here runs from about 1601 ft to 1654 ft across the plot and its surroundings.



Lower, 1601 ft — Higher, 1654 ft

— Water: ponds and lakes filled, streams and ditches as lines (USGS)

↑ Downhill (a longer arrow is steeper) ▲▼ Highest and lowest ground on the plot

The colour of a line shows its height, from blue-green (lowest ground shown) to dark brown (highest). Thin lines are every 7 ft of height and thick lines every fifth; heights are written on several lines. Light and shadow show the shape of the ground, lit from the north-west. The green outline is your plot.

The ground here varies little: the highest and lowest points shown differ by only 52 ft, so the colours are stretched over a small range and a change of colour is a small change in height.

Drawn from the same elevation tiles as the terrain figures above (about 15 to 30 m detail), a model of the ground and not a survey. Small ditches, banks and ridges do not show. For building, drainage or terracing, ask a surveyor, or for lidar contours where they exist, the USGS 3DEP program.

12. Frost pockets and cold air

AWS TERRAIN TILES | AGLAND PROFILE FROST-POCKET INDEX

Where cold air pools, from the shape of the ground

FROST POCKETS AND COLD AIR

No frost pocket indicated **The shape of the ground around the plot does not point to a frost pocket.**

Plot average height	1624 ft
Average height within 1.5 km	1617 ft
Lowest and highest ground within 1.5 km	1598 ft to 1690 ft
Share of the ground that is lower	63%
Sides with ground 10 m or more higher	1 of 8
Sides with ground 10 m or more lower	0 of 8

- The plot is about level with the average of the ground within 1.5 km.
- Ground at least 10 m higher lies on 1 of 8 sides, and at least 10 m lower on 0 of 8.
- 63% of the ground within 1.5 km is lower than the plot.

Frost can still come on the open ground; the frost dates are in the climate section and the year-by-year history shows the late and early frosts of the past thirty years.

An AgLand Profile reading of the shape of the ground from the same elevation tiles as the terrain section (about 15 to 30 m detail), not a temperature measurement. Walk the ground on a still, clear, cold morning, or ask neighbors where frost lingers, before you plant frost-sensitive crops.

Climate and weather

13. Climate

ERA5 CLIMATE REANALYSIS (SCIENTIFIC MODEL)

ERA5 reanalysis, 1991–2020

IN PLAIN WORDS

Winters are very cold: in a typical year the coldest night is about -21 °F, with frost on about 156 days. Summers are warm, with the hottest month averaging a daytime high of 82 °F and about 20 days a year above 86 °F.

You get a moderate amount of rain, about 28.2 in a year, and it is heaviest in June. Summers are dry: plants and soil lose much more water than falls as rain, so most crops will need irrigation in summer. The frost-free growing season lasts about 158 days (roughly 5 months). The heat total is moderate.

Hardiness zone: A scale of how cold winters get. A higher number means milder winters.
Growing degree days: A running total of useful heat. More means crops grow and ripen faster.

HARDINESS ZONE

4b

Mean yearly minimum -20.7 °F; coldest in 30 years -33.7 °F

GROWING DEGREE DAYS

1,441

Base 10 °C, Apr–Oct. Winkler class II; Huglin 1,926

FROST-FREE SEASON

158 d

Apr 28 to Oct 7 (8 in 10 years: 147–179 d)

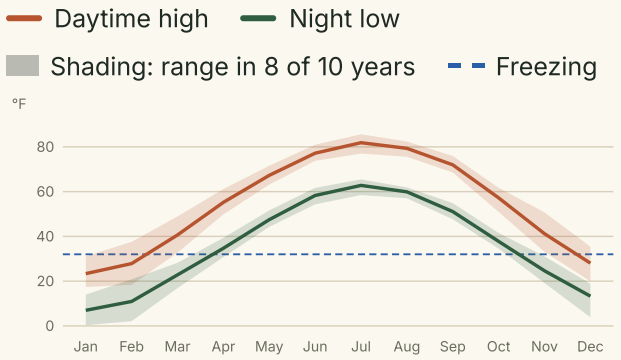
WINTER CHILL

892 h

Hours between 0 and 7.2 °C (662–1,098 in 8 of 10 winters)

Temperature by month

Hottest month: July, high 81.9 °F and low 62.8 °F. Coldest: January, high 23.4 °F and low 7.0 °F.



Rain and evaporation

Annual rain, the dry spell and the month-by-month water balance are in section 16, Rainfall and water balance ↓

Seasons

The year laid out month by month (it starts in January): how warm days and nights are, and when the hot, cool and frost-free seasons fall. Hot season 2.3 months, cool season 5.9 months.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average daytime high	23°	28°	41°	55°	67°	77°	82°	79°	72°	57°	41°	28°
Average night low	7°	11°	23°	35°	47°	58°	63°	60°	51°	38°	25°	13°

Blue underline: average night low below 36 °F, so frost is likely that month.

Hot season (average high above 79 °F) — Jun 23 to Aug 30

Cool season (average high below 55 °F) — Oct 20 to Apr 16

Frost-free season (typical year) — Apr 28 to Oct 7 (158 days)

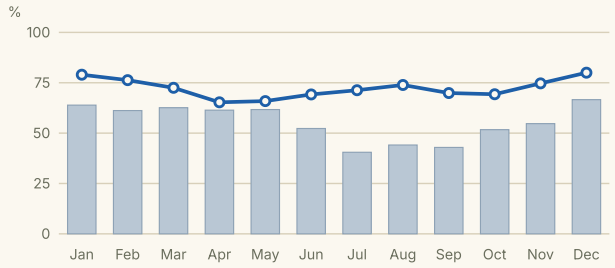
Lighter ends of the green bar show how far the first and last frost dates shift between years (8 in 10 years fall inside).

Cloud cover and humidity

Average cloud cover and relative humidity for each month. More cloud means less sun; humid air in the warm season favors plant disease. Warm-season humidity averages 69%.

Cloud cover, share of the sky (year average 55%)

Relative humidity, moisture in the air (year average 72%)

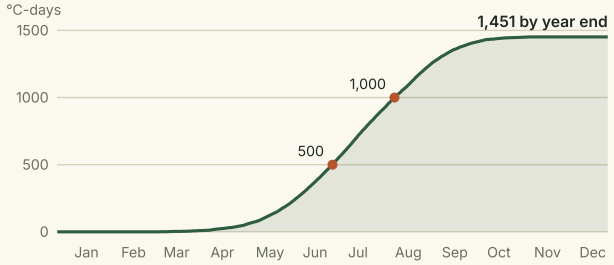


Growing degree days

Each day's heat above 10 °C, added up through the year: 1,451 °C-days, 1,441 of them in the Apr–Oct growing season. More means crops grow and ripen faster.

Running total of useful heat (average of 30 years)

Milestones: 500 and 1,000 °C-days



Frost and heat

The share of years with a late hard frost and the days at or above 95 °F are rated in section 21, Natural hazards ↓

Frost days per year	156
Days at or above 86 °F	19.6
Data grid	44.25, -96.75

Reanalysis is a 25 km grid and smooths local extremes. Frost pockets and hot spots on a single field can differ.

Which crops suit this climate ↓ See section 32 for every crop, factor by factor.

14. Climate year by year

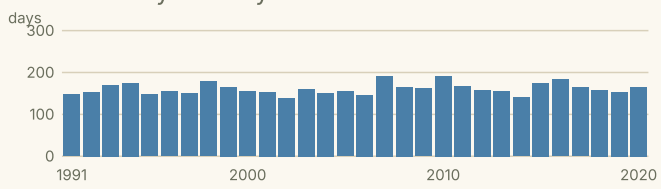
ERA5 CLIMATE REANALYSIS (SCIENTIFIC MODEL)

Thirty years, one year at a time

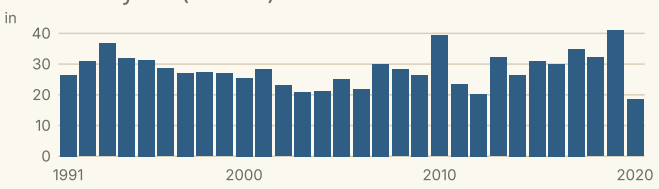
CLIMATE YEAR BY YEAR

The frost-free season ranged from 139 to 192 days over 30 years (1991 to 2020). Annual rain ranged from 18.5 in to 40.9 in.

Frost-free days each year

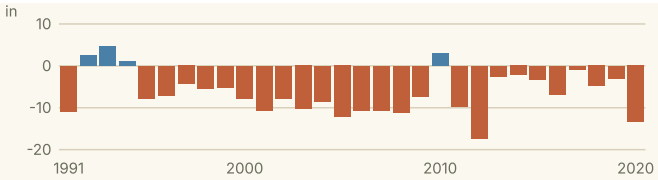


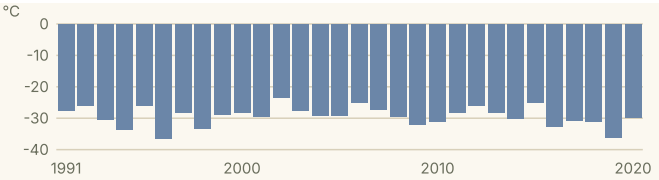
Rain each year (inches)



Warm-season water balance each year: rain minus the water plants use (inches); below zero is a deficit

Coldest night each year (°C)





Last spring frost	Apr 11 (earliest) to May 19 (latest)
First autumn frost	Sep 19 (earliest) to Oct 24 (latest)
Driest year	2020: 18.5 in
Wettest year	2019: 40.9 in
Years with a day at 35 °C or more	11 of 30
Years noticeably drier than average in the warm season	11 of 30

From the ERA5 daily record for the grid cell around the plot, 1991–2020. A frost is a night below 0 °C. The averages elsewhere in this report hide this spread: plan for the late-frost and dry years, not only the typical one. Reanalysis is a model of the weather, not a weather station on your land.

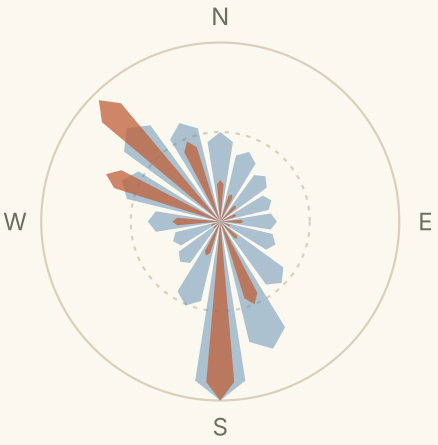
15. Wind and exposure

ERA5 CLIMATE REANALYSIS (SCIENTIFIC MODEL)

Hourly wind, 10 years

WIND AND EXPOSURE

Winds average 10 mph and blow mostly from the S. Gusts of 37 mph or more occur on about 36 days a year.



Blue: share of all hours from each direction. Red: hours at 19 mph or more.

Average wind	10 mph
Windiest month	Apr (11 mph)
Calmest month	Aug (8 mph)
Hours a year at 19 mph or more	472
Days a year with a gust of 37 mph+	35.9
Days a year with a gust of 56 mph+	0.6
Strongest gust in 10 years	58 mph

This is a windy place. Wind dries soil and crops, can damage tall or tree crops and flowers, carries soil, and is hard on young animals and on spraying. A windbreak on the S side is the usual remedy.

