



**Advertising of “problem solver” activity for 2018  
(also available in German, English and Italian) in printed version.**

List of 26 problem solvers that have passed initial checkout and have been translated, if necessary, and ranked with decision.

No	Questions and Answers
1	<p>1 Mina Petric (Mar 2016)</p> <p>Problem: WHO estimates that vector-borne diseases account for more than 17% of all infectious diseases, with more than half of the world’s population at risk. Every year, more than one billion people are affected, of which a large proportion is due to diseases transmitted by mosquitoes. Where mosquitoes are not important vectors of dangerous viruses, they can be so annoying to destroy the tourism economy or to impede the outdoor activities, working or free time. In the last decades, several species of disease carrying mosquitoes have invaded Europe through the transport of goods, increasing international travel and climate change.</p> <p>Small scale, weather driven, stage-population dynamics models can aid in making administrative decision regarding when and where to implement mosquito control</p>

	<p>strategies. The data included in these models needs to have sub-meter, horizontal accuracy with high frequency observations for the initial conditions for each model run. The main problems here are acquiring and transmitting real-time meteorological and mosquito data to a remote server where it can be run through the data assimilation algorithms and implemented in the model.</p> <p>Solution: A machine to machine (M2M) system that consists of a wireless sensor network of ground sensors with automated smart traps that allow automatic, bioacoustic recognition of mosquito species and counting of the individual specimens. The ground sensors form a wireless sensor network, with the smart traps and a collective sink surrounded by miniaturized multi-sensor nodes that capture temperature [°C] and relative humidity [%]. WSN can be designed based on IEEE 802.15.4 or ZigBee that provide low-power, low-cost and reduced data rate wireless transmissions either in point-to-point or mesh networks. Furthermore, communication through existing IEEE 802.11 and 2G-CDMA/3G networks can also be considered.</p> <p><u>Decision: First Problem Solver sent to make example for other students, written by PhD student.</u></p>
2	<p>2 Name (Mar 2016)</p> <p>Problem: climate caused severe droughts</p> <p>Solution: Soil and water conservation</p> <p><u>Decision: Short, the author was asked to elaborate and write a name.</u></p>
3	<p>3 Name (Apr 2016)</p> <p>Problem: Serbia has huge problem in agricultural field. Product which comes from other countries to Serbia are almost the same price as our price for agriculture products. Serbian farmer is forced to put a price down and continue with his hard work.</p> <p>Solution: In my opinion the solution is very simple. We need to raise taxes for incoming products and that will automatically allow better business conditions for our farmer and more earnings.</p> <p><u>Decision: The problem was current but without name of the author.</u></p>
4	<p>4 BOJAN IKRAŠ , ATILA HORVAT(May 2016)</p> <p>In Serbian:</p> <p>Problem: Zagađivanje vode i vazduha u Srbiji</p> <p>Solution: Zagađivanje vode u Srbiji je najveći ekološki problem, ocenio je danas menadžer za projekte iz oblasti ekologije u delegaciji Evropske unije u Srbiji Rajner Frojnd (Rainer Freund). "Zaštita voda predstavlja najveći izazov, jer se samo 10 odsto otpadnih voda u Srbiji preradjuje dok ostalo odlazi direktno u reke", rekao je Frojnd na brifingu za novinare o zaštiti životne sredine. Prema njegovim rečima, u oblasti zaštite voda Srbija još nema adekvatne zakone, niti infrastrukturu. To je takodje najskuplja</p>



