

PROVIDING THE DEVELOPMENT OF NON-WASTE PRODUCTION IN THE AGRARIAN SECTOR OF THE ECONOMY: THEORETICAL-METHODOLOGICAL JUSTIFICATION

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The objective character of increasing level of the agricultural business activity's intensity, which generates the considerable wastes, intensifies the issue of the adequate resource use. The article deals with the issues of theoretical and methodological support for the development of non-waste production in the agrarian sector, taking into account national peculiarities and world experience. It is established that the objective nature of increasing the level of intensity of agricultural production, which produces a large amount of waste, significantly exacerbates the problem of prudent resource use. In turn, the accelerated development of non-waste production in agriculture becomes relevant for a rational combination of efficiency of this business, environmental security, social orientation.

The methodological foundations of research into the development of non-waste production in the agrarian sector of the economy are revealed in the paper. The connection between the efficient functioning of non-waste production in the agrarian sector of the economy and the doctrine of the noosphere aimed at achieving the goal of harmonious development of nature and society is highlighted. The features of the "mental" attitude to the problem of the agro-residues at the national and global levels are disclosed. The article highlights the complex of economic, social, ecological and institutional indicators, which are necessary for the effectiveness of agricultural non-waste production.

The transition to non-waste agricultural production is an objective process, closely linked to the depletion of natural resources and energy resources. Accelerated developments in this area and the use of their results in economic practice are becoming an urgent requirement today. The study specifies the role of science for setting up the "science – technology – non-waste agriculture – society" system.

References

1. Bruttini, A. (1931). *Utilizaciia otkhodov: primenenie sel'skokhoziaistvennykh i promyshlennyykh otkhodov v kachestve produktov pitaniia, kormovykh sredstv, udobrenii i tekhnicheskogo sryia* [Garbage and waste utilization : use of agricultural garbage and waste as the food product, animal feed, fertilizer and technical raw-material]. Moscow, Leningrad: Sotcekgiz, 304 p.
2. Gusev, S.P. (1932). *Ispolzovanie otkhodov promyshlennosti i sel'skogo khoziaistva dlja udobrenii* [Use of the industrial and agricultural wastes for fertilizer production]. Moscow, Leningrad: Sotcekgiz, 140 p.
3. Gromov, B., Zaitcev, V., Laskorin B. et. al. (1983). *Okhrana prirody i vosproizvodstvo prirodnnykh resursov. Itogi nauki i tekhniki. Seriia "Okhrana prirody i vosproizvodstvo prirodnnykh resursov". T. 11: Bezotkhodnoe promyshlennoe proizvodstvo. Organizaciia bezotkhodnykh proizvodstv* [Environmental protection and reproduction of natural resources. Results of science and technology. Series "Nature Protection and Reproduction of Natural Resources". vol. 11: Non-waste industrial production. Organization of non-waste production]. Moscow: VINITI, 212 p.
4. Antonov, A.V. (1989). *Materialosberegaiushchie i bezotkhodnye tekhnologii* [Material saving and non-waste technology]. Moscow: Znanie, 62 p.
5. Balatckii, O., Voloshin, V. (1983). *Ekonomika bezotkhodnykh proizvodstv* [Economics of non-waste industries]. Kiev: Znanie, 43 p.

