¶ (12 pt.)

**INSTRUCTIONS FOR AUTHORS**

**(14 pt bold, CAPITAL LETTERS)**

¶ (12 pt.)

**Dragan Tomić1, Slavka Pavlov1 (12 pt bold)**

1University of Novi Sad,Technical Faculty “Mihajlo Pupin”, Zrenjanin, Serbia (12 pt)  
e-mail: [tomic@tfzr.uns.ac.rs](mailto:tomic@tfzr.uns.ac.rs) (12 pt, use hyperlink for email address)

¶ (11 pt.)

**Abstract (10 pt):** This work represents a review of biodiesel production in the world. European Union (EU) policy and aims are to reduce increased emission of gases, CO2 in particular, which cause greenhouse effect due to increase in demand and use of fossil fuels. Studies which are made for biodiesel, show that the total energy balance is positive. Regulations and aims directed to increase in production of biodiesel are also shown as well as possibilities for obtaining and use of this ecological fuel.

**Key words:** biodiesel, production, energy fuel (10 pt)

¶ (11 pt.)

**INTRODUCTION (Heading 1, 11 pt, bold, capital letters)**

¶ (11 pt)

Because of a lower supplies of fossil energy sources in the present time, a growing interest in other energy sources is expressed. Such energy sources are alternative energy sources, or renewable energy sources. This group consists of energy sources: wind energy, sun energy, waterpower, geothermal energy, wave energy and energy obtained from biomass.

The most important energy of 20th century was oil. In the world's primary energy consumption oil has participated with about 35%, coal with about 24%, gas with about 18%, renewable energy with about 17% and nuclear energy with about 6%, [1].

One of the most important renewable energy sources, if not the most important is biomass as for amount of energy periodically renewed and the relatively small cost of production, and collection. The great advantage of biomass is reflected in obtaining ecological alternative fuels, as one of the possible solutions more imposing is biodiesel, fuel that origins on plant processing and waste oils, [2].

For sustainable economic development depends on the sufficient amount of energy, and increased use of energy sources is inevitable.

¶ (11 pt.)

**MATERIAL AND METHODS**

¶ (11 pt.)

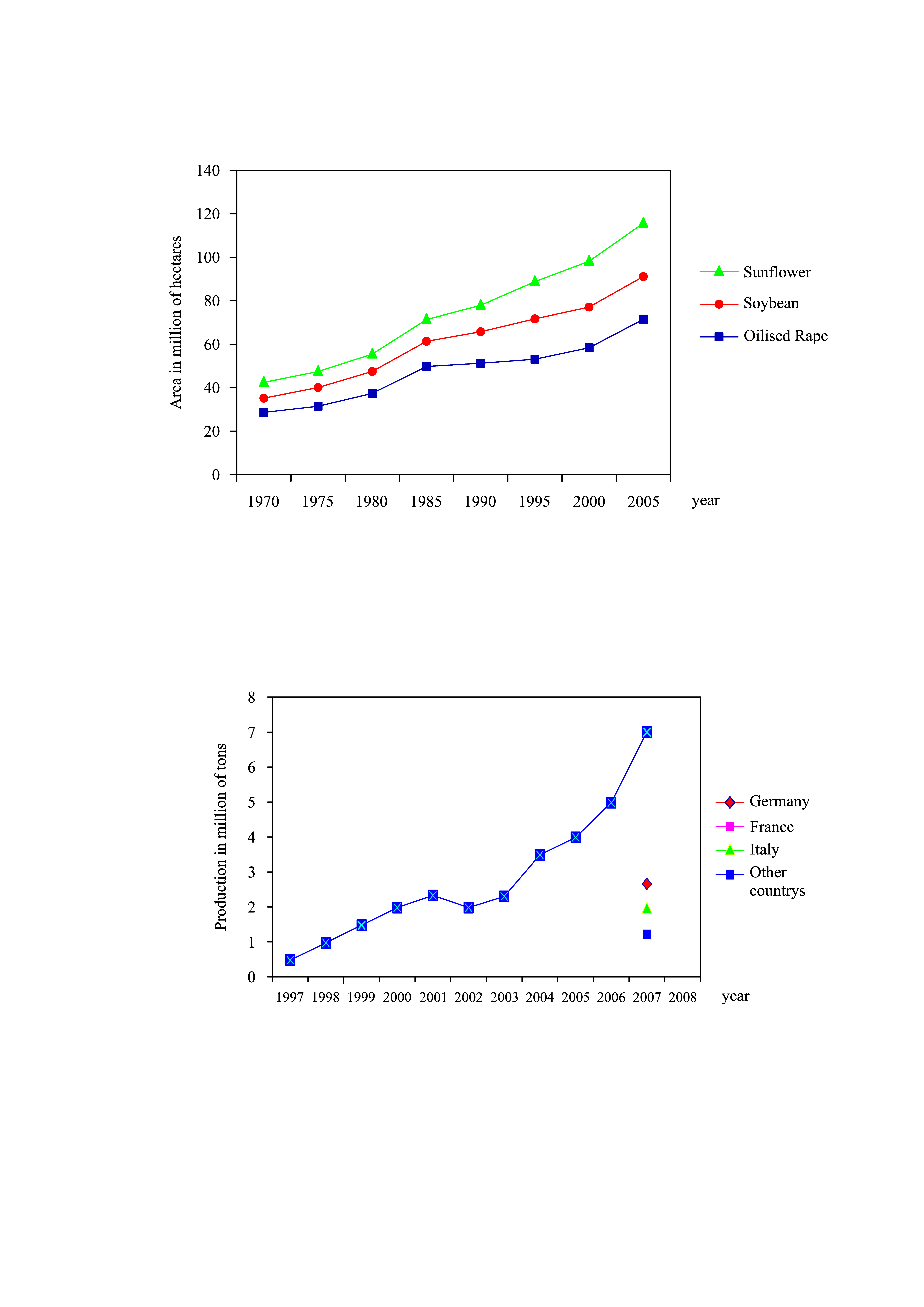
**Global production of biodiesel (Heading 2, 11 pt, bold)**