oblast zaštite životne sredine, ali i najvažnija za rešavanje. "Medjutim, najskuplja opcija je ništa ne učiniti po pitanju zaštite voda", rekao je Frojnd i ukazao da je u EU jedan od najvećih zagadjivača vode poljoprivredna delatnost. "Sredstva koja se koriste, razne vrste đubriva, jesu najveći zagadjivači voda", rekao je Frojnd. Što se tiče zagadjenja vazduha, veliki deo štetnih čestica dolazi iz oblasti energetike. Menadžer za projekte iz oblasti energetike Gligo Vuković rekao je da su u termoelektranama "Obrenovac" i "Kolubara" postavljeni elektrostatički filteri, čime je smanjena emisija čestica 20 puta. „Pola miliona ljudi u EU umre prerano zbog zagadjenja vazduha. U Srbiji su velika zagadjenja vazduha u većim gradovima kao što su Beograd, Niš, Bor", istakao je Frojnd u razgovoru sa novinarima. Upozorio je da su u Srbiji najveći zagadjivači vazduha toplane i stari automobili, kao i veliki broj domaćinstava koja se greju na drva i ugalj. Što se tiče upravljanja otpadom, Frojnd je kazao da se u Nemačkoj, Holandiji i Švedskoj reciklira sav otpad, a u Srbiji samo osam odsto. "Većini država kao lakše rešenje čini se da zemlju zatrpaju deponijama nego da preraduju otpad", upozorio je Frojnd, ali je i dodao da je veoma složen proces doći do nivoa na kome je Nemačka, jer to podrazumeva sortiranje otpada u svakom domaćinstvu, pa na dalje. EU je do sada, kako je podsetio, za zaštitu životne sredine u Srbiji izdvojila pomoć od 700 miliona evra. Takodje, od projekata u zaštiti životne sredine koje je EU sporovala u Srbiji direktnu korist osetilo je oko pola miliona ljudi, dok se očekuje da u narednim godinama, od novih projekata, korist oseti barem još 800.000 stanovnika Srbije. Ove probleme bi mogli lakše rešiti ako bi ljude više upoznali sa stvarima kojima oni zagadjuju svoju okolinu u kojoj oni žive (edukaciona predavanja).  
BOJAN IKRAŠ, ATILA HORVAT

**Translation:**

*Problem: Air and water pollution in Serbia*

*Solution: Water pollution in Serbia is the biggest ecological problem, said today manager of ecology projects at the EU Delegation to Serbia, Rainer Freund. "Water protection is the biggest challenge, because only 10 percent of wastewater in Serbia is processed while the rest goes directly into the rivers," Freud said at a briefing for environmental journalists. According to him, in the area of water protection, Serbia still lacks adequate laws or infrastructure. It is also the most expensive area of environmental protection, but also the most important for solving. "However, the most expensive option is doing nothing," said Freund, pointing out that the in EU one of the largest polluters is agricultural sector. "The tools used and various types of fertilizers, are the biggest water pollutants," Freud said. As for air pollution, a large part of the harmful particles comes from the field of energy. Energy Projects Manager Gligo Vukovic said electrostatic filters were installed in thermal power plants "Obrenovac" and "Kolubara", which reduced the emission of particles 20 times. "Half a million people in the EU die prematurely due to air pollution. In Serbia, there are large air pollution in major cities such as Belgrade, Nis, Bor, "Freund said in a conversation with reporters. He warned that in Serbia the biggest air pollutants are heating plants and old cars, as well as a large number of households that heat on wood and coal .As for waste*



	<p><i>management, Freud said that all waste is recycled in Germany, the Netherlands and Sweden, and only eight percent in Serbia. "Most of the countries, as an easier solution, seem to be landing up landfills rather than processing waste," he warned, but he added that it is a very complicated process to reach the level at which Germany is, since it implies the sorting of waste in every household, and further" said Freund. The EU has so far, as he recalled, allocated extra aid to protect the environment in Serbia of EUR 700 million. Also, the European Union's environmental protection projects in Serbia have directly benefited about half a million people, while it is expected that in the coming years, from new projects, At least 800,000 people in Serbia feel at least. These problems could be solved more easily if people were to get to know more about things they pollute their environment in which they live (educational lessons).</i></p> <p><u>Decision: the text is dealing with pollution of the water and air by different sources. They have quoted Rajner Frojnd and his speech on waste water and power plants. Since they were writing in Serbian and we had two autors, we did not include this text into the competition for the main award.</u></p>
5	<p>5 ATILA HORVAT, BOJAN IKRAŠ (May 2016), BOJAN IKRAŠ , ATILA HORVAT(May 2016)  <b>In Serbian:</b>          Problem: Zagadjenje vode i vazduha u Srbiji          Solution: Zagadjenje vode u Srbiji je najveći ekološki problem, ocenio je danas menadžer za projekte iz oblasti ekologije u delegaciji Evropske unije u Srbiji Rajner Frojnd (Rainer Freund). "Zaštita voda predstavlja najveći izazov, jer se samo 10 odsto otpadnih voda u Srbiji preradjuje dok ostalo odlazi direktno u reke", rekao je Frojnd na brifingu za novinare o zaštiti životne sredine. Prema njegovim rečima, u oblasti zaštite voda Srbija još nema adekvatne zakone, niti infrastrukturu. To je takodje najskuplja oblast zaštite životne sredine, ali i najvažnija za rešavanje. "Medjutim, najskuplja opcija je ništa ne učiniti po pitanju zaštite voda", rekao je Frojnd i ukazao da je u EU jedan od najvećih zagadjivača vode poljoprivredna delatnost. "Sredstva koja se koriste, razne vrste đubriva, jesu najveći zagadjivači voda", rekao je Frojnd. Što se tiče zagadjenja vazduha, veliki deo štetnih čestica dolazi iz oblasti energetike. Menadžer za projekte iz oblasti energetike Gligo Vuković rekao je da su u termoelektranama "Obrenovac" i "Kolubara" postavljeni elektrostatički filteri, čime je smanjena emisija čestica 20 puta. „Pola miliona ljudi u EU umre prerano zbog zagadjenja vazduha. U Srbiji su velika zagadjenja vazduha u većim gradovima kao što su Beograd, Niš, Bor", istakao je Frojnd u razgovoru sa novinarima. Upozorio je da su u Srbiji najveći zagadjivači vazduha toplane i stari automobili, kao i veliki broj domaćinstava koja se greju na drva i ugalj. Što se tiče upravljanja otpadom, Frojnd je kazao da se u Nemačkoj, Holandiji i Švedskoj reciklira sav otpad, a u Srbiji samo osam odsto. "Većini država kao lakše rešenje čini se da zemlju zatrpaju deponijama nego da preradjuju otpad", upozorio je Frojnd, ali je i dodao da je veoma složen proces doći do nivoa na kome je Nemačka, jer to podrazumeva sortiranje otpada u svakom domaćinstvu, pa na dalje. EU je do sada, kako je podsetio, za zaštitu životne sredine u Srbiji izdvojila pomoć od 700 miliona evra.</p>



