

Politics & War Resource Bonus Production

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March 5, 2018

1 Bonus Production

Resource production and refining improvements now receive a bonus for having additional improvements of the same type in the same city. Each extra improvement after the first adds a bonus to production of that resource. This is to encourage specialization and boost resource production in-game. The maximum bonus for resource production per city is 50% when you have maxed out the number of improvements of that type in the city.

1.1 Formula

$$b = 1 + \frac{0.5(m-1)}{(c-1)}$$

$$P = m * b * r$$

P : Production amount per turn

B : Bonus

m : Improvements

r : Base Production Rate

c : Improvement Cap

The base production rate is 0.25 for most raw resources, and Land Area / 500 for Food. The base production rate is modified by National Projects before being entered into the above formula for per-turn production.

The result is rounded to two decimal places.

1.2 Base Production Rates

The first value listed is the default rate. The second value is the increased rate given the presence of the relevant national project, if applicable to the resource.

Coal: 0.25

Iron: 0.25 / 1.02

Oil: 0.25

Lead: 0.25

Iron: 0.25

Bauxite: 0.25

Uranium: 0.25 / 0.5

Food: $\frac{LandArea}{500}$ / $\frac{LandArea}{400}$

Gasoline: 0.5 / 1

Aluminum: 0.75 / 1.02

Munitions: 1.5 / 2.01

Steel: 0.75 / 1.02

1.3 Example 1

Food production for a city with 1000 sq. mi of land, 8 farms, and no Mass Irrigation national project.

Regular Production: $8 * \frac{1000}{500} = 16$ Food/turn

New Production with Bonus: $8 * (1 + \frac{0.5(8-1)}{(20-1)}) * \frac{1000}{500} = 18.95$ Food/turn

1.4 Example 2

Uranium production for a city with 3 uranium mines and the Uranium Enrichment Program national project.

Regular Production: $3 * 0.5 = 1.5$ Uranium/turn

New Production with Bonus: $3 * (1 + \frac{0.5(3-1)}{(3-1)}) * 0.5 = 2.25$ Uranium/turn

1.5 Example 3

Coal production for a city with 12 coal mines.

Regular Production: $12 * 0.25 = 3$ Coal/turn

New Production with Bonus: $12 * (1 + \frac{0.5(12-1)}{(12-1)}) * 0.25 = 4.5$ Coal/turn