The Simple AP® Human Geography Unit 5 Cheat Sheet

5.1 Introduction to Agriculture

Environment Shapes Farming

Physical geography: climate, soil, terrain & water decide what can grow in a place.
Mediterranean ag: dry summers, wet winters → olives, grapes & winter wheat (Italy, California).
Tropical climates: heavy rain washes nutrients from soil → shifting farming or plantations.

Intensive vs. Extensive

Intensive: lots of labor or money per acre, small plots, high yields; near cities or in crowded areas.
Extensive: few inputs per acre, big areas, lower yields; far from markets or in harsh climates.

Intensive	Extensive
Market gardening	Shifting cultivation
Plantations	Nomadic herding
Mixed crop/livestock	Ranching
Wet rice farming	Large grain farms

Key Farming Types

Shifting cultivation (slash & burn): clear forest, farm 2–3 yrs, move on when soil wears out.
Pastoral nomadism: herders move animals to new pasture in dry lands (Sahel, Mongolia).
Plantation: big tropical farm growing 1 cash crop for export (coffee, bananas, palm oil).
Ranching: raising cattle or sheep on huge dry ranges for sale (US West, Argentina, Australia).

⚠ Intensive/extensive = inputs per acre, not farm size: a huge wheat farm is extensive.

✓ FRQ: name the climate → explain how it shapes farming → give a real place (Sahel herding).

5.2 Settlement Patterns & Survey Methods

Rural Settlement Patterns

Clustered: homes grouped in a village w/ fields outside → shared services & defense.
Dispersed: farmhouses spread out, each on its own land (US Midwest, Homestead Act).
Linear: homes lined up along a road, river or coast for easy access to water & transport.

Land Survey Methods

Method	Shape	Where
Metes & bounds	irregular	E. US colonies
Township	square grid	US Midwest
Long lot	thin strips	Quebec

Metes & bounds: borders follow natural features like streams, trees & rocks → odd-shaped plots.
Township & range (1785): US grid of 6×6-mile townships, each w/ 36 one-mile sections.
Long lot (French): narrow strips back from a river → every farm gets water access.

Reading the Landscape

Air photos: grid roads = township & range; winding lines = metes & bounds.
Inheritance: splitting land among all heirs → smaller & smaller plots over generations.
Legacy: old survey lines still shape property lines & road grids today, visible on maps & air photos.

⚠ Survey method ≠ settlement pattern; long lots often make linear settlements.

✓ Name the system, then explain who made it & why (British colonists, US gov't, French settlers).

5.3–5.4 Origins, Diffusion & the 2nd Ag. Revolution

1st (Neolithic) Ag. Revolution

Domestication (~10,000 yrs ago): plants & animals bred for human use → food surplus & villages.
Animals: goats, sheep & cattle in SW Asia; llamas in the Andes; horses on the Central Asian steppe.

Hearth	Crops / animals
Fertile Crescent	wheat, barley, goats
East Asia	rice, millet, soybeans
Mesoamerica	maize, beans, squash
Andes (Peru)	potato, llama
West Africa	sorghum, yams

Diffusion: crops spread by trade & migration; the **Columbian Exchange** sent maize & potatoes east & wheat, cattle & horses west after 1492.

2nd Agricultural Revolution

When/where: Britain, 1700s–1800s, alongside the Industrial Revolution; then Europe & N. America.
New tools & methods: seed drill, iron plow, reaper, crop rotation, fenced (enclosed) farms.
Effects: more food w/ fewer farmers → people moved to cities for factory jobs.
Enclosure: shared fields fenced into private farms → efficient, but poor farmers lost land.

⚠ Farming began in several hearths on its own, not in one place that spread out to the world.

✓ Chain: 2nd Ag. Rev. → extra farm workers → move to cities → factories (Industrial Revolution).

5.5 The Green Revolution

What It Was

Green Revolution (1940s–1970s): new farm tech spread to developing countries; led by scientist **Norman Borlaug** (Nobel Peace Prize 1970).
Inputs: high-yield (HYV) seeds of wheat, rice & maize + fertilizer, pesticides & irrigation.
Where: Mexico (wheat), India & Pakistan (wheat, "miracle rice"), the Philippines & much of Asia.

Positive vs. Negative

Positive	Negative
Yields ↑ 2–3×	Uses lots of water
Fewer famines	Chemical runoff
Cheaper food	Farmers go into debt
Self-sufficiency	Helped big farms most
Less land cleared	Fewer crop varieties

Africa: less success b/c its main crops got less research & it lacked roads & irrigation.
Social effects: machines cut farm jobs → people moved to cities; big farms grew bigger.

Its Legacy

GMOs (genetically modified crops) continue the idea → same debate on yield vs. safety.
Today: India's Punjab faces falling water tables from years of thirsty rice & wheat crops.