	<p>Takodje, od projekata u zaštiti životne sredine koje je EU sporovala u Srbiji direktnu korist osetilo je oko pola miliona ljudi, dok se očekuje da u narednim godinama, od novih projekata, korist oseti barem još 800.000 stanovnika Srbije.</p> <p>Ove probleme bi mogli lakše rešiti ako bi ljude više upoznali sa stvarima kojima oni zagadjuju svoju okolinu u kojoj oni žive (edukaciona predavanja).</p> <p>ATILA HORVAT, BOJAN IKRAŠ,</p> <p><b>Translation:</b></p> <p><i>Problem: Air and water pollution in Serbia</i></p> <p><i>Solution: Water pollution in Serbia is the biggest ecological problem, said today manager of ecology projects at the EU Delegation to Serbia, Rainer Freund. "Water protection is the biggest challenge, because only 10 percent of wastewater in Serbia is processed while the rest goes directly into the rivers," Freud said at a briefing for environmental journalists. According to him, in the area of water protection, Serbia still lacks adequate laws or infrastructure. It is also the most expensive area of environmental protection, but also the most important for solving. "However, the most expensive option is doing nothing," said Freud, pointing out that the in EU one of the largest polluters is agricultural sector. "The tools used and various types of fertilizers, are the biggest water pollutants," Freud said. As for air pollution, a large part of the harmful particles comes from the field of energy. Energy Projects Manager Gligo Vukovic said electrostatic filters were installed in thermal power plants "Obrenovac" and "Kolubara", which reduced the emission of particles 20 times. "Half a million people in the EU die prematurely due to air pollution. In Serbia, there are large air pollution in major cities such as Belgrade, Nis, Bor, "Freund said in a conversation with reporters. He warned that in Serbia the biggest air pollutants are heating plants and old cars, as well as a large number of households that heat on wood and coal .As for waste management, Freud said that all waste is recycled in Germany, the Netherlands and Sweden, and only eight percent in Serbia. "Most of the countries, as an easier solution, seem to be landing up landfills rather than processing waste," he warned, but he added that it is a very complicated process to reach the level at which Germany is, since it implies the sorting of waste in every household, and further" said Freund. The EU has so far, as he recalled, allocated extra aid to protect the environment in Serbia of EUR 700 million. Also, the European Union's environmental protection projects in Serbia have directly benefited about half a million people, while it is expected that in the coming years, from new projects, At least 800,000 people in Serbia feel at least. These problems could be solved more easily if people were to get to know more about things they pollute their environment in which they live (educational lessons).</i></p> <p><u>Decision: Text was sent before by the same authors.</u></p>
6	<p>6 Milica Golušin (May 2016)</p> <p>In Serbian:</p> <p>Problem: Ambalaža od korišćenih pesticida.</p>