¶ (11 pt.)

The desire for progress and development of existing technology of getting biodiesel has led many countries in the world to discovering new raw materials from which it is possible to get this ecological fuel. In addition to the basic raw material for obtaining biodiesel worldwide are used: palm oil, coconut, sugar cane and wood jatrofa, vegetable [3]. All these advances in the development of technology production of biodiesel carry with them some difficulties. Because of seizing working areas, i.e. growing plant culture to obtain a higher degree of biodiesel, in the world, notably in the eastern countries of the world, there is a problem of lack of surface for planting wheat and other crops that are necessary factor of human life, [4,5]. Using food crops to produce biodiesel is increasing the world food problem. According to FAO there are more than 1,02 billion hungry people. For these reasons, the production of biodiesel has a limiting factor.

In 2007. year total production in the world amounted to seven million tons of biodiesel, which is a approximately 2.9 million tons produced Germany, as shown in Fig. 1.

¶ (11 pt.)



***Fig. 1.*** *Figure caption**(10 pt, italic, centered)*

¶ (11 pt.)

Energy balance of oilseed rape is shown in Table 1, where the total energy entry includes (processing of land, fertilizer, agro-chemical, seed, storage, transportation, processing-production), and the total energy output includes (biofuel, unleavened cake, stalks).

¶ (11 pt.)

|  |  |
| --- | --- |
|  | (1) |

¶ (11 pt.)

***Table 1.*** *Table caption (10 pt, italic, centered)*

|  |  |
| --- | --- |
| **The parameters** | **Values** |
| Grain yield (t/ha) | 2,5 |
| The total energy input (MJ/ha) | -35.045 |
| Total energy output (MJ/ha) | 87.900 |
| Net energy balance (MJ/ha) | 52.855 |

¶ (11 pt.)

**Ecological aspects**

¶ (11 pt.)

Complete assessment of the energy balance of fuel cycle includes not only the energy content of biodiesel and energy is spent in the production, but also energy that is absorbed welcome by all the necessary process to reach the final product.

Amounts of emissions are becoming a growing problem of industrial developed countries. It is known that engines with internal combustion are big air pollutants. According to different authors, from (68 to 85) % of total air pollution, causing engines with internal combustion. Car Exhaust gases contain about 200 different substances, of which a particularly toxic can be distinguished as follows: CO2, CO, NOx, CH, Pb and its compounds. …

¶ (11 pt.)

**RESULTS AND DISCUSSION**

¶ (11 pt.)

In Europe, biodiesel is most used in transportation, agriculture, forestry and construction and due to their bio-degradability characteristic and less emission of harmful gases in a comparison to the classic fuel.

Germany is world champion in the production of eco-fuels. The factory "Horen industries, in the German city Freiburg will soon begin production of biodiesel generation. As raw materials, in addition to traditional biomass, will be used agricultural wastes-stem, straw and pulverous straw. Until now, for the production of biodiesel only crop of family agricultural was suitable.

Obstacle to the wider introduction of alternative energy sources makes his undurability, because bio-fuel quickly loses its quality and becomes a cause premature of engine fatigue. To the rapid deterioration of the biological product oxygen contributes, which is his ingredient.

¶ (11 pt.)

**CONCLUSION**

¶ (11 pt.)

Production and use of biodiesel is a trend that is very present in the whole of Europe and in the world. The use of biodiesel is very important and is present in energetics and ecology.

Technically, the undeniable fact is that the sources of fossil fuel are still limited. Liquid fuels for starting the engines and all kinds of mobile systems are in that measure applied in practice that is totally unrealistic to expect any quick preorentiation to other fuels. Investment in research and exploitation of new oil sites from year to year are increasing, and therefore the price, of liquid fossil fuels grows. A special problem is to provide a safe supply of oil from the region with rich deposits.

Biodiesel in the economic sense has significant advantages. Degradability in water and soil is relatively fast and complete. In car exhaust gases there are much less harmful substances. From the standpoint of carbon dioxide, biodiesel is neutral, because all the amount of biodiesel combustion that overhangs in the atmosphere engines throughout photosynthesis in plants from which is again re-produced biodiesel.