ERA5 hourly wind at 10 m for the grid cell around the plot, 2011–2020; directions are where the wind blows from. It is a model, not a measurement on your land.

Water

16. Rainfall, water balance and irrigation outlook

OPENSTREETMAP

ERA5 CLIMATE REANALYSIS (SCIENTIFIC MODEL) AGLAND PROFILE IRRIGATION OUTLOOK

IN PLAIN WORDS

Rainfall is moderate (28.2 in a year), but what matters is the balance with evaporation. Here that balance is close to even (aridity index 0.74). Rain alone is often enough for many crops.

Big Sioux River is 2.1 mi away, and the sea is 886.7 mi away. Access to water is rated medium.

Aridity index: Yearly rain divided by the water lost to evaporation and plant use. Below 0.5 is dry, above 0.65 is humid.

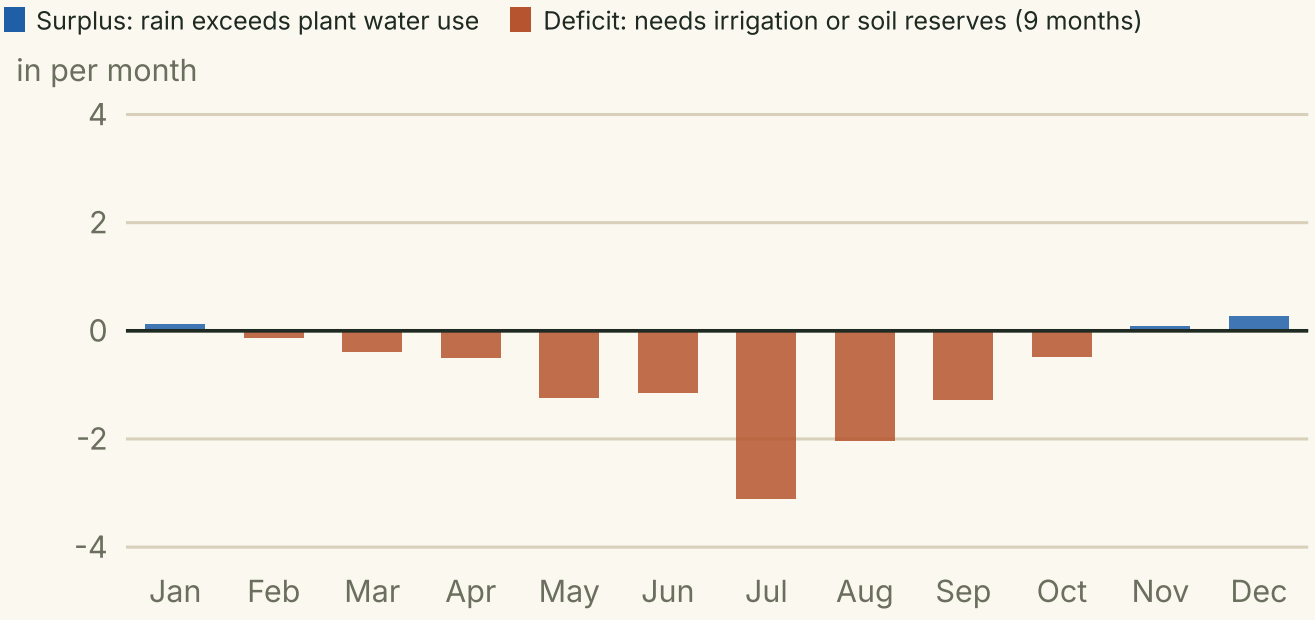
RAINFALL AND DRYNESS

Annual rain	28.2 in
Warm-season water balance	-6.3 in
Longest dry spell (yearly average)	24 days

Aridity index (rain ÷ water lost) **0.74**



MONTH BY MONTH: RAIN MINUS WATER LOST



A negative water balance in the warm season means crops usually need irrigation or stored soil water.

Which crops suit this rainfall ↓ See section 32 for every crop, factor by factor.

17. Soil moisture

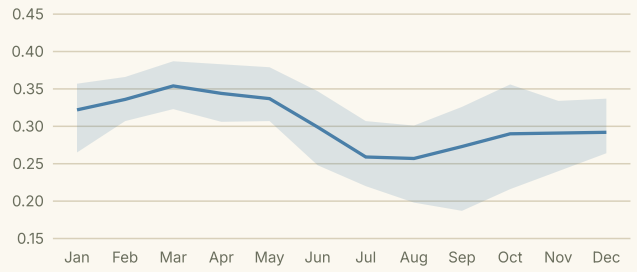
ERA5 CLIMATE REANALYSIS (SCIENTIFIC MODEL)

Shallow and deeper soil layers, 10 years

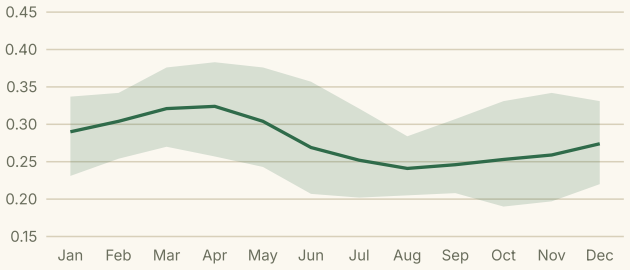
SOIL MOISTURE THROUGH THE YEAR

The deeper soil is driest in Aug (24% water by volume) and wettest in Apr (32%). In the warm season it holds between 21% in the driest year of ten and 34% in the wettest.

Shallow layer, 0 to 7 cm (water as a share of soil volume)



Deeper layer, 28 to 100 cm



The warm-season deep soil water differs a lot from one year to the next, so dry years are a real risk here: rain in the growing season matters more than the average suggests, and irrigation or drought-tolerant crops are worth considering.

The line is the monthly average over 2011–2020; the shaded band runs from the drier tenth to the wetter tenth of years. ERA5 soil moisture is a model for the grid cell and the soil type it assumes, not a measurement in your soil: read the shape across the year and the spread between years, not the exact percentage. For the water your soil can hold, see the USDA soil survey.

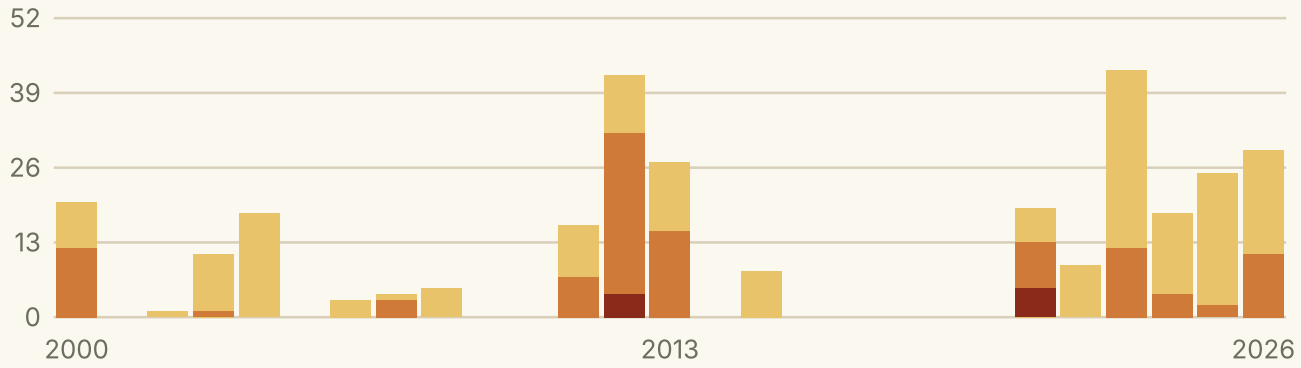
18. Drought history US DROUGHT MONITOR

Weekly county drought maps since 2000

DROUGHT HISTORY

Since 2000, at least a quarter of Brookings County, SD has been in drought (moderate or worse) in 21.3% of weeks, in severe drought or worse in 8% and in extreme drought or worse in 0.6%. The worst year for severe drought was 2012, with 32 weeks.

Weeks each year with at least a quarter of the county in moderate (light), severe (medium) or extreme (dark) drought or worse



The latest map (2026-09-29) puts 87% of the county in moderate drought or worse and 0% in severe drought or worse; 100% is abnormally dry or worse.

From the US Drought Monitor, 1,396 weekly maps for Brookings County (2000 to 2026). It is made for counties and regions, not single fields, and describes drought, not the water in your soil; past drought does not forecast the next. The climate section and the year-by-year history show the weather at the plot itself, and the soil moisture section the soil.

19. Water: proximity, streams and ponds OPENSTREETMAP USGS NATIONAL HYDROGRAPHY DATASET

Rivers, canals and lakes by distance, and mapped streams, ditches, ponds and marshes

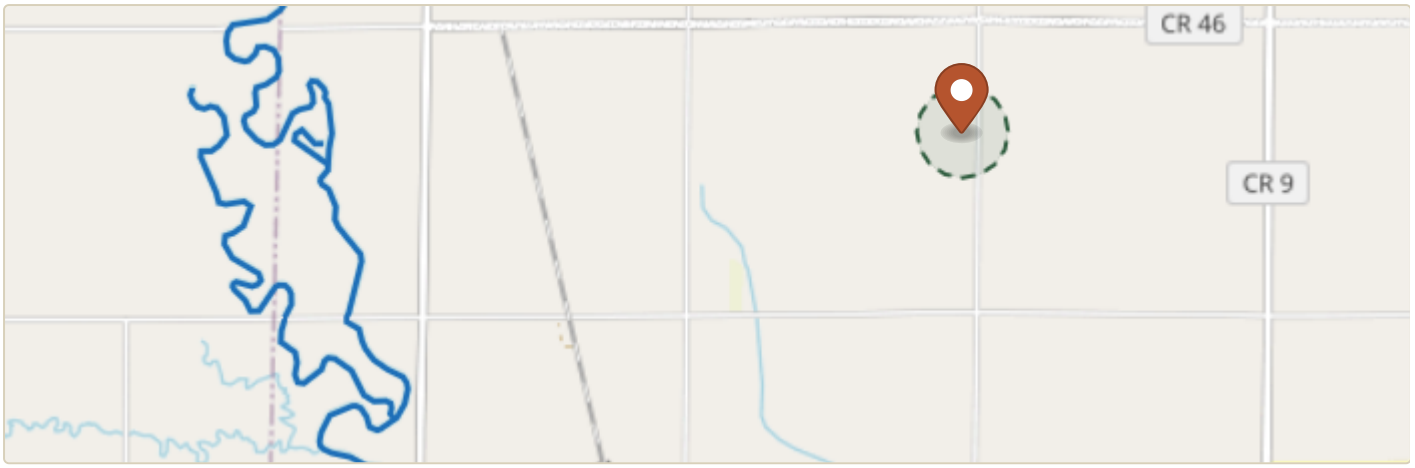
PROXIMITY TO WATER MEDIUM

Nearest mapped river, canal or lake within 6.2 mi, measured from the area's center. High is 2 km or less, Medium up to 10 km, otherwise Low (indicative bands). See them on the map above.

Big Sioux River	river	2.1 mi
Unnamed river	river	2.2 mi
Unnamed water	water	2.4 mi
Coast	sea	886.7 mi

0 mapped rivers and canals cross the analyzed area. Satellite moisture maps are not included in this report, so how wet the land is right now is not shown.

Water sources



River Canal Lake or reservoir shore

Map data © OpenStreetMap contributors. The dashed outline is the analyzed area.