	<p>Solution: Vraćanje ambalaže poljoprivrednim apotekama ili napraviti neku vrstu kontejnera koji bi se nalazili u blizini parcela u koje bi se odlagala ambalaza a zatim da naležna služba dalje odnosi na mesto uništavanja ili reciklaže.</p> <p><b>Translation:</b>  <i>Problem: Packages from used pesticides.</i>  <i>Solution: Restore the packaging of agricultural pharmacies or make some kind of containers that would be located near the parcel in which the packaging would be deposited, and then the support service would refer to the place of destruction or recycling.</i></p> <p><b>Decision:</b> <i>The author was on point about this problem, and gave one of the solutions.</i></p>
7	<p>7 Marina Milinkovic (May 2016)  <b>In Serbian:</b>          Problem: Prekomerna upotreba pesticida u poljoprivredi i zagađivanje zemljišta.          Solution: Resenje je da se uvede poljoprivredna strucna sluzba koja ce vrsiti nadzor nad vlasnicima koji poseduju parcele u vreme koriscenja pesticida,kako ne bi doslo do prekomernog unosenja pesticida u zemljište, jer se time zemljište zagađuje vise a samim tim i biljke koje se kasnije koriste u ishrani.          Marina Milinkovic, Katarina Ilic</p> <p><b>Translation:</b>  <i>Problem: Excessive use of pesticides in agriculture and soil contamination.</i>  <i>Solution: The solution is to introduce an agricultural expert service that will supervise owners who own plots at the time of pesticide use, in order not to get excessive pesticide input into the land, because the soil pollutes more and consequently the plants that are later used in nutrition.</i></p> <p><b>Decision:</b> <i>The authors was on point about this problem, but again we have two authors.</i></p>
8	<p>8 Nevena Mirkovic (May 2016)  <b>In Serbian:</b>          Problem: Kako spreciti secu suma?          Solution:          1) Da se posle svakog posecenog drveta posadi novo drvo.          2) Posebno da se zabrani bacanje smeca i paljenja vatre u sumi (piknik, rostiljanje i dr.)          3) Da je zastitimo od samog coveka, jer je covек najveći zagađivac i sekac.</p> <p><b>Translation:</b>  <i>Problem: Forest cutting - How to prevent the noise of the forest?</i>  <i>Solution: 1) To plant a new tree after every tree planted.</i>  <i>2) It is especially prohibited to throw litter and fire in the forest (picnic, barbecue, etc.)</i></p>



	<p>3) <i>To protect it from the very man, because man is the biggest contaminant and cutter.</i></p> <p><u>Decision: The author was on point about this problem, and gave one of the solutions</u></p>
9	<p>9 Natasa Kukic (May 2016)</p> <p><b>In Serbian:</b>  Problem: Kako spreciti zagadjenje vazduha od industrija?  Solution: Postaviti mrezeice ili filtere na odzake</p> <p><b>Translation:</b>  <i>Problem: How to prevent air pollution from industry?</i>  <i>Solution: Set up networks or filters to respond</i></p> <p><u>Decision: The author was on point about this problem, but two short in elaboration</u></p>
10	<p>10 Magdalena Pušić (May 2016)</p> <p>Problem: How to prevent the deterioration of plants due to salting roads in Winter weather?  Solution: For the maintaince of roads on Winter weather (removing ice and snow) it has been used 97% of NaCL or pebble. When the roads are „salted“, NaCL can be dropped on the soil which has an adverse influence on develop of plants. Because we cannot prevent the maintaince of roads with NaCL, we need to find the functional solution for the protection of plants which will be profitabile and decorative at the same time. That solution can be Agro Textiles mats. These mats can protects the soil from the developing of weed, insects and soil illnesses. They are made from UV stabilized polypropylene with high endurance and aesthetic features. There is a different types of Agro Textiles mats whose functionality is reflected in the high resistance such as harmful influences and water permeability. Also they are very suitable as frost protection.  Magdalena Pušić</p> <p><u>Decision: The author was on point about this problem. It can be moved into the group for the final award.</u></p>
11	<p>11 Rajko Brkić (May 2016)</p> <p><b>In Serbian:</b>  Problem: Danas veliki problem u poljoprivredi predstavlja velika količina komunalnog otpada koji se skladišti na raznim mestima bez kontrole. Taj otpad ne samo sto se raznosi po poljoprivrednim parcelama putem vetra već ih i zagadjuje.  Solution: Danas postoji veliki broj kopova u zemljištu, mesta sa kojih je eksplatisano zemljište. Takve rupe iskoristiti za skladištenje komunalnog otpada, ogranskog ili građevinskog otpada ukoliko nije viskok nivo podzemne vode u tim rupama. Ukoliko</p>





