

# Package ‘EconAndProdEfficiency’

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**Type** Package

**Title** Economic and Production Efficiency

**Version** 0.1.0

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**Description** Production efficiency and economic efficiency are crucial concepts in agriculture/horticulture for sustainable and profitable practices. It helps to determine the optimal use of resources to maximize outputs and profitability. Production efficiency focuses on the optimal use of resources to produce goods, while economic efficiency ensures these goods are produced and allocated in a way that maximizes economic welfare. Production efficiency and economic efficiency are calculated with the help of the formula given by (Kumar et al., 2017) <doi:10.21921/jas.v4i04.10202>.

**License** GPL-3

**Encoding** UTF-8

**NeedsCompilation** no

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**Repository** CRAN

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economicEfficiency      *Economic efficiency*

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### Description

Economic efficiency refers to the optimal production and allocation of resources to maximize the wealth or welfare. It considers both production and consumption, ensuring that goods and services are produced at the lowest possible cost and distributed to those who value them the most.

### Usage

```
eco_eff(Net_return , Total_duration_of_the_crop)
```

### Arguments

Net\_return      Net return (\$/ha)  
 Total\_duration\_of\_the\_crop  
                   Total duration of the crop (in days)

### Value

Economic efficiency (\$/ha/day)

### References

Kumar, M., Rajkhowa, D.J., Meena, K.L., Rakesh, K., Zeliang, P.K., Kikon, E.L., Rangnamei, K.L., Namei, A., 2017. Effect of nutrient management in lowland rice for improving productivity, profitability and energetics under the mid hill of Nagaland. *J. AgriSearch* 4, 247–250.\ Dutta, S. K., Layek, J., Yadav, A., Das, S. K., Rymbai, H., Mandal, S. & Mishra, V. K. (2023). Improvement of rooting and growth in kiwifruit (*Actinidia deliciosa*) cuttings with organic biostimulants. *Heliyon*, 9(7).

### Examples

```
Net_return <- 7.2
Total_duration_of_the_crop <- 270
eco_eff(Net_return, Total_duration_of_the_crop)
```

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productionEfficiency    *Production efficiency*

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**Description**

Production efficiency refers to the ability of a production system to convert inputs (such as labor, materials, and capital) into outputs (goods or services) in the most efficient manner without wasting resources.

**Usage**

```
prod_eff(Grain_yield, Total_duration_of_the_crop)
```

**Arguments**

```
Grain_yield      Grain yield (kg/ha)
Total_duration_of_the_crop
                  Total duration of the crop (in days)
```

**Value**

Production efficiency (kg/ha/day)

**References**

Kumar, M., Rajkhowa, D.J., Meena, K.L., Rakesh, K., Zeliang, P.K., Kikon, E.L., Rangnamei, K.L., Namei, A., 2017. Effect of nutrient management in lowland rice for improving productivity, profitability and energetics under the mid hill of Nagaland. *J. AgriSearch* 4, 247–250. \ Dutta, S. K., Layek, J., Yadav, A., Das, S. K., Rymbai, H., Mandal, S. & Mishra, V. K. (2023). Improvement of rooting and growth in kiwifruit (*Actinidia deliciosa*) cuttings with organic biostimulants. *Heliyon*, 9(7).

**Examples**

```
Grain_yield <- 8.67
Total_duration_of_the_crop <- 270
prod_eff(Grain_yield, Total_duration_of_the_crop)
```

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