STREAMS, PONDS AND DITCHES

About 1946 ft of mapped stream, ditch or canal runs across the plot (1946 ft intermittent).

Nearest perennial stream	none mapped within 1 km
Streams and ditches within 1 km	5 intermittent

Stream kinds: perennial stream (flows all year); intermittent stream (flows part of the year); ephemeral stream (flows only after storms); canal or ditch. Intermittent and ephemeral streams are often dry when you visit.

From the USGS National Hydrography Dataset, drawn from aerial photographs and older maps: small streams, new ponds and ditches can be missing or have moved. A stream, pond or marsh on or near a plot can bring wetland, setback, flood or permit rules for building, clearing, grazing and drainage, and a mapped stream gives no right to use its water (see the wetlands and flood sections, and ask the state water agency about water rights).

20. Wetlands US FISH AND WILDLIFE SERVICE NWI ESA WORLDCOVER

WETLANDS

3.8% of your plot (about 1.9 acres) is mapped as wetland.

Freshwater marsh or wet meadow (emergent wetland) · PEM1A	3.8%

OPEN WATER (PONDS, LAKES, STREAMS)

River or stream · R4SBC	1.2%
Nothing mapped as wetland or water	95%

The wetland map for this area was drawn from aerial photographs taken in 1984 (color-infrared, 1:58,000).

> These photographs are about 42 years old. Wetlands may have been drained, built on, restored or newly formed since, so check the ground.

This is a map, not a legal wetland delineation. Wetlands can limit building, draining, clearing and farming and often need a permit, and a wetland that is not on the map can still be regulated. Only the Army Corps of Engineers (or NRCS for farm programs) can say officially whether land is a regulated wetland. Shares are measured on a grid of points over your plot, so they are accurate to a few percent.

WETLANDS: ESA WORLDCOVER SATELLITE MAP VS NATIONAL WETLANDS INVENTORY

ESA WorldCover is a worldwide 10 m satellite classification for 2021 that sees wet vegetation. The National Wetlands Inventory is the US Fish and Wildlife Service's map of wetlands and deep water, drawn by interpreters from aerial photographs.

MEASURE	SATELLITE LAND COVER (ESA WORLDCOVER)	NATIONAL WETLANDS INVENTORY REPORT GOES BY THIS	
Wetland on the plot	0%	3.8%	Close
Open water on the plot	0%	1.2%	Close
Map date	2021	photos from 1984	

Satellite land cover (0%) and the National Wetlands Inventory (3.8%) agree on how much of the plot is wetland. The report goes by National Wetlands Inventory.

Risks

21. Natural hazards

FEMA FLOOD MAP · GLOFAS RIVER MODEL (SCIENTIFIC MODEL) · USGS EARTHQUAKES · AGLAND PROFILE RATING BANDS

Indicative ratings from AgLand Profile's own bands

FEMA FLOOD ZONE

Medium

11.6% of your plot is in the 100-year floodplain.

1% annual chance flood zone (100-year floodplain) · zone A	11.6%
0.2% annual chance flood zone (500-year floodplain) · zone X	1.7%
Minimal flood hazard (zone X) · zone X	86.6%

Map sheet: 46011C0430D (countywide map, printed). Map effective 2025-04-23.

These are FEMA's official flood zones, the ones lenders and insurers use. Zone X means outside the mapped 100-year floodplain, not no risk. A flood map shows river, coastal and lake flooding as it was studied, and often misses small streams and local drainage. The shares are measured on a grid of points over your plot, so they are accurate to a few percent. This report is not a flood zone determination. For a purchase, ask the county floodplain administrator for a flood determination for the exact parcel.

FLOOD RISK: FEMA FLOOD MAP VS RIVER-FLOW MODEL

FEMA's National Flood Hazard Layer is the official map of flood zones, drawn from engineering studies. The river model (GloFAS, through Open-Meteo) is a coarse global estimate from 30 years of river flow and is not an official map.

MEASURE	FEMA FLOOD MAP (OFFICIAL) REPORT GOES BY THIS	RIVER MODEL (GLOFAS, NOT AN OFFICIAL MAP)	
Flood risk rating	medium	low	Differs
What it found	11.6% in the 100-year floodplain	no significant river in the model cell	
As of	effective 2025	30-year river flow	

FEMA's map shows where flooding is officially mapped from engineering studies, so the report goes by it. The river model is a coarse global estimate from river flow: it can point to risk where no zone is mapped, and it misses local ponding and small streams. Zone X does not mean no risk. Ask the county floodplain administrator about flood history. The report goes by FEMA flood map (official).

IN PLAIN WORDS

The main concern is late spring frost. Worth watching: flooding (FEMA flood map). Flooding is taken from FEMA's flood map; the other indicators are not based on official hazard maps.

Flooding (FEMA flood map)

Medium

Low **Medium** High

11.6% of your plot is in FEMA's 1% annual chance flood zone (the 100-year floodplain), and a further 1.7% in the 0.2% (500-year) zone

Map effective 2025-04-23. Zone X means outside the mapped 100-year floodplain, not no risk. River-model indicator, not an official map: no significant river in the model cell (rated low).

Source: FEMA National Flood Hazard Layer; river model: GloFAS via Open-Meteo

Drought and dryness

Low

Low Medium High

Aridity index 0.74 (annual rain ÷ evapotranspiration)

Warm-season water balance -161 mm; longest dry spell about 24 days per year; annual rain 539–894 mm in 8 of 10 years.

Source: ERA5 via Open-Meteo, 1991–2020

Extreme heat

Low

Low Medium High

1.1 days per year at or above 35 °C

19.6 days per year at or above 30 °C. Reanalysis smooths local extremes, so real peaks are usually higher.

Source: ERA5 via Open-Meteo, 1991–2020

Late spring frost

High

Low Medium **High**

100% of years with a hard frost (−2 °C or lower) after 1 April

156 frost days per year on average. Local cold-air pockets are not resolved at 25 km.

Source: ERA5 via Open-Meteo, 1991–2020

Strong wind

Low

Low Medium High

1 days per year with daily maximum wind at or above 50 km/h

Strongest daily maximum in 30 years: 68 km/h. Reanalysis underestimates gusts.

Source: ERA5 via Open-Meteo, 1991–2020

Earthquakes

Low

Low Medium High

0 earthquakes of magnitude 4.5+ within 200 km since 1976

0 of magnitude 5+ within 100 km. Largest within 200 km: magnitude 4.3 (1982).

Source: USGS Earthquake Catalog

Soil erosion

Low

Low | Medium | High

Rain erosivity low, gentle ground, moderately erodible topsoil

Modified Fournier Index 75 (low). Mean slope 4%, 0% of the area steeper than 15%. Topsoil silt 46%, organic matter 4.3%. Bare or tilled slopes erode much faster than grass or trees.

Source: Derived from ERA5 rain, elevation tiles and SoilGrids (indicative bands)

Landslide

Data not available

Data not available for assessment

Worth checking locally: ask the geological survey or the local authority about past slope failures.

Wildfire

Data not available

Data not available for assessment

Hail

Data not available

Data not available for assessment

Worth asking local growers and insurers about hail history.

22. Pest and disease

ERA5 CLIMATE REANALYSIS (SCIENTIFIC MODEL) AGLAND PROFILE MODEL

Weather-based indicator, not observed presence

IN PLAIN WORDS

Weather here gives medium disease pressure: about 558 hours per warm season are humid and mild enough for fungi to thrive. Warm, humid spells happen often enough that fungal diseases will need watching in wet years. This is an indicator from the weather, not a count of actual pests or disease on the ground.

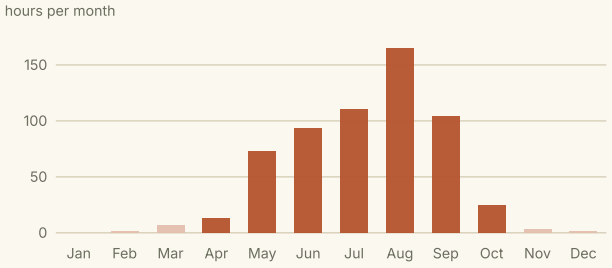
Leaf wetness: Hours when the air is humid and mild enough for leaves to stay damp, which is when fungal diseases spread.

Leaf-wetness hours by month

Hours per month with relative humidity at 90% or above and 10 to 30 °C, a general proxy for fungal disease pressure.

Warm season (Apr–Oct), counted in the total

Other months



DISEASE PRESSURE

558 h

Medium

Low Medium High

Per warm season (Apr–Oct). Bands: under 300 h Low, under 800 h Medium, otherwise High (indicative). Crop-specific models (mildews, scab, blight) and pest records are not included in this report.

Which crops cope with this disease pressure ↓ See section 32 for every crop, factor by factor.

PEST TIMING, IN AN AVERAGE YEAR

Insects develop with warmth, not with the calendar. This lists, for nine common pests, the date in an average year when this plot has collected the degree days (above 50 °F, 10 °C, from January 1) at which each stage is usually seen. It tells you when to start looking, not whether the pest is here.

PEST AND WHAT IT ATTACKS	STAGE	DEGREE DAYS °F	AVERAGE YEAR
Codling moth apples, pears, walnuts Look for: moths caught in pheromone traps, then eggs	First moths	150	May 15
	Eggs laid	250	May 25
	Peak moth emergence	500	Jun 12
	Second-generation moths	1,150	Jul 14
	Second-generation peak	1,600	Aug 3
Flea beetles brassicas, potatoes, eggplant Look for: tiny shot-holes in young leaves	Adults active	150 to 200	May 15 to May 20
Imported cabbageworm cabbage, broccoli, kale Look for: white butterflies laying eggs	Butterflies fly	150 to 240	May 15 to May 24
Colorado potato beetle potatoes, tomatoes, eggplant Look for: small larvae on the underside of leaves	First larvae (1st instar)	185	May 18
	Fourth instar larvae	400	Jun 6
	Pupae in the soil	675	Jun 21

PEST AND WHAT IT ATTACKS	STAGE	DEGREE DAYS °F	AVERAGE YEAR
European corn borer corn, peppers, potatoes, beans Look for: moths in flight, then egg masses on leaves	First spring moths	375	Jun 4
	First eggs	450	Jun 9
	Peak spring moths	631	Jun 19
	First summer moths	1,400	Jul 24
	Summer egg hatch	1,550	Jul 31
	Peak summer moths	1,733	Aug 9
Apple maggot apples, hawthorn, cherries Look for: flies on yellow sticky traps	First flies	900	Jul 2
	First egg laying	1,100	Jul 11
	Peak emergence	1,600	Aug 3
Japanese beetle grapes, soybeans, corn silks, fruit trees Look for: adult beetles feeding on leaves	Adults appear	900 to 1,200	Jul 2 to Jul 16
Squash vine borer squash, pumpkins, cucumbers Look for: orange-and-black moths, eggs at stem bases	Egg laying	900 to 1,000	Jul 2 to Jul 7
Corn rootworm corn, soybeans (variant) Look for: adult beetles on silks and in fields	Adult beetles	1,300	Jul 20

Thresholds are the University of Wisconsin-Madison Extension's published values for common insect pests, so another state's extension may use different ones. Real timing shifts by weeks with the weather; the climate data is a 25 km grid; the degree-day sum has no upper temperature cutoff, so it runs a little high in hot summers; and pests whose counting starts at a trap catch are not included. For spray timing, ask a local extension office.