	<p>jeste prvo uraditi određene meliorativne mere, dreniranje tog terena, zaštititi da otpad ima dodir sa podzemnom vodom. Zatim taj otpad zatrpali zemljištem koje je plodno. Usled ubrzane urbanizacije danas imamo veliko količine plodnog zemljišta sa gradilišta koje se uklanjaju i rasipaju. Samim tim regulisali bi to rasipanje i zatrpali otpad. Ovim postupkom bi dobili nove obradive površine što bi bilo od izuzetnog značaja jer je obradivih površina sve manje, a problem sa otpadom bi bio rešen.</p> <p>Rajko Brkić Mirko Rodić</p> <p><b>Translation</b></p> <p><i>Problem: Today a major problem in agriculture is the large amount of municipal waste that is stored in various locations without control. This waste not only spreads through agricultural parcels through the wind, but also pollutes it.</i></p> <p><i>Solution: Today there is a large number of mines in the soil, the sites from which the land is extracted. Use such holes for storage of municipal waste, industrial or construction waste, if there is not a high level of groundwater in these holes. If you are first to do certain meliorative measures, drain the terrain, protect the waste from touching the groundwater. Then the waste is filled with soil that is fertile. Due to the accelerated urbanization, today we have large quantities of fertile land from the construction sites that are being removed and scattered. Consequently, they would regulate this waste removal. This procedure would provide new arable land, which would be of great importance because the arable land is getting smaller and the problem with the waste would be solved</i></p> <p><u>Decision: The authors was on point about this problem, but again we have two authors.</u></p>
12	<p>12 Name (May 2016)</p> <p>In Serbian:</p> <p>Problem: Smanjenje organskih materija u zemljištu?</p> <p>Solution: Unošenje stajnjaka na svakih 3-5 godina. Minimum 40t/ha. Zaoravanje žetvenih ostataka a ne njihovo spaljivanje.</p> <p><b>Translation:</b></p> <p><i>Problem: Reduction of organic matter in the soil?</i></p> <p><i>Solution: The introduction of manure every 3-5 years. Minimum 40t / ha. Storing crop residues and not burning them.</i></p> <p><u>Decision: The authors was on point about this problem, but there was no name to contact.</u></p>
13	13 Viktor Sabo (May 2016)





	<p><b>In Serbian:</b>  Problem: Kako spreciti zaslanjivanje zemljista i sacuvati biljke u uslovima navodnjavanja?  Solution: Kada gajimo biljke kojima je potrebno dodatno navodnjavanje tu nastaju problemi jer vode kojima se zemljiste zaliva sadrže određene količine soli koje su štetne i za tlo i za biljke. Resenje ovog problema moglo bi da bude preciscavanje vode ili ugradnja filtera u zalivne sisteme kako bi voda pre nego sto stigne do zemljista bila preciscena od svega sto ne zelimo da imamo. Kao i vece angazovanje coveka tokom zalivanja da bi biljka dobila tacno onoliko vode koliko joj je potrebno jer cest je slucaj da njive budu prezasicene vodom.  Viktor Sabo</p> <p><b>Translation:</b>  <i>Problem: How to prevent salinization of soil under irrigation</i>  <i>Solution: Problem occur when irrigation is performed with the water that has additional salts that are harmful for plants. The solution for this problem can be water treatment, desalination of the water before it is used in irrigation. Also it is necessary to have adequate water management, and to use only the amount of water that crop can use, in order to prevent soil saturation.</i></p> <p><b>Decision:</b> <u>The authors was on point about this problem, and it is considered for the main reward. Presented on the web site.</u></p>
14	<p><b>14 Name</b> (May 2016)  <b>In Serbian:</b>  Problem: Low price of domestic agricultural products. Milk, meat, corn, soy, wheat, vegetables.  Solution: Banning import of foreign products, except ones that country can't produce for itself due to climate etc. When the domestic market is filled, export mainly to Russia and China.  <b>Decision:</b> <u>The author did not list its name.</u></p>
15	<p><b>15 Name</b> (May 2016)  <b>In Serbian:</b>  Problem: Problem kiselosti zemljista u Vojvodini?  Solution: Zakiseljavanje zemljista prirodan je proces u svim zemljistima, a može biti povećano aktivnostima čoveka. Stepen zakiseljavanja zavisi od strukture zemljista, unosenju u zemljiste zagadenja, mineralnih đubriva i primenjenih agrotehnickih mera.  Resevanje kiselosti zemljita: -analizom zemljista pH-odabirom kultura koja se mogu uzgajati na kiselom zemljistu -obavljanjem kalcifikacije pre uzgoja polj. kultura-cescim obavljanjem kalcifikacije, s manjim kolicinama materijala kalcifikaciju.</p>



