



2017-2018

Examples of the Agricultural Land Productivity Valuation Formula

Per 15-7-201 MCA the formula used to determine the per-acre value of agricultural land is $V=I/R$ where:

V = productivity per-acre value of agricultural land
I = per-acre net income associated with agricultural use¹
R = capitalization rate. The rate converts an on-going income stream into value; the rate is 6.4%

Summer Fallow Farmland

Avg. price for spring wheat = \$6.67/bu.
Productivity = 23 bu/Ac
Gross Income/ac. = 23 bu/ac. * \$6.67 = \$153.41/Ac
Net Income = \$153.41 * 0.125 = \$19.18
\$19.18/.064 = \$299.68 Productivity Value/Acre

Nonirrigated Hayland

Avg. price for alfalfa = \$86.20/ton
Productivity = .71 tons/Ac
Gross Income/ac. = \$86.20 * .71 tons = \$61.20/Ac
Net Income = \$61.20 * .25 = \$15.30/Ac
\$15.30/.064 = \$239.06 Productivity Value/Acre

Grazing Land

Avg. private grazing lease = \$19.53/AUM
Operating Expense = \$19.53 * .25 = \$4.88/AUM
Adjusted Gross Income = \$19.53 - \$4.88 = \$14.65/AUM
Statewide Average Productivity = .21 AUM/Ac
Net Income/ac. = \$14.65/AUM * .21 AUM/Ac = \$3.08/Ac
\$3.08/.064 = \$48.13 Productivity Value/Acre

Irrigated Land

Avg. price for alfalfa = \$86.20/ton
Productivity = 3 tons/Ac
Gross Income/ac. = 3 tons/ac.* \$86.20 = \$258.60/Ac
Net Income = \$258.60 * .25 = \$64.65/Ac
\$64.65 – Water Cost 2 (\$22.50) = \$42.15/Ac
\$42.15/.064 = \$658.59² Productivity Value/Acre

CC Farmland

Avg. price for spring wheat = \$6.67/bu
Productivity = 35 bu/Ac
Income/ac. = 35 bu/ac. * \$6.67 = \$233.45/Ac
Net Income = \$233.45 * .25 = \$58.36
\$58.36/.064 = \$911.88 Productivity Value/Acre

¹ A crop share approach is used to determine the net income attributable to agricultural production. In a crop share approach, a percentage of the income from production (the share) is attributed to the landlord (owner) of the land. The remaining percentage is considered the tenant's share and includes expenses of production.

² Based on Legislative recommendations contained in HB658 and 15-7-201(7) (f) MCA, the minimum value of irrigated land is established at \$599.26 per acre. When the valuation formula calculates a value that is less than \$599.26, the minimum value is used. In the example the value of the irrigated land would be \$599.26 and not the calculated value. The minimum value is determined based on the statewide average spring wheat production (23 bu/ac) and the CC Farmland crop share formula.