23. Crop disease risk

ERA5 CLIMATE REANALYSIS (SCIENTIFIC MODEL) AGLAND PROFILE MODEL

Optional · how often the climate favors ten common crop diseases

CROP DISEASE RISK

For the crops you chose, the climate favors none of the screened diseases most of the season. Of the ten diseases screened, the climate here favors brown rot, late blight, downy mildew of grape, fusarium head blight (scab), white mold on at least 60% of the susceptible months.

DISEASE	CROPS	SUSCEPTIBLE SEASON, AND MONTHS THE CLIMATE FAVORS IT	RISK
Gray leaf spot of maize *Cercospora zeae-maydis* Rectangular gray lesions that cut leaf area, worst in warm, humid summers.	**Maize (corn)**		Medium
Brown rot *Monilinia* Blossom blight and fruit rot, worst when warm weather is wet near bloom and ripening.	Peaches and nectarines, Apples		High
Late blight *Phytophthora infestans* Leaves and tubers or fruit rot quickly in cool, wet weather.	Potatoes, Tomatoes		High
Downy mildew of grape *Plasmopara viticola* Yellow oily patches on leaves and rotting clusters after warm, wet spells.	Wine grapes, Table grapes		High
Fusarium head blight (scab) *Fusarium graminearum* Bleached grain heads and toxin-contaminated grain when flowering is warm and wet.	Wheat (winter), Barley		High
White mold *Sclerotinia sclerotiorum* Cottony rot on stems and pods under a cool, damp, closed canopy.	Soybeans, Common beans, Green beans, Sunflower		High
Apple scab *Venturia inaequalis* Dark scabby spots on leaves and fruit, worst in wet springs.	Apples, Pears		Medium
Fire blight *Erwinia amylovora* Blossoms and shoots blacken and die; spreads in warm, damp weather at bloom.	Apples, Pears		Medium
Early blight *Alternaria solani* Brown ringed spots on older leaves in warm, humid weather.	Tomatoes, Potatoes		Medium

DISEASE	CROPS	SUSCEPTIBLE SEASON, AND MONTHS THE CLIMATE FAVORS IT	RISK
Powdery mildew of grape *Erysiphe necator* White powder on leaves and fruit; likes humid, mild weather without long wet spells.	Wine grapes, Table grapes, Cucumbers, Melons	J F M A M J J A S O N D	Low

Red months are in the crop's susceptible season and have the monthly average temperature and leaf-wetness hours the disease likes; pale months are in the season but the weather does not favor it; dashed months are outside the season.

An AgLand Profile screening, not a forecast and not a count of disease on the ground. It uses the 30-year monthly average temperature and the hours a month with leaf wetness (humidity of 90% or more at 10 to 30 °C) from ERA5, against infection conditions in university extension guides, simplified to monthly averages. Real outbreaks depend on the weather of a particular year, the variety, the spray program and nearby inoculum. The risk rating is the share of susceptible months that favor the disease: 60% or more high, 25% or more medium, otherwise low. Ask your extension office for the disease forecasts and thresholds they use locally.

24. Contamination and neighbors

US EPA · USGS WIND TURBINE DATABASE

Registered sites and industrial neighbors nearby

CONTAMINATION AND NEIGHBORS

No Superfund site within 5.0 mi, brownfield or toxic release facility within 1.9 mi, or wind turbine within 5.0 mi is on record.

Searched: Superfund sites within 5.0 mi, brownfields and toxic release facilities within 1.9 mi, wind turbines within 5.0 mi. Wind turbines are listed as neighbors (sight, noise, shadow flicker and lease questions), not as contamination.

These are records from EPA's Facility Registry Service and the USGS wind turbine database. A mapped site is a record, not a finding about your land, and none mapped is not a clearance: unreported contamination, old dumps, spills, and farm chemical or fuel storage are not in these registers, and a site's point can be some distance from the site itself. Before buying, a Phase I environmental site assessment by a qualified professional is the usual check, and the seller or the county can say what the land was used for in the past.

Nature and protected land

25. Public and protected land USGS PAD-US

PUBLIC AND PROTECTED LAND

No public or protected land is recorded on your plot. The nearest is Wetlands Reserve Program (WRP), Brookings, SD, about 1.7 mi W of it.

NEARBY, NOT ON YOUR PLOT (WITHIN 1.9 MI)

Wetlands Reserve Program (WRP), Brookings, SD · Easement over land someone else owns 1.7 mi W
Conservation Easement · managed by NRCS · over private land · Closed to the public · protected for nature, managed · whole unit 234 acres

Source: PAD-US 4.1 from the US Geological Survey, a compiled inventory of public parks, forests, refuges and easements. Boundaries come from many agencies and are approximate, and some land is missing or out of date, so "none recorded" is not "none". "Open access" does not mean you may cross neighboring private land to reach it, and the inventory shows no private parcels, roads or rights of way. Shares are measured on a grid of points over your plot, so they are accurate to a few percent.

26. Protected species habitat US FISH AND WILDLIFE SERVICE

PROTECTED SPECIES HABITAT

No critical habitat is mapped on your plot or within 5 km of it.

This is the federal map of areas designated, or proposed, as critical habitat for species listed under the Endangered Species Act. It does not show where a species actually lives: a plot outside any critical habitat can still hold a protected species, and state-listed species and nests of protected birds are not on it. Boundaries are generalized, designations change, and habitat along streams may be drawn as narrow strips, so confirm any question with USFWS. Federal law also prohibits harming a listed species wherever it lives, whether or not the land is designated, so a clear map is not a clearance. The US Fish and Wildlife Service's online tool IPaC (Information for Planning and Consultation) is the official way to check a site.

27. Wildlife sightings GBIF

WILDLIFE SIGHTINGS

233 kinds of birds and mammals were reported within 3.1 mi of your plot, 2016 to 2026 (9,404 sightings).

Birds: 226 species, 9,333 sightings. Most reported: American Robin (341), Canada Goose (canadensis Group) (331), Red-winged Blackbird (323), Common Grackle (293), Mallard (238).

Mammals: 7 species, 71 sightings. Most reported: fox squirrel (40), eastern cottontail (15), cat (7), big brown bat (4), Virginia opossum (3).

> Another 238 records for the same area and years were left out because the observer licensed them for non-commercial use only, or stated no license. This report is sold, so those are not counted. The real total is higher.

Records come from: EOD – eBird Observation Dataset (9,277, records licensed CC0 or CC BY); iNaturalist Research-grade Observations (123, records licensed CC0 or CC BY); Birda - Global Observation Dataset (4, records licensed CC0 or CC BY). Summarized by AgLand Profile (counts by species and group). Licenses: CC BY 4.0 and CC0. Cite as: GBIF.org (2 October 2026) GBIF Occurrence Search.

These are sightings that people chose to report, mostly by bird watchers using eBird, so they show where people look, not what lives there. A place that is rarely visited looks empty and a popular one looks rich, and common species are reported more than rare or hidden ones. This is not a species list for your plot and says nothing about hunting, game numbers or the absence of any species. For protected species, ask the state wildlife agency.

Rules, rights and value

28. Land values and rents USDA NASS

State and county averages from USDA surveys, never a valuation

LAND VALUES AND RENTS

In South Dakota, USDA's 2025 average farm real estate value was $6,600 an acre, cropland $8,000 and pasture $2,400.

South Dakota average value, dollars an acre (USDA NASS)

YEAR	ALL FARM REAL ESTATE	CROPLAND	PASTURE
2021	$5,000	$6,000	$2,000
2022	$5,400	$6,500	$2,100
2023	$5,800	$7,000	$2,200
2024	$6,200	$7,500	$2,300
2025	$6,600	$8,000	$2,400

All farm real estate: +32% from 2021 to 2025.

Brookings County, South Dakota average cash rent, dollars an acre a year (USDA NASS)

YEAR	NON-IRRIGATED CROPLAND	IRRIGATED CROPLAND	PASTURE
2021	$180	not published	not published
2022	$190	not published	$31
2023	$200	not published	$32
2024	$210	not published	$33
2025	$220	not published	$34

The South Dakota average in 2025: non-irrigated cropland $172, pasture $29.

These are survey averages for farmland in the whole state or county, to compare an asking price or rent with. They are not a valuation, an appraisal or a comparable sale of this land: its soil, water, access, buildings, size and location make it worth more or less. Ask a local appraiser or rural real estate agent.

This product uses the NASS API but is not endorsed or certified by NASS.

29. Local rules and permits: who to ask

US CENSUS BUREAU

AGLAND PROFILE LIST OF WHO TO ASK

Zoning, permits, floods and water rights: the offices that decide

WHO DECIDES WHAT YOU CAN DO HERE

No public map settles these questions. Each line names who decides, and a line is marked when something in this report points to it.

Zoning and land use

Ask: The planning or zoning department of Brookings County, SD, and the city or township if the plot lies inside one.

Zoning decides what may be built or done on the land: houses and extra homes, farm buildings, livestock numbers, splitting the land, short-term rentals, solar or wind. It is set county by county and city by city, and no national map shows it, so this report does not.

Search: Brookings County, SD planning and zoning

Wetlands, streams and drainage Relevant here

In this report: the Wetlands Inventory maps 3.8% of the plot as wetland; USGS maps about 593 m of stream or ditch on the plot.

Ask: The Army Corps of Engineers district office for federal permits, your state's environmental or natural-resources agency, and the local USDA service center for farm-program wetland rules.

Filling, draining or clearing wetlands, or working in or near streams and ponds, can need a federal or state permit, and farm-program payments can depend on wetland rules. Whether a particular area counts as a wetland is decided on site by a trained delineator, not by a map.

Army Corps of Engineers: Regulatory Request System · EPA: Clean Water Act section 404 permits · US Fish and Wildlife Service: National Wetlands Inventory · Find your USDA service center (NRCS and FSA)

Floodplain rules and flood insurance Relevant here

In this report: 11.6% of the plot is in FEMA's 1% annual chance flood zone.

Ask: The floodplain administrator of Brookings County, SD, and an insurance agent.

Building in a mapped flood zone usually needs a local permit and can require flood insurance with a mortgage. The county's floodplain administrator can say what applies to a particular spot, and the FEMA map in this report shows its own map date.

FEMA Flood Map Service Center · Search: Brookings County, SD floodplain administrator

Water rights, wells and irrigation permits

Ask: South Dakota Department of Agriculture and Natural Resources, Water Rights Program, and the local office or district in Brookings County.

South Dakota treats the right to use water as a separate property right, dated and ranked by seniority, that can be sold, leased or lost if unused. Owning the land does not by itself give a right to water from a stream, ditch or well. Ask whether any water right, well permit or irrigation district membership comes with the land, whether it is in good standing and whether it can be transferred. This report shows rain, soil moisture and mapped water, not a right to use any of it.

Search: South Dakota Department of Agriculture and Natural Resources, Water Rights Program

30. Rights, restrictions and programs AGLAND PROFILE CHECKLIST

What a report cannot tell you, and who can

BEFORE YOU BUY: ASK ABOUT

None of this is in any public dataset a report can read. A real estate attorney or title company answers it for the parcel being sold; this is a checklist, not legal advice.

Title and liens

Ask: A title company or a real estate attorney.

A title search shows who owns the land and what is recorded against it: mortgages, liens, judgments, unpaid taxes. A drawn plot is not a parcel, so the search is for the parcel the seller is actually selling.