	<p>Decision: There was no name, but the answer is very similar as one already considered.</p>
16	<p>16 Grubisa Marko, Nestic Branislav (May 2016)</p> <p><b>In Serbian:</b></p> <p>Problem: Problem zaslanjivanja zemljista  Solution: Kako smo na vezbama uvideli koliko je velik uticaj moze so da ima na rast, razvoj i sam prinos biljke, mislim da ovom problemu treba posvetiti paznje. U Vojvodini slatine se prostiru na površini od oko 153.000 hektara i koriste se uglavnom za ispasu stoke. Postoje tri tipa zaslanjenih zemljista, a to su: soloncak, solonjec i solodj. Sva tri tipa imaju veoma lose hemijska i fizicka svojstva kao i mehanicka. Neki od nacina popravke hemijskih, fizickih i mehanickih osobina zaslanjenih zemljista su: 1).Izgradnja sistema za navodnjavanje (cilj je ispiranje soli i natrijuma) 2) Gipsovanje zemljista-kalcifikacija (cilj jeste da uneseni kalcijum zameni isprani natrijum iz zemljista i time stvori povoljnu strukturu odnosno vodni,vazdusni i toplotni rezim. 3) Odvodnjavanje (cilj jeste spustanje nivoa mineralizovane podzemne vode i nagomilavanje stetnih soli) 4) Duboko rastresanje zemljista-podrirvanje 5) Djubrenje organskim i mineralnim djubrivima (cilj jeste popravka fizickih i hemijskih osobina) 6)Setva odgovarajucih vrsti i sorti biljaka (to su one biljke koje imaju tolerantnost na povecan sadrzaj soli u zemljistu npr.kamilica,pirinac,raz,jecam,suncokret,secerna repa...) Ukoliko se ne spreci dalje pogorsanje svojstva zaslanjenih zemljista jednog dana ce se i slatinasta zemljista pretvoriti u slatine, zbog cega treba posvetiti vecu paznju ovom problemu.  Grubisa Marko, Nestic Branislav</p> <p><b>Translation:</b></p> <p><i>Problem: The problem of increase of the soil salinity of the land  Solution: As we saw in the exercises how great the influence salt can have on the growth, development and the yield of the plant itself, I think that this problem should be addressed. In Vojvodina, the sail marshes cover approximately 153,000 hectares and are mainly used for cattle breeding. There are three types of salty land, which are: Soloncak, Solonec and solodj. All three types have very poor chemical and physical properties as well as mechanical. Some of the ways of repairing the chemical, physical and mechanical properties of the soils are: 1). Construction of the irrigation system (the aim is to wash salts and sodium) 2) soil calcification (the aim is that the calcium introduced replaces the soaked sodium from the soil, thereby creating a favorable 3) Drainage (the aim is to lower the level of mineralized groundwater and accumulate harmful salt) 4) Deep soil spreading 5) Fertilization with organic and mineral fertilizers (the aim is to repair physical and chemical properties) 6) Sowing of the appropriate species and plant varieties (these are plants that have tolerance for increased salt content in the soil, for example, carrots, rats, pigs, jets, sunflowers, sugar beets ...). If one does not prevent further deterioration of the properties of the slaughtered land one day and the swampy lands turn into salty, which is why more attention should be paid to this problem.</i></p>



	<p>Decision: <u>Several authors considered the problem of soil salinization. Here we have two authors, but good explanation.</u></p>
17	<p>17 Vladimir Nakic (May 2016)</p> <p>In Serbian:</p> <p>Problem: kako smanjiti eolsku eroziju</p> <p>Solution: eolska erozija je erozija vetrom, to jest odnosenje površinskog sloja zemljišta, što je nepovoljno za setvu, prskanje i td. rešenje je zasadići poljozasitne pojaseve na određenom rastojanju, kako bi se smanila erozija.</p> <p><b>Translation:</b></p> <p><i>Problem: how to reduce eolic erosion</i></p> <p><i>Solution: Eolic erosion is wind erosion, that is, the relation of the surface layer of the soil, which is unfavorable for sowing, spraying, etc. The solution is to plant polystyrene belts at a certain level in order to reduce erosion</i></p> <p>Decision: <u>Good problem solver, considered for the reward.</u></p>
18	<p>18 Name (May 2016)</p> <p>In Serbian:</p> <p>Problem: Stete koje glodari prave na poljoprivrednim površinama.</p> <p>Solution: Upotrebljavati ptice predatore za glodare koji imaju svoje staniste na nasim prostorima. Kako? Tako što se oko njive posade drva, koja bi bila staniste za kobce ili sove koje koriste glodare u svojoj ishrani. Takodje moze i da se na nekoliko mesta u samoj njivi zabodu stapovi, koji bi sluzili pticama za osmatranje i lov.</p> <p><b>Translation:</b></p> <p><i>Problem: Damage caused by rodents on agricultural land.</i></p> <p><i>Solution: Use bird predators for rodents that have their habitat in our area. How? By planting trees around the field, which would be home for birds using rodents in their diet. It is also possible to stab a few sticks in the field itself, which would serve the birds for observation and hunting.</i></p> <p>Decision: <u>Good problem solver, no contact info.</u></p>
19	<p>19 Rada Sucur (May 2016)</p> <p>In Serbian:</p> <p>Problem: uklanjanje (spaljivanje) zetvenih ostataka</p>