6. Belashov, L.A., Zharkova, I.A., Sanzharevskii, V.A. (1986). *Ekonomicheskie osnovy maloothodnykh i bezothodnykh proizvodstv* [The economic basis of low-waste and non-waste production]. Kiev: Nauk. dumka, 143 p.
7. Zaitsev, V.A. (1987). *Maloothodnye i bezothodnye protsessy segodnia* [Modern law- and non-waste processes]. Moscow: Znanie, 32 p.
8. Lebedinskii, Yu.P., Ganechko, L.A. (1986). *Prodovolstvennyi kompleks Ukrainskoi SSR* [Food productivity of USSR]. Kyiv: Nauk. dumka, 254 p.
9. Skliankin, Yu.V., Stychinskii, S.L. (1988). *Bezothodnaia pererabotka selskokhoziaistvennogo syria: ekologo-ekonomicheskii aspekt* [Non-waste recycling of the agricultural raw-material : ecological and economic view]. Kyiv: Urozhai, 164 p.
10. Verbytskyi, P. (2008). *Utylizatsiia vidkhodiv tvarynnoho pokhodzhennia v Ukraini* [Animal wastes utilization in Ukraine]. *Tvarynnystvo Ukrayiny* [Ukrainian livestock], no. 5, pp. 2-6.
11. Viatkin, P. (2010). *Vyznachennia zahalnoho efektu formuvannia bezvidkhodnoho vyrobnytstva na pererobnykh pidpriemstvakh APK* [Determination of the general effect of the formation of waste-free production at processing enterprises of agriculture]. *Ekonomika rozvitu* [Economics of development], no. 1 (53), pp. 65-69.
12. Heletukha, H., Zheliezna T. (2014). *Perspektyvy vykorystannia vidkhodiv silskoho hospodarstva dlia vyrobnytstva enerhii v Ukraini* [Prospects for the use of agricultural waste for energy production in Ukraine]. Analytichna zapyska BAU. No. 7, 33 p. Available at: <https://saf.org.ua/wp-content/uploads/2019/04/position-paper-uabio-7-ua.pdf> (Accessed 07 March 2020).
13. Kolodiichuk, I. (2017). *Zasadnychi pryntsypy formuvannia systemy povodzhennia z vidkhodamy* [Basic principles of formation of a waste management system]. *Rehionalna ekonomika* [Regional economy], no. 2 (84), pp. 80-88.
14. Tymchak, V.S. (2017). *Efektyvnist innovatsii kompleksnoho vykorystannia vidkhodiv kharchovoi promyslovosti. Kand. Diss.* [Innovations' effectiveness of the complex use of food industry's wastes. Candidate's thesis]. Zhytomyr, 227 p.
15. Markarian, S.E., Agasarian, A.D. (2008). *Sistema bezothodnoi pererabotki organiceskikh otkhodov* [The non-waste recycling system of the organic wastes]. *Agrarnaia nauka* [Agrarian science], no. 7, pp. 30-32.
16. Bjerke, L. (2014). *Chistoe proizvodstvo i energoeffektivnost. Norvezhskaia model* [Cleaner Production and Energy Efficiency. The Norwegian Model]. Kherson: Publ. company KCCI, 120 p.
17. Grigorian, A.A., Borodavkina, N.Yu. (2017). *Strany Pribaltiki na puti k ekonomike zamknutogo tsikla* [Baltic countries at their way to a closed loop economy]. *Baltiiskii region* [Baltic region], no. 3, pp. 7-22.
18. Murray, R. (2002). *Zero Waste*. Greenpeace Environmental Trust, 232 p.
19. Pauli, G. (2012). *The Blue Economy: 10 Years, 100 Innovations, 100 Million Jobs*. Paradigm Publications, 336 p.
20. Vernadsky, V.I. (2001). *Khimicheskoe stroenie biosfery Zemli i ee okruzheniya* [Chemical structure of the Earth's biosphere and its surroundings]. Moscow: Nauka, 376 p.
21. Zahorodnyi, A., Volkov, S., Onishchenko, O., Shestopalov, V. (2013). *V. I. Vernadskyi – vchenyi, myslytel, orhanizator nauky* [Volodymyr Vernadskyi is the scientist, thinker, science organizer]. Bulletin of the National Academy of Sciences of Ukraine, no. 3, pp. 8-37.
22. Ler, R. (1981). *Pererabotka i ispolzovanie selskokhoziaistvennykh otkhodov* [Recycling and use of agricultural wastes]. Moscow: Kolos, 415 p.
23. World Economic Forum Annual Meeting. Available at: <https://www.weforum.org/events/world-economic-forum-annual-meeting-2014/programme> (Accessed 07 March 2020).

24. Musina, L.A., Kvasha, T.K. (2014). *Resursoefektyvna ekonomika: yevropeiski tendentsii ta uroky dlia Ukrayny* [Resource-effective economy: European trends and lessons for Ukraine]. *Ekonomichnyi analiz* [Economic analysis], no. 18 (1), pp. 55-56.
25. Yi Q. (2003). Cleaner Production and Circular Economy – New Strategy For Environment and Development in China. Available at: http://mail.neaef.org/pubs/neaef16/1-4_Yi.pdf (Accessed 12 March 2020).
26. Pubule, J. (2014). *Cleaner production in biowaste management. Doctoral Thesis in Power and Electrical Engineering*. Riga technical university. Riga, Latvia. Available at: <https://ortus.rtu.lv/science/lv/publications/18359/fulltext> (Accessed 12 March 2020).
27. Towards a circular economy: A zero waste programme for Europe. European Commission, COM(2014) 398 final. Brussels, 2.7.2014 Available at: <http://ec.europa.eu/environment> (Accessed 12 March 2020).
28. Understanding the Circular Economy in Europe, from Resource Efficiency to Sharing Platforms: The CEPS Framework Igor Taranic, Arno Behrens and Corrado Topi* CEPS Special Report No. 143, July 2016. Available at: https://www.ceps.eu/system/files/SR%20No143%20Circular%20Economy_0.pdf (Accessed 12 March 2020).

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