Search: Brookings County, SD recorder of deeds

Easements and rights of way

Ask: The title commitment, a surveyor, and the county recorder.

Neighbors, utilities, pipelines, drainage districts or the public may hold recorded rights to cross or use part of the land, and those rights stay with it. A road beside the plot is not the same as a recorded right to use it.

Search: Brookings County, SD recorder of deeds

Mineral, oil, gas, wind and solar rights

Ask: A real estate attorney and the county recorder.

These rights are often sold or leased separately from the surface. Ask whether they come with the land, whether any lease is in force, and what the holder may do on the surface.

Search: Brookings County, SD recorder of deeds

Leases and who uses the land now

Ask: The seller, and an attorney.

A farm lease, grazing permit, hunting lease or tower lease can continue after a sale. Ask who farms or uses the land today, on what terms and until when, and whether any government program payments are tied to it.

Find your USDA service center (NRCS and FSA)

Conservation easements, program contracts and deed restrictions

Ask: The title commitment, the local USDA service center and any land trust named in it.

Land can be bound by a conservation easement, a Conservation Reserve Program contract or a covenant that limits plowing, building, draining or dividing it. These do not show on any map used here unless a public-land inventory records them.

FSA: Conservation Reserve Program · Find your USDA service center (NRCS and FSA)

Boundaries and acreage

Ask: A licensed land surveyor.

The outline in this report is the one that was drawn, not a surveyed boundary, and the acreage here can differ from the deed. A survey settles fences, corners and encroachments.

Property taxes and special assessments

Ask: The assessor and treasurer of Brookings County, SD.

Ask the current tax bill and any special assessments (drainage, irrigation, roads). Some states tax farmland at its farm-use value and charge back taxes if the use changes, so ask what applies if the plan differs from today's use.

Search: Brookings County, SD county assessor property tax

Environmental history

Ask: An environmental consultant (a Phase I environmental site assessment).

Records show only what was reported. A Phase I assessment looks at the land's past use and at neighbors' for contamination, and lenders often ask for one. Nearby sites listed in this report are records, not findings.

ORGANIC, CONSERVATION AND CARBON PROGRAMS

Organic production Relevant here

In this report: The USDA crop map for 5 recent years shows the plot mostly in crops, hay or fallow in 5 of them; it shows what grew, not what was sprayed.

Ask: An organic certifier, and the seller's field records.

USDA organic rules require that no prohibited substances were applied to the land for three years before the first organic harvest. This report cannot show what was applied; the seller's records and a certifier decide. A buyer can ask when each field last received any prohibited input.

USDA: organic standards · USDA Organic Integrity Database (certifiers and operations)

Conservation and carbon programs

Ask: The local USDA service center, and any carbon program you are considering.

Conservation programs and private carbon markets pay for practices such as cover crops, reduced tillage and grazing management. Whether a plot qualifies, and what it pays, depends on its farming history, on whether it is already enrolled and on the program's rules for that year. Nothing in this report establishes eligibility or a payment.

NRCS: Environmental Quality Incentives Program · FSA: Conservation Reserve Program · Find your USDA service center (NRCS and FSA)

What the land can produce

31. Pasture and grazing capacity

ERA5 CLIMATE REANALYSIS (SCIENTIFIC MODEL) SOILGRIDS (SCIENTIFIC MODEL) USDA NRCS RANGELAND PRODUCTION AGLAND PROFILE MODEL AGLAND PROFILE ESTIMATE

Two estimates of how many animals the land could carry: AgLand Profile's climate model, and USDA's rangeland production

PASTURE AND CARRYING CAPACITY

Good pasture potential



Pasture should grow well through much of the year. Expect roughly 5 to 15 acres for each cow with calf, more if irrigated.

Indicative only. Local agricultural extension services publish real stocking rates for your soil and rainfall.

USDA's own soil data gives a second estimate, compared with this one, further down this section ↓

WHAT DRIVES IT

Water for grass (dryness)		0.74
Growing season length		158 days
Heat for growth		1,441 °C-days
Soil pH		6.9

GRAZING CAPACITY FROM USDA SOILS (ANIMAL UNIT MONTHS)

In a normal year, about 11 acres for each cow with calf kept year-round, or about 4.4 cow-calf pairs on the 50 acres of your plot that USDA rates.

	PLANT GROWTH USDA NRCS	AREA PER ANIMAL UNIT MONTH AGLAND PROFILE ESTIMATE	ANIMAL UNIT MONTHS A YEAR AGLAND PROFILE ESTIMATE	COW-CALF PAIRS YEAR-ROUND AGLAND PROFILE ESTIMATE
Poor year	2,985 lb/acre	1.2 acres	41	3.4
Normal year	3,872 lb/acre	0.9 acres	53	4.4
Good year	4,758 lb/acre	0.8 acres	65	5.4

What this assumes. An animal unit is a 1,000 lb cow with calf. NRCS counts 30 lb of air-dry forage a day for it, which is 913 lb in a month, and that is one animal unit month. Only 25% of the year's plant growth is counted as eaten. That is the starting point NRCS recommends for rangeland grazed through the season: the "take half, leave half" rule removes about half the growth, but half of that is trampled, spoiled or lost. With well-managed rotational grazing specialists use up to about 35% for the preferred plants (the numbers above would be about 40% higher), and 15% for poor-quality plants (about 40% lower).

This is AgLand Profile's own arithmetic on USDA's production figure, not a USDA number, a stocking plan or a forecast. It describes only the part of the plot USDA rates (100%), counts natural range in good condition (not hay or irrigated pasture), and ignores water, fencing, terrain, season of use and the poisonous or unpalatable plants. Real stocking rates come from a range specialist or your NRCS office, who use the ecological site description for the soil. This is not a grazing plan: stocking a pasture at a number from any table can overgraze it, and the local NRCS or Extension office can set a rate for the actual plant community and season.

HOW THE TWO ESTIMATES COMPARE

From USDA soil data (this section)
about 11 acres per cow with calf for a year

From the AgLand Profile climate model (the estimate above, in this section)
4.9 acres to 15 acres per cow with calf

> The two estimates agree. They come from different routes (what USDA measured on this soil, and what water, season and heat the climate gives), so agreement makes the figure more believable.

32. Which crops suit this land

ERA5 CLIMATE REANALYSIS (SCIENTIFIC MODEL) SOILGRIDS (SCIENTIFIC MODEL) AGLAND PROFILE MODEL

Factor by factor, against every crop in the catalog

For each factor, the crops whose best range includes this land's value ("ideal"), the ones that can tolerate it, and the ones it does not suit. Ranges are indicative, pending agronomist review.

Which crops suit this soil

Topsoil pH This land: 6.9

Ideal for **74** of 83 crops · tolerable for 8 · not suited to 1

Wheat (winter) Barley Oats Rye Maize (corn) Rice Sorghum Soybeans Chickpeas Lentils Field peas Faba beans Common beans Sunflower Rapeseed (canola) Cotton Sugar beet Hemp Hops Onions Garlic Carrots Lettuce Cabbage Broccoli Cauliflower Peppers Cucumbers Zucchini and squash Eggplant Spinach Peas (garden) Green beans Sweet corn Pumpkins Asparagus Artichokes Beetroot Melons Apples Pears Cherries Peaches and nectarines Plums Apricots Olives Figs Pomegranates Persimmons Blackberries Currants Wine grapes Table grapes Lemons Oranges Mandarins Grapefruit Avocado Mango Bananas Almonds Walnuts Hazelnuts Pistachios Pecans Lavender Basil Rosemary Thyme Mint Saffron Alfalfa (lucerne) Clover pasture Ryegrass pasture

Maize (corn) ideal 6 to 7.2 Good

EVERY CROP FOR THIS FACTOR, BY CATEGORY

IDEAL (74)

Cereals: Wheat (winter), Barley, Oats, Rye, Maize (corn), Rice, Sorghum

Legumes: Soybeans, Chickpeas, Lentils, Field peas, Faba beans, Common beans

Oilseeds and industrial: Sunflower, Rapeseed (canola), Cotton, Sugar beet, Hemp, Hops

Vegetables: Onions, Garlic, Carrots, Lettuce, Cabbage, Broccoli, Cauliflower, Peppers, Cucumbers, Zucchini and squash, Eggplant, Spinach, Peas (garden), Green beans, Sweet corn, Pumpkins, Asparagus, Artichokes, Beetroot, Melons

Tree fruit: Apples, Pears, Cherries, Peaches and nectarines, Plums, Apricots, Olives, Figs, Pomegranates, Persimmons

Berries: Blackberries, Currants

Vines: Wine grapes, Table grapes

Citrus: Lemons, Oranges, Mandarins, Grapefruit

Tropical fruit: Avocado, Mango, Bananas

Nuts: Almonds, Walnuts, Hazelnuts, Pistachios, Pecans

Herbs and spices: Lavender, Basil, Rosemary, Thyme, Mint, Saffron

Fodder and pasture: Alfalfa (lucerne), Clover pasture, Ryegrass pasture

TOLERABLE (8)

Oilseeds and industrial: Peanuts

Vegetables: Tomatoes, Potatoes, Sweet potatoes

Tree fruit: Kiwifruit

Berries: Strawberries, Raspberries

Nuts: Chestnuts

▶ **Not suited (1)** · show the crops this land does not suit

Topsoil sand content This land: 27%

Ideal for **65** of 83 crops · tolerable for 18 · not suited to 0

Wheat (winter) Barley Oats Rye Maize (corn) Rice Sorghum Soybeans Chickpeas Lentils

Field peas · Faba beans · Common beans · Sunflower · Rapeseed (canola) · Cotton · Sugar beet · Hemp · Tomatoes · Lettuce · Cabbage · Broccoli · Cauliflower · Peppers · Cucumbers · Zucchini and squash · Eggplant · Spinach · Peas (garden) · Green beans · Sweet corn · Pumpkins · Artichokes · Beetroot · Apples · Pears · Cherries · Peaches and nectarines · Plums · Apricots · Olives · Figs · Pomegranates · Persimmons · Raspberries · Blackberries · Currants · Wine grapes · Table grapes · Lemons · Oranges · Mandarins · Grapefruit · Avocado · Mango · Bananas · Almonds · Walnuts · Hazelnuts · Pecans · Basil · Mint · Alfalfa (lucerne) · Clover pasture · Ryegrass pasture

Maize (corn) ideal 20% to 65% Good

EVERY CROP FOR THIS FACTOR, BY CATEGORY

IDEAL (65)

Cereals: Wheat (winter), Barley, Oats, Rye, Maize (corn), Rice, Sorghum

Legumes: Soybeans, Chickpeas, Lentils, Field peas, Faba beans, Common beans

Oilseeds and industrial: Sunflower, Rapeseed (canola), Cotton, Sugar beet, Hemp

Vegetables: Tomatoes, Lettuce, Cabbage, Broccoli, Cauliflower, Peppers, Cucumbers, Zucchini and squash, Eggplant, Spinach, Peas (garden), Green beans, Sweet corn, Pumpkins, Artichokes, Beetroot

Tree fruit: Apples, Pears, Cherries, Peaches and nectarines, Plums, Apricots, Olives, Figs, Pomegranates, Persimmons

Berries: Raspberries, Blackberries, Currants

Vines: Wine grapes, Table grapes

Citrus: Lemons, Oranges, Mandarins, Grapefruit

Tropical fruit: Avocado, Mango, Bananas

Nuts: Almonds, Walnuts, Hazelnuts, Pecans

Herbs and spices: Basil, Mint

Fodder and pasture: Alfalfa (lucerne), Clover pasture, Ryegrass pasture

TOLERABLE (18)

Oilseeds and industrial: Peanuts, Hops

Vegetables: Potatoes, Onions, Garlic, Carrots, Asparagus, Sweet potatoes, Melons

Tree fruit: Kiwifruit

Berries: Blueberries, Strawberries

Nuts: Pistachios, Chestnuts

Herbs and spices: Lavender, Rosemary, Thyme, Saffron

Not suited (0): every crop tolerates this value.