¶ (11 pt.)

**REFERENCES**

¶ (11 pt.)

1. Arslan, R., Agricultural and Economic Potential of Biodiesel in Turkey, Energy Sources, Part B: Economics, Planning, and Policy, No.2, pp. 305-310, 2007. ¶ (11 pt.)
2. Al-Widian, M.I., Al-Shyoukh, A.O., Experimental evaluation of the transesterification of waste palm oil into biodiesel, Bioresource Tecnology, Vol.85, pp. 253-256, 2002.
3. Balat, M., An Overview of Biofuels and Policies in the European Union, Energy Sources, Part B: Economics, Planning, and Policy, No.2, pp.67 – 181, 2007.
4. Balat, M., Prospects for Worldwide Biodiesel Market Development, Energy Sources, Part B: Economics, Planning, and Policy, No.4., pp. 48 – 58, 2009.
5. Best, G., Alternative energy crops for agricultural machinery biofuels – focus on biodiesel, Agricultural Engineering International: the CIGR E-journal, Vol. 8, 2006.
6. Brkić, M., Skala, D., Mulić, R., Marić, M., Technology production of biodiesel - Biodiesel and ecological alternative to liquid fuel, Contemporary Agricultural Engineering, Vol.30, pp.73-105, 2005.
7. Canakci, M., Van Gerpen J.H., Comparison of Engine Performance and Emissions for Petroleum Diesel Fuel, Transactions of the American Society of Agricultural Engineers, Vol.46, pp. 937-944, 2003.
8. Demirbas A., The Importance of Bioethanol and Biodiesel from Biomass. Energy Sources, Part B: Economics Planning and Policy, No.3., pp. 177 – 185, 2008.
9. Prvulovic,S., Tolmac, D., Brkic, M., Radovanovic, Lj., The Analysis of energetic and economic parameters during the utilization of the corn grain as a fuel for the cereal dryers, Energy Sources, 2010., Article in press.

>>> IMPORTANT DATES <<<

|  |  |
| --- | --- |
| September 25, 2025 | Deadline for paper submission |
| October 1, 2025 | Deadline for registration and full payment |
| October 1, 2025 | Presentation submission (for oral presenters) |
| October 2-3, 2025 | Conference days |

**>>> PAPER INSTRUCTIONS <<<**

* The paper must be written in **English**.
* A4 format (297 x 210 mm), portrait.
* Margins: left, top, bottom and right 25 mm.
* Papers must be written in **Microsoft Word** format.
* Use **Arial** font, single spacing.
* Font sizes are:
  + **paper title** - 14 pt bold, capitals;
  + **abstract** – 10 pt;
  + **author(s) names** - 12 pt bold;
  + **key words** - 10 pt italic;
  + **chapter titles** - 11 pt bold, capitals;
  + **text** - 11 pt, justified.
* Use bullets as shown in this sample.
* Do not indent first lines.
* Do not insert page numbers.
* Do not number chapter titles and subtitles.
* The paper should have a **minimum of 4 and a maximum of 8 pages**.
* A single author should be on a **maximum of two papers**.
* Use the Header as given in this sample.
* **Equations** should be **centered** and **numbered** consecutively from 1 upwards. Equations must be typed in Microsoft Word Equation Editor.
* Figures have to be made in high quality (min 300 dpi), which is suitable for reproduction and printing.
* Publication is referenced by **enclosing its number**, listed at the end of the paper, in the **brackets** (e.g. [1], [2,3], [5-8] ...).
* The reference list should be numbered consecutively, from 1 upwards. Numbers should be enclosed in brackets using numbering settings (**in the order of appearance in the text**, e.g., [1], [3, 4], [7-11], etc.) as shown below:

1. Prvulovic, S., Tolmac, J., Palinkas, I.: Book title, Publisher, City, Year of publication.
2. Desnica, E., Pekez, J., Radovanovic, Lj.: Paper title, Proceedings title, pp. 55-62, place of the Conference, City, Year.
3. Vujic, B., Marceta, U.: Paper title, Journal title, Volume number, pp. 120-131, Year.
4. Internet source: Technical Faculty “Mihajlo Pupin” website: <http://www.tfzr.uns.ac.rs/iizs/index.php>

* For literature or data on websites and documents without authors’ reference, should include the full name of the website, the document referred and URL, such as:

1. Eurostat, Statistical yearbook 2019, Available at www.eurostat.com/mainmenu/…

**>>> ADDITIONAL INFORMATION <<<**

* Authors are able to present their papers orally using a PowerPoint presentation template or as a poster presentation that will be shared on our website. The appropriate visual aids will be available to authors.
* Papers (as well as paper submissions) should be e-mailed to: [iizs@tfzr.rs](mailto:iizs@tfzr.rs) ;
* Please read the instructions carefully and prepare your paper accordingly. We are looking forward to seeing you in Zrenjanin in October 2025;
* **Please use the format settings defined in this sample in order to make easier preparation of the paper!**
* Please inform your colleagues and friends of the Conference IIZS 2025. Thank you!