⚠ The Green Revolution didn't end hunger; today hunger is mostly about poverty & access.

✓ "Evaluate" FRQ: give 1 benefit + 1 cost w/ a real place (India's Punjab: yields ↑, water ↓).

5.6–5.7 Production Regions & Spatial Organization

Subsistence vs. Commercial

Subsistence: food grown mainly to feed the farm family; common in developing regions.
Commercial: crops grown to sell; big, specialized, high-tech farms in developed regions.

Region	Main type
US Corn Belt	Mixed crop/livestock
Great Plains	Grain farming
SE Asia deltas	Wet rice
Central America	Plantations
Sahel	Nomadic herding

How Agribusiness Works

Agribusiness: big companies run farming as one system, from seeds & fertilizer to grocery stores.
Vertical integration: 1 company owns many steps (Tyson raises & packages chicken).
Economies of scale: bigger farms → lower cost per unit → beat small family farms.
Monocropping: same crop every year → efficient but risky (pests, soil loss, price drops).
Subsidies: gov't payments support farmers & steer what they grow (US corn, EU farms).
Commodity chain: the steps from farm → processor → shipper → store → you.

⚠ Big commercial farms are replacing small family farms; explain why (cost, scale, subsidies).

✓ Map stimulus: match a region's climate to its farm type first, then add economic causes.

5.8 Von Thünen Model

The Model (1826)

Von Thünen: farm land use around 1 city forms rings, set by transport cost & spoilage.
Assumptions: flat land, same soil & climate, 1 market, no roads or rivers, farmers seek profit.

Ring	Land use	Why
1	Dairy, veggies	spoil fast
2	Forest	heavy wood
3	Grains	keep well
4	Ranching	animals walk
Beyond	Wilderness	too far

Key idea: land rent drops w/ distance → the most profitable use wins each ring around the city.

Today

Still true: dairy & vegetable farms cluster near big cities (milksheds, NJ "Garden State" farms).
Global scale: rich markets act as the "city"; beef & grain shipped from far away (Argentina).

Limitations

Why it breaks: refrigeration, trucks & planes, uneven land, multiple cities & gov't subsidies.
Still useful: explains why land near cities costs more & is farmed more intensively.

⚠ Forest is ring 2, not ring 4: wood was heavy & needed daily for fuel in the 1800s.

✓ FRQ: explain a ring w/ distance + transport cost + spoilage, then give 1 modern limit.

5.9–5.10 Global System & Consequences

The Global System

Global supply chains: food grown in one country, processed in another, eaten in a third.
Export commodity dependence: relying on 1–2 crops (cocoa, coffee) → hurt when prices fall.
Fair trade: guaranteed fair prices & labor standards for farmers (coffee, cocoa, bananas).
Trade policy: subsidies & tariffs in rich countries make it hard for poor farmers to compete.
Core–periphery: poorer countries grow cash crops for richer ones; profits go to big firms.

Environmental Consequences

Practice	Effect
Irrigation	salty soil (salinization)
Overgrazing	desertification
Clearing forest	deforestation
Fertilizer	runoff, dead zones
Pumping groundwater	aquifers drained

Example: overgrazing & drought → desertification along the southern edge of the Sahara (Sahel).
Dead zone: fertilizer runoff down the Mississippi → low-oxygen water in the Gulf of Mexico.

Conservation

Fixes: terracing, contour plowing, no-till farming & crop rotation all cut soil erosion.

⚠ Desertification is caused by people misusing dry land (overgrazing), not just by nature.

✓ Answer = practice → effect → real place (irrigation → salinization → Aral Sea).

5.11–5.12 Challenges, Women & the Exam

Contemporary Challenges

GMOs: higher yields & pest resistance vs. less biodiversity, seed patents & public distrust.
Organic & local food: fewer chemicals, shorter supply chains, but higher prices for buyers.
Food deserts: areas w/o affordable fresh food, often low-income urban areas.
Diet changes: richer people eat more meat → more grain grown for animal feed & big feedlots.
Urban farming: rooftop & community gardens bring fresh food to cities (Detroit).

Women in Agriculture

Big role: women do ~40% of farm work in developing countries (Africa, South Asia).
Barriers: less land, credit & training; equal access could raise yields 20–30% (FAO).
Change: small loans (microcredit) & land-rights laws help women farmers earn more.

Exam Format

Section	Qs	Time	Weight
MCQ	60	60 min	50%
FRQ	3	75 min	50%

FRQs: 1 w/ no stimulus, 1 w/ 1 stimulus, 1 w/ 2 (maps, charts, photos); 7 pts each.

⚠ "Explain" means say why or how it happens, not just what happens; link cause → effect.

✓ Always name a real place & the scale (local, national or global) in every FRQ answer.