Which crops suit this climate

Hardiness zone This land: 4b

Ideal for **56** of 83 crops · tolerable for 8 · not suited to 19

Wheat (winter) · Barley · Oats · Rye · Maize (corn) · Rice · Sorghum · Soybeans · Chickpeas · Lentils · Field peas · Faba beans · Common beans · Sunflower · Rapeseed (canola) · Peanuts · Cotton · Sugar beet · Hemp · Hops · Tomatoes · Potatoes · Onions · Garlic · Carrots · Lettuce · Cabbage · Broccoli · Cauliflower · Peppers · Cucumbers · Zucchini and squash · Eggplant · Spinach · Peas (garden) · Green beans · Sweet corn · Pumpkins · Asparagus · Beetroot · Sweet potatoes · Melons · Apples · Pears

Plums Blueberries Strawberries Raspberries Currants Walnuts Hazelnuts Basil Mint Alfalfa (lucerne) Clover pasture Ryegrass pasture

Maize (corn) ideal 3a to 12a Good

EVERY CROP FOR THIS FACTOR, BY CATEGORY

IDEAL (56)

Cereals: Wheat (winter), Barley, Oats, Rye, Maize (corn), Rice, Sorghum

Legumes: Soybeans, Chickpeas, Lentils, Field peas, Faba beans, Common beans

Oilseeds and industrial: Sunflower, Rapeseed (canola), Peanuts, Cotton, Sugar beet, Hemp, Hops

Vegetables: Tomatoes, Potatoes, Onions, Garlic, Carrots, Lettuce, Cabbage, Broccoli, Cauliflower, Peppers, Cucumbers, Zucchini and squash, Eggplant, Spinach, Peas (garden), Green beans, Sweet corn, Pumpkins, Asparagus, Beetroot, Sweet potatoes, Melons

Tree fruit: Apples, Pears, Plums

Berries: Blueberries, Strawberries, Raspberries, Currants

Nuts: Walnuts, Hazelnuts

Herbs and spices: Basil, Mint

Fodder and pasture: Alfalfa (lucerne), Clover pasture, Ryegrass pasture

TOLERABLE (8)

Tree fruit: Cherries, Peaches and nectarines, Apricots

Berries: Blackberries

Nuts: Chestnuts

Herbs and spices: Lavender, Thyme, Saffron

▶ **Not suited (19)** · show the crops this land does not suit

---

Hottest-month mean high This land: 82 °F

Ideal for **56** of 83 crops · tolerable for 22 · not suited to 5

Wheat (winter) Maize (corn) Rice Sorghum Soybeans Chickpeas Common beans Sunflower Peanuts Cotton Hemp Tomatoes Onions Peppers Cucumbers Zucchini and squash Eggplant Green beans Sweet corn Pumpkins Asparagus Artichokes Sweet potatoes Melons Apples Pears Cherries Peaches and nectarines Plums Apricots Olives Figs Pomegranates Persimmons Kiwifruit Blackberries Wine grapes Table grapes Lemons Oranges Mandarins Grapefruit Avocado Mango Bananas Almonds Walnuts Chestnuts Pecans Lavender Basil Rosemary Thyme Mint Saffron Alfalfa (lucerne)

Maize (corn) ideal 75 °F to 90 °F Good

EVERY CROP FOR THIS FACTOR, BY CATEGORY

IDEAL (56)

Cereals: Wheat (winter), Maize (corn), Rice, Sorghum

Legumes: Soybeans, Chickpeas, Common beans

Oilseeds and industrial: Sunflower, Peanuts, Cotton, Hemp

TOLERABLE (22)

Cereals: Barley, Oats, Rye

Legumes: Lentils, Field peas, Faba beans

Oilseeds and industrial: Rapeseed (canola), Sugar beet, Hops

Vegetables: Potatoes, Garlic, Carrots, Cabbage, Beetroot

Vegetables: Tomatoes, Onions, Peppers, Cucumbers, Zucchini and squash, Eggplant, Green beans, Sweet corn, Pumpkins, Asparagus, Artichokes, Sweet potatoes, Melons

Tree fruit: Apples, Pears, Cherries, Peaches and nectarines, Plums, Apricots, Olives, Figs, Pomegranates, Persimmons, Kiwifruit

Berries: Blackberries

Vines: Wine grapes, Table grapes

Citrus: Lemons, Oranges, Mandarins, Grapefruit

Tropical fruit: Avocado, Mango, Bananas

Nuts: Almonds, Walnuts, Chestnuts, Pecans

Herbs and spices: Lavender, Basil, Rosemary, Thyme, Mint, Saffron

Fodder and pasture: Alfalfa (lucerne)

Berries: Blueberries, Strawberries, Raspberries, Currants

Nuts: Hazelnuts, Pistachios

Fodder and pasture: Clover pasture, Ryegrass pasture

▶ **Not suited (5)** · show the crops this land does not suit

---

Growing degree days (base 10 °C, warm season) This land: 1,441

Ideal for **60** of 83 crops · tolerable for 4 · not suited to 19

Wheat (winter) Barley Oats Rye Soybeans Chickpeas Lentils Field peas Faba beans Common beans Sunflower Rapeseed (canola) Sugar beet Hemp Hops Tomatoes Potatoes Onions Garlic Carrots Lettuce Cabbage Broccoli Cauliflower Peppers Cucumbers Zucchini and squash Eggplant Spinach Peas (garden) Green beans Sweet corn Pumpkins Asparagus Artichokes Beetroot Apples Pears Cherries Peaches and nectarines Plums Apricots Blueberries Strawberries Raspberries Blackberries Currants Wine grapes Walnuts Hazelnuts Chestnuts Lavender Basil Rosemary Thyme Mint Saffron Alfalfa (lucerne) Clover pasture Ryegrass pasture

Maize (corn) ideal 1,500 to 3,200 Marginal

EVERY CROP FOR THIS FACTOR, BY CATEGORY

IDEAL (60)

Cereals: Wheat (winter), Barley, Oats, Rye

Legumes: Soybeans, Chickpeas, Lentils, Field peas, Faba beans, Common beans

Oilseeds and industrial: Sunflower, Rapeseed (canola), Sugar beet, Hemp, Hops

Vegetables: Tomatoes, Potatoes, Onions, Garlic, Carrots, Lettuce, Cabbage, Broccoli, Cauliflower, Peppers, Cucumbers, Zucchini and squash, Eggplant, Spinach, Peas (garden), Green beans, Sweet corn, Pumpkins, Asparagus, Artichokes, Beetroot

Tree fruit: Apples, Pears, Cherries, Peaches and nectarines, Plums, Apricots

Berries: Blueberries, Strawberries, Raspberries, Blackberries, Currants

Vines: Wine grapes

TOLERABLE (4)

Cereals: Maize (corn), Sorghum

Tree fruit: Kiwifruit

Vines: Table grapes

Nuts: Walnuts, Hazelnuts, Chestnuts

Herbs and spices: Lavender, Basil, Rosemary, Thyme, Mint, Saffron

Fodder and pasture: Alfalfa (lucerne), Clover pasture, Ryegrass pasture

▶ **Not suited (19)** · show the crops this land does not suit

---

Frost-free season (days) This land: 158 days

Ideal for **66** of 83 crops · tolerable for 2 · not suited to 15

Wheat (winter) Barley Oats Rye Maize (corn) Rice Sorghum Soybeans Chickpeas Lentils Field peas Faba beans Common beans Sunflower Rapeseed (canola) Peanuts Sugar beet Hemp Hops Tomatoes Potatoes Onions Garlic Carrots Lettuce Cabbage Broccoli Cauliflower Peppers Cucumbers Zucchini and squash Eggplant Spinach Peas (garden) Green beans Sweet corn Pumpkins Asparagus Beetroot Sweet potatoes Melons Apples Pears Cherries Peaches and nectarines Plums Apricots Persimmons Kiwifruit Blueberries Strawberries Raspberries Blackberries Currants Walnuts Hazelnuts Chestnuts Lavender Basil Rosemary Thyme Mint Saffron Alfalfa (lucerne) Clover pasture Ryegrass pasture

Maize (corn) ideal 130 days or more Good

EVERY CROP FOR THIS FACTOR, BY CATEGORY

IDEAL (66)

Cereals: Wheat (winter), Barley, Oats, Rye, Maize (corn), Rice, Sorghum

Legumes: Soybeans, Chickpeas, Lentils, Field peas, Faba beans, Common beans

Oilseeds and industrial: Sunflower, Rapeseed (canola), Peanuts, Sugar beet, Hemp, Hops

Vegetables: Tomatoes, Potatoes, Onions, Garlic, Carrots, Lettuce, Cabbage, Broccoli, Cauliflower, Peppers, Cucumbers, Zucchini and squash, Eggplant, Spinach, Peas (garden), Green beans, Sweet corn, Pumpkins, Asparagus, Beetroot, Sweet potatoes, Melons

Tree fruit: Apples, Pears, Cherries, Peaches and nectarines, Plums, Apricots, Persimmons, Kiwifruit

Berries: Blueberries, Strawberries, Raspberries, Blackberries, Currants

Nuts: Walnuts, Hazelnuts, Chestnuts

Herbs and spices: Lavender, Basil, Rosemary, Thyme, Mint, Saffron

Fodder and pasture: Alfalfa (lucerne), Clover pasture, Ryegrass pasture

TOLERABLE (2)

Vines: Wine grapes, Table grapes

▶ **Not suited (15)** · show the crops this land does not suit

---

Winter chill (hours between 0 and 7.2 °C) This land: 892 h

Ideal for **79** of 83 crops · tolerable for 4 · not suited to 0

Wheat (winter) Barley Oats Rye Maize (corn) Rice Sorghum Soybeans Chickpeas Lentils Field peas Faba beans Common beans Sunflower Rapeseed (canola) Peanuts Cotton Sugar beet Hemp Hops Tomatoes Potatoes Onions Garlic Carrots Lettuce Cabbage Broccoli Cauliflower Peppers Cucumbers Zucchini and squash Eggplant Spinach Peas (garden) Green beans Sweet corn Pumpkins Asparagus Artichokes Beetroot Sweet potatoes Melons Pears Peaches and nectarines Plums Apricots Olives Figs Pomegranates Kiwifruit Blueberries Strawberries Raspberries Blackberries Wine grapes Table grapes Lemons Oranges Mandarins Grapefruit Avocado Mango Bananas Almonds Walnuts Hazelnuts Pistachios Chestnuts Pecans Lavender Basil Rosemary Thyme Mint Saffron Alfalfa (lucerne) Clover pasture Ryegrass pasture

Maize (corn) ideal any Good

EVERY CROP FOR THIS FACTOR, BY CATEGORY

IDEAL (79)

Cereals: Wheat (winter), Barley, Oats, Rye, Maize (corn), Rice, Sorghum

Legumes: Soybeans, Chickpeas, Lentils, Field peas, Faba beans, Common beans

Oilseeds and industrial: Sunflower, Rapeseed (canola), Peanuts, Cotton, Sugar beet, Hemp, Hops

Vegetables: Tomatoes, Potatoes, Onions, Garlic, Carrots, Lettuce, Cabbage, Broccoli, Cauliflower, Peppers, Cucumbers, Zucchini and squash, Eggplant, Spinach, Peas (garden), Green beans, Sweet corn, Pumpkins, Asparagus, Artichokes, Beetroot, Sweet potatoes, Melons

Tree fruit: Pears, Peaches and nectarines, Plums, Apricots, Olives, Figs, Pomegranates, Kiwifruit

Berries: Blueberries, Strawberries, Raspberries, Blackberries

Vines: Wine grapes, Table grapes

Citrus: Lemons, Oranges, Mandarins, Grapefruit

Tropical fruit: Avocado, Mango, Bananas

Nuts: Almonds, Walnuts, Hazelnuts, Pistachios, Chestnuts, Pecans

Herbs and spices: Lavender, Basil, Rosemary, Thyme, Mint, Saffron

Fodder and pasture: Alfalfa (lucerne), Clover pasture, Ryegrass pasture

TOLERABLE (4)

Tree fruit: Apples, Cherries, Persimmons

Berries: Currants

Not suited (0): every crop tolerates this value.