	<p>Solution: neka od resenja sprovedjenja mera protiv spaljivanja zetenih ostataka:  1.edukacija poljoprivrednih proizvođača od strane stručnih lica  2.redovna kontrola stručne inspekcije pri završetku zetje  3.novčana pomoć proizvođačima za podsticaj zaoravanja zetje ostataka ili pravljenja stocne hrane ili prostirke  Rada Sućur  Sljadjana Nikoli</p> <p><b>Translation:</b>  <i>Problem: The removal (incineration) of crop residues</i>  <i>Solution: The measures against burning crop residues (biomass) are: education of farmers by experts, regular control by expert inspection at the completion of harvest, financial assistance to producers in order to encourage incorporation of crop residues or making animal food or bedding.</i></p> <p><u>Decision: Good problem solver, we have two authors but it is translated and given on the web page.</u></p>
20	<p>20 Name (May 2016)  In Serbian:  Problem: Problem kiselih zemljišta?  Solution: Dodavanje kalcijum karbonata.izvršavanje mere pod nazivom gipsovanje dodavanjem alkalnih jedinjenja koja će svesti kiselu ph vrednost na neutralnu...</p> <p><u>Decision: No personal details for contact, and similar answer as before.</u></p>
21	<p>21 Name (May 2016)  In Serbian:  Problem: Ispiranjem zemljišta dolazi do zagađenja podzemnih voda i zagađenja vode za navodnjavanje.  Solution: Pravljenje filtera za preciscavanje podzemnih voda i skupljanja hranjivih elemenata,omogućava i busenje bunara na manjoj dubini i smanjenje troskova.</p> <p><b>Translation:</b>  <i>Problem: Land drainage leads to contamination of groundwater and pollution of water for irrigation.</i>  <i>Solution: Creating filters for groundwater scrubbing and collecting nutrients, also facilitates drilling of wells at a lower depth and reducing costs.</i></p> <p><u>Decision: No personal details for contact, and answer should be more elaborated.</u></p>



22	<p>22 Zoran Milanovci (May 2016)</p> <p><b>In Serbian:</b></p> <p>Problem: Problem kiselosti zemljišta u Vojvodini i okolini?</p> <p>Solution: Zakiseljavanje zemljišta prirodan je proces u svim zemljištima, a može biti povećano aktivnostima čoveka. Stepem zakiseljavanja zavisi od strukture zemljišta, unosenju u zemljište atmosferskih zagađenja, mineralna đubriva i primenjenih agrotehničkih mera. Resavanje kiselosti zemljišta:-analizom zemljišta (pH)-odabirom kultura koja se mogu uzgajati na kiselom zemljištu -obavljanjem kalcifikacije pre uzgoja poljoprivrednih kultura-čestim obavljanjem kalcifikacije, s manjim količinama materijala za kalcifikaciju.</p> <p>Zoran Milanovci</p> <p><b>Translation:</b></p> <p><i>Problem: The problem of soil acidity in Vojvodina and region?</i></p> <p><i>Solution: The soil acidification is a natural process which can be increased by a human activity. The degree of acidification depends on the soil structure, deposition of atmospheric pollution, use of mineral fertilizers and applied agro-technical measures.</i></p> <p><i>Solving soil acidity can be done by: regular soil pH analysis, selection of the culture that can be grown on acid soil, by calcification of growing crops, by frequent calcification performance, with smaller quantities of material for liming.</i></p> <p><u>Decision: Good problem solver considered for main reward and present on web site.</u></p>
23	<p>23 Name (Aug 2017)</p> <p>Problem: There has been a problem of excessive wind in my locality and it has affected the rate of evapotranspiration thereby leading to wilting and death of plants</p> <p>Solution: A solution to this problem is to use shelter belts and unfortunately shelter belt technology is difficult in my locality.</p> <p><u>Decision: Good problem unfortunately no contact info and additional elaboration required, added to web page.</u></p>
24	<p>24 Name (Oct 2017)</p> <p><b>In Serbian:</b></p> <p>Problem: Kako zaštititi vazduh od zagađivanja</p> <p>Solution: Povećanje površina pod šumama, parkovima, vetrozaštitnim pojasevima i zasadima.</p> <p>Razblaživanje čistim vazduhom. Izbor sirovina i goriva koji manje zagađuju okolinu.</p> <p>Ninković Katarina Pažitnaji Jasmina</p> <p><b>Translation:</b></p>