Late-spring frost (share of years) This land: 100%

Ideal for **0** of 83 crops · tolerable for 0 · not suited to 83

No crop in the catalog has this land value in its ideal range.

Maize (corn) ideal up to 25% Poor

EVERY CROP FOR THIS FACTOR, BY CATEGORY

IDEAL (0)

None

TOLERABLE (0)

None

▶ **Not suited (83)** · show the crops this land does not suit

---

Days at or above 35 °C per year This land: 1.1 days

Ideal for **65** of 83 crops · tolerable for 17 · not suited to 1

Wheat (winter) Barley Oats Rye Maize (corn) Rice Sorghum Soybeans Chickpeas Common beans Sunflower Rapeseed (canola) Peanuts Cotton Hemp Hops Tomatoes Peppers Cucumbers Zucchini and squash Eggplant Green beans Sweet corn Pumpkins Artichokes Sweet potatoes Melons Apples Pears Cherries Peaches and nectarines Plums Apricots Olives Figs Pomegranates Persimmons Kiwifruit Blueberries Strawberries Raspberries Blackberries Currants Wine grapes Table grapes Lemons Oranges Mandarins Grapefruit Avocado Mango Bananas Almonds Walnuts Hazelnuts Chestnuts Pecans Lavender Basil Rosemary Thyme Saffron Alfalfa (lucerne) Clover pasture Ryegrass pasture

Maize (corn) ideal up to 10 days Good

EVERY CROP FOR THIS FACTOR, BY CATEGORY

IDEAL (65)

Cereals: Wheat (winter), Barley, Oats, Rye, Maize (corn), Rice, Sorghum

Legumes: Soybeans, Chickpeas, Common beans

Oilseeds and industrial: Sunflower, Rapeseed (canola), Peanuts, Cotton, Hemp, Hops

Vegetables: Tomatoes, Peppers, Cucumbers, Zucchini and squash, Eggplant, Green beans, Sweet corn, Pumpkins, Artichokes, Sweet potatoes, Melons

Tree fruit: Apples, Pears, Cherries, Peaches and nectarines, Plums, Apricots, Olives, Figs, Pomegranates, Persimmons, Kiwifruit

Berries: Blueberries, Strawberries, Raspberries, Blackberries, Currants

Vines: Wine grapes, Table grapes

Citrus: Lemons, Oranges, Mandarins, Grapefruit

Tropical fruit: Avocado, Mango, Bananas

Nuts: Almonds, Walnuts, Hazelnuts, Chestnuts, Pecans

Herbs and spices: Lavender, Basil, Rosemary, Thyme, Saffron

Fodder and pasture: Alfalfa (lucerne), Clover pasture, Ryegrass pasture

TOLERABLE (17)

Legumes: Lentils, Field peas, Faba beans

Oilseeds and industrial: Sugar beet

Vegetables: Potatoes, Onions, Garlic, Carrots, Lettuce, Cabbage, Broccoli, Cauliflower, Peas (garden), Asparagus, Beetroot

Nuts: Pistachios

Herbs and spices: Mint

▶ **Not suited (1)** · show the crops this land does not suit

Which crops suit this rainfall

Annual rainfall This land: 28 in

Ideal for **74** of 83 crops · tolerable for 8 · not suited to 1

Wheat (winter) Barley Oats Rye Maize (corn) Sorghum Soybeans Field peas Faba beans Common beans Sunflower Rapeseed (canola) Peanuts Cotton Sugar beet Hemp Hops Tomatoes Potatoes Onions Garlic Carrots Lettuce Cabbage Broccoli Cauliflower Peppers Cucumbers Zucchini and squash Eggplant Spinach Peas (garden) Green beans Sweet corn Pumpkins Asparagus Artichokes Beetroot Sweet potatoes Melons Apples Pears Cherries Peaches and nectarines Plums Apricots Olives Figs Pomegranates Persimmons Blueberries Strawberries Raspberries Blackberries Currants Wine grapes Table grapes Lemons Oranges Mandarins Grapefruit Almonds Walnuts Hazelnuts Chestnuts Pecans Lavender Basil Rosemary Thyme Mint Alfalfa (lucerne) Clover pasture Ryegrass pasture

Maize (corn) ideal 20 in to 43 in Good

EVERY CROP FOR THIS FACTOR, BY CATEGORY

IDEAL (74)

Cereals: Wheat (winter), Barley, Oats, Rye, Maize (corn), Sorghum

Legumes: Soybeans, Field peas, Faba beans, Common beans

Oilseeds and industrial: Sunflower, Rapeseed (canola), Peanuts, Cotton, Sugar beet, Hemp, Hops

Vegetables: Tomatoes, Potatoes, Onions, Garlic, Carrots, Lettuce, Cabbage, Broccoli, Cauliflower, Peppers, Cucumbers, Zucchini and squash, Eggplant, Spinach, Peas (garden), Green beans, Sweet corn, Pumpkins, Asparagus, Artichokes, Beetroot, Sweet potatoes, Melons

Tree fruit: Apples, Pears, Cherries, Peaches and nectarines, Plums, Apricots, Olives, Figs, Pomegranates, Persimmons

Berries: Blueberries, Strawberries, Raspberries, Blackberries, Currants

Vines: Wine grapes, Table grapes

Citrus: Lemons, Oranges, Mandarins, Grapefruit

Nuts: Almonds, Walnuts, Hazelnuts, Chestnuts, Pecans

Herbs and spices: Lavender, Basil, Rosemary, Thyme, Mint

Fodder and pasture: Alfalfa (lucerne), Clover pasture, Ryegrass pasture

TOLERABLE (8)

Cereals: Rice

Legumes: Chickpeas, Lentils

Tree fruit: Kiwifruit

Tropical fruit: Avocado, Mango

Nuts: Pistachios

Herbs and spices: Saffron

▶ **Not suited (1)** · show the crops this land does not suit

Which crops cope with this disease pressure

Leaf-wetness hours (warm season) This land: 558 h

Ideal for **5** of 83 crops · tolerable for 77 · not suited to 1

Mango | Bananas | Alfalfa (lucerne) | Clover pasture | Ryegrass pasture

Maize (corn) ideal up to 450 h Marginal

EVERY CROP FOR THIS FACTOR, BY CATEGORY

IDEAL (5)

Tropical fruit: Mango, Bananas

Fodder and pasture: Alfalfa (lucerne), Clover pasture, Ryegrass pasture

TOLERABLE (77)

Cereals: Wheat (winter), Barley, Oats, Rye, Maize (corn), Rice, Sorghum

Legumes: Soybeans, Chickpeas, Lentils, Field peas, Faba beans, Common beans

Oilseeds and industrial: Sunflower, Rapeseed (canola), Peanuts, Cotton, Sugar beet, Hemp, Hops

Vegetables: Tomatoes, Potatoes, Onions, Garlic, Carrots, Lettuce, Cabbage, Broccoli, Cauliflower, Peppers, Cucumbers, Zucchini and squash, Eggplant, Spinach, Peas (garden), Green beans, Sweet corn, Pumpkins, Asparagus, Artichokes, Beetroot, Sweet potatoes, Melons

Tree fruit: Apples, Pears, Cherries, Peaches and nectarines, Plums, Apricots, Olives, Figs, Pomegranates, Persimmons, Kiwifruit

Berries: Blueberries, Strawberries, Raspberries, Blackberries, Currants

Vines: Wine grapes, Table grapes

Citrus: Lemons, Oranges, Mandarins, Grapefruit

Tropical fruit: Avocado

Nuts: Almonds, Walnuts, Hazelnuts, Chestnuts, Pecans

Herbs and spices: Lavender, Basil, Rosemary, Thyme, Mint, Saffron

▶ **Not suited (1)** · show the crops this land does not suit

33. Field shape and machinery

AWS TERRAIN TILES · ESA WORLDCOVER · AGLAND PROFILE MODEL

Optional · size, width, shape, slope and obstacles

FIELD SHAPE AND MACHINERY

Well suited **The plot's size, shape and slope suit ordinary farm machinery.**

FACTOR	THIS PLOT		WHAT IT MEANS
Size	50 acres	Good	Large enough that turning at the ends takes a small share of the work.
Narrowest width	505 m (1657 ft)	Good	Room for long passes with wide implements.
Shape	Compact	Good	A compact outline wastes little ground on corners and odd edges.
Slope	4% average, 0% steeper than 15%	Good	Gentle: suitable for most row-crop machinery.
Trees, buildings and wet ground	4.4% of the plot	Good	Little to work around.

Bands are AgLand Profile rules of thumb (size 40 acres or more good, 5 or more fair; narrowest width 120 m or more good, 60 m or more fair; average slope up to 5% good, up to 10% fair; under 5% trees, buildings and wet ground good, under 20% fair). They are not an engineering or safety standard. The right machinery depends on the crop and the operator: check slopes on the ground before using heavy equipment.

AgLand Profile models

34. Crop fit

ERA5 CLIMATE REANALYSIS (SCIENTIFIC MODEL) · SOILGRIDS (SCIENTIFIC MODEL) · AGLAND PROFILE MODEL

Optional · indicative thresholds, pending agronomist review

FIT CARD: THIS LAND VS MAIZE (CORN)

Hardiness zone 4b Good



Maize (corn) prefers 3a to 12a

Hottest-month mean high 82 °F Good



Maize (corn) prefers 75 °F to 90 °F

OVERALL

82 / 100

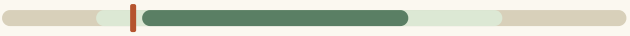
Strong fit · Confidence: medium

INSIGHTS AND MITIGATIONS

Strong on hardiness, summer heat, frost-free season, rainfall, winter chill, extreme-heat days, soil ph, soil sand.

Growing degree days (base 10 °C, warm season)

1,441 Marginal

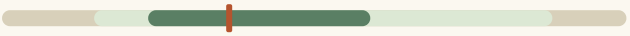


Maize (corn) prefers 1,500 to 3,200

Frost-free season (days) 158 days Good

Maize (corn) prefers 130 days or more

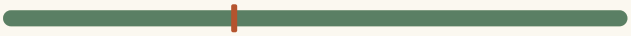
Annual rainfall 28 in Good



Maize (corn) prefers 20 in to 43 in

Winter chill (hours between 0 and 7.2 °C)

892 h Good



Maize (corn) prefers any

Late-spring frost (share of years) 100% Poor



Maize (corn) prefers up to 25%

Days at or above 35 °C per year

1.1 days Good



Maize (corn) prefers up to 10 days

Leaf-wetness hours (warm season)

558 h Marginal



Maize (corn) prefers up to 450 h

Topsoil pH 6.9 Good



Maize (corn) prefers 6 to 7.2

Topsoil sand content 27% Good



Maize (corn) prefers 20% to 65%

Ideal range · Tolerable range · This land

Each row uses a fixed scale (for example hardiness runs from zone 2 to 12).

Growing degree days: land is 1,441, below the ideal (1,500 to 3,200). Choose early-ripening cultivars or a warmer slope.

Late frost: land is 100%, above the ideal (up to 25%). Use frost protection (fans or sprinklers) or later-blooming cultivars, and avoid low-lying frost pockets.

Disease pressure: land is 558 h, above the ideal (up to 450 h). Choose disease-resistant cultivars, open the canopy, and plan a spray program or organic alternatives.

Yield depends heavily on summer water; irrigation is common where summers are dry.

What grows well on this land · all 83 crops ranked, and the best in each category

BEST IN EACH CATEGORY

Cereals	Wheat (winter)	86

TOP 15 OVERALL

Alfalfa (lucerne)	91
Wheat (winter)	86

Legumes	Common beans	86
Oilseeds and industrial	Hemp	86
Vegetables	Eggplant	86
Tree fruit	Plums	86
Berries	Blackberries	82
Vines	Wine grapes	40
Citrus	Lemons	40
Tropical fruit	Bananas	40
Nuts	Walnuts	86
Herbs and spices	Basil	86
Fodder and pasture	Alfalfa (lucerne)	91

Eggplant	86
Sweet corn	86
Hemp	86
Common beans	86
Sunflower	86
Peppers	86
Pumpkins	86
Zucchini and squash	86
Basil	86
Cucumbers	86
Ryegrass pasture	86
Clover pasture	86
Green beans	86

B marks a hard blocker. Priorities: none set · rain-fed.

ALL 83 CROPS, BEST FIT FIRST

Alfalfa (lucerne) 91 · Wheat (winter) 86 · Eggplant 86 · Sweet corn 86 · Hemp 86 · Common beans 86 · Sunflower 86 · Peppers 86 · Pumpkins 86 · Zucchini and squash 86 · Basil 86 · Cucumbers 86 · Ryegrass pasture 86 · Clover pasture 86 · Green beans 86 · Soybeans 86 · Plums 86 · Pears 86 · Walnuts 86 · Rapeseed (canola) 82 · Barley 82 · Maize (corn) 82 · Chickpeas 82 · Oats 82 · Mint 82 · Rye 82 · Hazelnuts 82 · Sorghum 82 · Apples 82 · Tomatoes 82 · Blackberries 82 · Hops 77 · Sugar beet 77 · Currants 77 · Asparagus 77 · Raspberries 77 · Faba beans 77 · Onions 77 · Thyme 77 · Beetroot 77 · Lavender 77 · Cabbage 77 · Field peas 77 · Lettuce 73 · Melons 73 · Rosemary 73 · Garlic 73 · Saffron 73 · Broccoli 73 · Cauliflower 73 · Peas (garden) 73 · Lentils 73 · Strawberries 73 · Rice 73 · Carrots 73 · Chestnuts 73 · Sweet potatoes 68 · Spinach 68 · Peanuts 68 · Artichokes 68 · Potatoes 68 · Persimmons 64 · Figs 59 · Pomegranates 59 · Pecans 59 · Wine grapes 40 · Apricots 40 · Peaches and nectarines 40 · Cherries 40 · Table grapes 40 · Cotton 40 · Blueberries 40 · Kiwifruit 40 · Olives 40 · Lemons 40 · Mandarins 40 · Bananas 40 · Oranges 40 · Almonds 40 · Avocado 40 · Grapefruit 40 · Mango 40 · Pistachios 36

35. Livestock fit

ERA5 CLIMATE REANALYSIS (SCIENTIFIC MODEL) · SOILGRIDS (SCIENTIFIC MODEL) · AGLAND PROFILE MODEL

Optional · indicative ranges, pending livestock specialist review

Stocking for a beef herd: Pasture should grow well through much of the year. Expect roughly 5 to 15 acres for each cow with calf, more if irrigated.

HOW EACH TYPE OF LIVESTOCK FITS THIS LAND

Pick one or more for the full detail

ANIMALS	SCORE	MAIN LIMITS
Pigs, outdoor or pasture-raised Pigs · Berkshire, Duroc, Tamworth, Large Black, Hampshire	**87** Strong fit	heat stress, damp and disease
Sheep, wool and lamb breeds Sheep · Merino, Rambouillet, Suffolk, Dorset, Corriedale	**86** Strong fit	damp and disease, heat stress
Turkeys Poultry · Broad Breasted, Bourbon Red, Narragansett	**83** Strong fit	heat stress, damp and disease
Ducks and geese Poultry · Pekin, Khaki Campbell, Muscovy, Embden geese	**83** Strong fit	water for stock, heat stress
Laying hens, free-range Poultry · Rhode Island Red, Leghorn, Australorp, Sussex, ISA Brown	**82** Strong fit	heat stress, damp and disease
Beef cattle, temperate breeds Beef cattle · Angus, Hereford, Charolais, Limousin	**79** Workable with changes	water for stock, heat stress
Meat goats Goats · Boer, Kiko, Spanish	**77** Workable with changes	water for stock, grazing season
Dairy goats Goats · Nubian, Saanen, Alpine, LaMancha	**77** Workable with changes	heat stress, water for stock
Dairy cattle, heat-adapted or crossbred Dairy cattle · Jersey, Zebu crosses, Girolando, Sahiwal crosses	**75** Workable with changes	water for stock, heat stress
Sheep, hair breeds (heat-tolerant) Sheep · Katahdin, Dorper, St. Croix, Barbados Blackbelly	**74** Workable with changes	winter cold, grazing season
Beef cattle, heat-tolerant breeds Beef cattle · Brahman, Brangus, Santa Gertrudis, Nellore	**71** Workable with changes	winter cold, water for stock
Dairy cattle, Holstein-type Dairy cattle · Holstein, Friesian, Brown Swiss	**40** Poor fit	heat stress, water for stock
Meat chickens, pasture-raised Poultry · Cornish Cross, Freedom Ranger, Red Ranger	**40** Poor fit	heat stress, damp and disease

FIT CARD: THIS LAND VS BEEF CATTLE, TEMPERATE BREEDS

Do best where summers are mild. Heat and humidity cut growth and fertility.

Summer heat-stress index (THI) 78 Marginal



Prefers up to 74

Days at or above 35 °C per year

1.1 days Good



Prefers up to 10 days

Distance to mapped water 2.1 mi Marginal



Prefers up to 1.2 mi

Annual rainfall 28 in Good



Prefers 28 in to 63 in

Aridity index (rain ÷ water lost) 0.74 Good



Prefers 0.65 or more

Frost-free season (days) 158 days Marginal



Prefers 200 days or more

Hardiness zone (winter cold) 4b Good



Prefers 3a to 9b

Growing degree days (pasture heat)

1,441 Good



Prefers 1,200 to 3,500

Topsoil pH 6.9 Good



Prefers 5.8 to 7.2

Topsoil sand content 27% Good



Prefers 15% to 55%

Mean slope 4% Good



Prefers up to 10%

Leaf-wetness hours (warm season)

558 h Marginal



OVERALL

79 / 100

Workable with changes

WHAT TO PLAN FOR

Heat stress: land is 78, above the ideal (up to 74). Provide shade and cool water, work cattle early in the day, or choose a heat-tolerant breed.

Water for stock: land is 2.1 mi, above the ideal (up to 1.2 mi). Plan a well, tank storage and troughs sized for the herd (roughly 40 to 90 litres per animal a day), and check drilling and water-use rules.

Grazing season: land is 158 days, below the ideal (200 days or more). Budget stored feed (hay or silage) for the months when grass stops, and plan winter shelter and windbreaks.

Damp and disease: land is 558 h, above the ideal (up to 300 h). Damp, humid conditions favor foot rot, liver fluke and other parasites, so plan drainage, rotational grazing and a herd-health program.

Also plan for: Shade and clean drinking water close to grazing, a handling yard, and winter feed where pasture stops.

Prefers up to 300 h

Ideal range Tolerable range This land

WATER, FEED AND HEAT FOR A BEEF HERD

Drinking water per animal	11 gal to 18 gal a day
For 100 animals	1,057 gal to 1,849 gal a day
Nearest mapped water	2.1 mi
Heat-stress index (THI)	78, alert: some stress
Frost-free season	158 days
Grass stops for cold	about 207 days
Grass stops for dryness	rarely

Rough planning figures. Animals drink more in heat, and lactating animals drink more.

THINGS TO NOTE ABOUT THIS LAND

Nothing stands out from the data available.

Checks and summary

Who stands behind the data: ERA5 climate reanalysis Intergovernmental/EU program
SoilGrids 2.0 Globally recognized scientific organization USDA soil survey (SSURGO) Government agency
AWS Terrain Tiles (Terrarium) Government agency ESA WorldCover 2021 Space agency
OpenStreetMap (Overpass and Nominatim) Foundation
Natural Earth 1:50m coastline Cartographic society (NACIS) GloFAS river discharge Intergovernmental/EU program
USGS Earthquake Catalog (ComCat) Government agency NAIP aerial photography Government agency
FEMA National Flood Hazard Layer Government agency National Wetlands Inventory Government agency
PAD-US protected areas database Government agency
Cropland Data Layer (USDA image service) Government agency USFWS critical habitat Government agency
GBIF species records Intergovernmental/EU program EPA Facility Registry Service Government agency
US Wind Turbine Database Government agency USGS National Hydrography Dataset Government agency
US Drought Monitor Government agency US Census Bureau geocoder Government agency
BLM Public Land Survey System index Government agency
USDA NASS land values and cash rents Government agency CropScape University research center Fetched ....

Important notice. This report is a screening tool. Where it shows flood zones, wetlands, protected land, critical habitat or other regulatory information, it is a map taken from the agency's published data. It is not a flood zone determination, a wetland delineation, an endangered species review, a permit check, a survey, an appraisal, or legal, financial, engineering or agronomic advice. Do not rely on it alone to buy, lend against, build on, plant or stock land: check what matters to you on the ground, and with the right professional or agency, first.

This report is built from trusted third-party data. You can check where each figure comes from on our data sources page. The data is owned by its providers and shown as they publish it, so its accuracy rests with them. The scores and ratings are our own reading of that data, and the reasoning behind them is set out in the methodology. It does not cover legal title, zoning, water rights or market values, and it does not replace a site visit and lab tests.

Know what any parcel can grow. Get another report at aglandprofile.com.

The online link to this report is valid for 365 days from purchase, so keep this PDF.