	<p><i>Problem: How to protect air from pollution</i>  <i>Solution: Increasing areas under forests, parks, windbreaks and plantations. Dilution with clean air. Selection of raw materials and fuels that pollute the environment less.</i></p> <p><b>Decision:</b> <u>Good problem solver but very obvious.</u></p>
25	<p>25 Name (Oct 2017)  <b>In Serbian:</b>          Problem: Problem sabijanja zemljišta          Solution: Sabijanje (kompakcija) zemljišta je jedan od osnovnih problema savremene poljoprivrede. Prekomerno korišćenje teške mehanizacije za obradu, žetvu i transport na prevlaženim zemljištima, intenzivno ratarenje, neodgovarajući plodoredi. Sabijanjem se smanjuje njegova fizička plodnost usled smanjenja zaliha i dostupnosti vode i hranljivih materija biljkama.</p> <p><b>Translation:</b>  <i>Problem: Land compaction problem</i>  <i>Solution: Land consolidation is one of the basic problems of modern agriculture. Excessive use of heavy machinery for processing, harvesting and transporting on soil, intensive cropping, inadequate crop rotation. Compaction land has reduced fertility due to reduced stock and availability of water and nutrients to plants.</i></p> <p><b>Decision:</b> Good problem unfortunately no contact info.</p>
26	<p>26 Ikraš Bojan (Dec 2017)  <b>In Serbian:</b>          Problem: Kako da rešimo da organski otpad sa životinjskih farmi bude profitabilan?          Solution: Postoji nova tehnologija koja obezbeđuje da dnevno proizvedena količina otpada uđe u proces koji traje 7 dana i na taj način je potpuno eliminisana potreba za deponijama otpada. Tehnologija je primenjiva kod kokošijeg i svinjskog otpada gde nije moguća primena kalifornijske gliste. Proizvodi nastali primenom ove tehnologije vraćaju se prirodi primenom u obradi zemljišta i ishrani živine, svinja, ribe i sl. Otpad sa životinjskih farmi može da predstavi ozbiljne ekološke probleme, ali može da bude i veoma značajna sirovina. Ovaj otpad se fermentacijom pretvara u veoma kvalitativno đubrivo, ali za to je potrebno i do godinu dana, dok taj otpad stoji izaziva ekološke posledice. Kod kravljeg otpada se koristi kalifornijska glista koja skraćuje proces na oko 60-90 dana i dobijamo humus. Nova tehnologija koristi larve obične muve koje se hrane otpadom i tako taj otpad prerađuju u humus. Ovim načinom smanjujemo bolesti koje se mogu pojaviti npr. salmonela.          Ikraš Bojan, Atila Horvat</p> <p><b>Translation</b></p>



*Problem: How can we make organic waste from animal farms profitable?  
Solution: There is a new technology that ensures that the daily waste produced enters a process that lasts 7 days, thus eliminating the need for waste dumps completely. The technology is applicable to fowl and pig waste. The products produced using this technology are returned to nature by applying in the cultivation of land and the feeding of livestock, pigs, fish, etc. Waste from animal farms can present serious ecological problems, but it may also be a very important raw material. It can be turned into a very qualitative fertilizer, but it takes up to a year for this waste to cause ecological consequences. In cow waste, Californian worm is used which shortens the process for about 60-90 days and produces humus. The new technology uses larvae of regular flies that feed on waste and thus waste is processed into humus. This way we reduce diseases that can occur, for example, Salmonella. Ikrah Bojan, Atila Horvat*

Decision: The authors have noticed a problem and gave good solution. On the web. But we have two authors.

**Problem solver of the first year was:** Magdalena Pušić (May 2016) with her creative thinking on the topic of “How to prevent the deterioration of plants due to salting roads in winter weather?” She received ticket for the EXIT 2017 music festival.

