

**Agricultural Innovation & Engineering Technologies**

<b>IS-4122-08R</b>	<b>Enhanced Climate Control of Semi-arid and Arid Greenhouses Equipped with Fogging Systems</b>	App. Duration: 3 years																		
4001	<table border="0"> <tr> <td>Linker, R.</td> <td>Technion</td> <td></td> </tr> <tr> <td>Kacira, M.</td> <td>U Arizona</td> <td>AZ</td> </tr> <tr> <td>Arbel, A.</td> <td>ARO, Min. Ag.</td> <td></td> </tr> <tr> <td>Giacomelli, G.A.</td> <td>U Arizona</td> <td>AZ</td> </tr> <tr> <td>Kubota, C.</td> <td>U Arizona</td> <td>AZ</td> </tr> </table>	Linker, R.	Technion		Kacira, M.	U Arizona	AZ	Arbel, A.	ARO, Min. Ag.		Giacomelli, G.A.	U Arizona	AZ	Kubota, C.	U Arizona	AZ				
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Arbel, A.	ARO, Min. Ag.																			
Giacomelli, G.A.	U Arizona	AZ																		
Kubota, C.	U Arizona	AZ																		
<b>IS-4255-09</b>	<b>Fusion of Hyper-Spectral and Thermal Images for Evaluating Nitrogen and Water Status in Potato Fields for Variable Rate Application</b>	App. Duration: 3 years																		
	<table border="0"> <tr> <td>Cohen, Y.</td> <td>ARO, Min. Ag.</td> <td></td> </tr> <tr> <td>Rosen, C.J.</td> <td>U Minnesota</td> <td>MN</td> </tr> <tr> <td>Alchanatis, V.</td> <td>ARO, Min. Ag.</td> <td></td> </tr> <tr> <td>Mulla, D.J.</td> <td>U Minnesota</td> <td>MN</td> </tr> <tr> <td>Heuer, B.</td> <td>ARO, Min. Ag.</td> <td></td> </tr> <tr> <td>Dar, Z.</td> <td>Isr. Min. Agr.</td> <td></td> </tr> </table>	Cohen, Y.	ARO, Min. Ag.		Rosen, C.J.	U Minnesota	MN	Alchanatis, V.	ARO, Min. Ag.		Mulla, D.J.	U Minnesota	MN	Heuer, B.	ARO, Min. Ag.		Dar, Z.	Isr. Min. Agr.		
Cohen, Y.	ARO, Min. Ag.																			
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Dar, Z.	Isr. Min. Agr.																			
<b>US-4280-10R</b>	<b>Automated imaging broiler chicksexing for gender-specific and efficient production</b>	App. Duration: 3 years																		
4257	<table border="0"> <tr> <td>Tao, Y.</td> <td>U Maryland</td> <td>MD</td> </tr> <tr> <td>Mizrach, A.</td> <td>ARO, Min. Ag.</td> <td></td> </tr> <tr> <td>Alchanatis, V.</td> <td>ARO, Min. Ag.</td> <td></td> </tr> <tr> <td>Shamir, N.</td> <td>ARO, Min. Ag.</td> <td></td> </tr> <tr> <td>Porter, T.E.</td> <td>U Maryland</td> <td>MD</td> </tr> </table>	Tao, Y.	U Maryland	MD	Mizrach, A.	ARO, Min. Ag.		Alchanatis, V.	ARO, Min. Ag.		Shamir, N.	ARO, Min. Ag.		Porter, T.E.	U Maryland	MD				
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Alchanatis, V.	ARO, Min. Ag.																			
Shamir, N.	ARO, Min. Ag.																			
Porter, T.E.	U Maryland	MD																		
<b>IS-4374-11C</b>	<b>Micrometeorological methods for inferring whole canopy evapotranspiration in large agricultural structures: measurements and modeling</b>	App. Duration: 3 years																		
3861	<table border="0"> <tr> <td>Tanny, J.</td> <td>ARO, Min. Ag.</td> <td></td> </tr> <tr> <td>Katul, G.</td> <td>Duke U</td> <td>NC</td> </tr> <tr> <td>Cohen, S.</td> <td>ARO, Min. Ag.</td> <td></td> </tr> <tr> <td>Teitel, M.</td> <td>ARO, Min. Ag.</td> <td></td> </tr> </table>	Tanny, J.	ARO, Min. Ag.		Katul, G.	Duke U	NC	Cohen, S.	ARO, Min. Ag.		Teitel, M.	ARO, Min. Ag.								
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Teitel, M.	ARO, Min. Ag.																			
<b>IS-4480-12</b>	<b>Evaluating and predicting water consumption by irrigated agriculture in the semi-arid regions of Israel and the U.S.: inverse biophysical modeling utilizing spaceborne imagery</b>	App. Duration: 3 years																		
	<table border="0"> <tr> <td>Karnieli, A.</td> <td>Ben Gurion U</td> <td></td> </tr> <tr> <td>French, A.N.</td> <td>USDA, ARS</td> <td>AZ</td> </tr> <tr> <td>Bounoua, L.</td> <td>NASA, Goddard</td> <td>MD</td> </tr> <tr> <td>Ben-Gal, A.</td> <td>ARO, Min. Ag.</td> <td></td> </tr> <tr> <td>Imhoff, M.</td> <td>NASA, Goddard</td> <td>MD</td> </tr> </table>	Karnieli, A.	Ben Gurion U		French, A.N.	USDA, ARS	AZ	Bounoua, L.	NASA, Goddard	MD	Ben-Gal, A.	ARO, Min. Ag.		Imhoff, M.	NASA, Goddard	MD				
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**BARD Approved Projects**  
**2008 - 2012**  
**Agriculture Economics and Rural Development**

6/4/2012

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**US-4096-08**

**The Use of Branding and Sampling in Agricultural Fresh Produce**

App. Duration: 3 years

Zilberman, D.	UC, Berkeley	CA
Heiman, A.	Hebrew U	
Jin, Y.	Rutgers	NJ

**BARD Approved Projects**  
**2008 - 2012**  
**Animal Health and Invasive Species**

6/4/2012

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<b>IS-4100-08C</b> 3679	<b>Characterization and Control Strategies of Low Pathogenic Avian Influenza Virus H9N2</b> Perk, S. Isr. Vet. Inst. Mundt, E. U Georgia GA Panshin, A. Isr. Vet. Inst. Davidson, I. Isr. Vet. Inst. Shkoda, I. Isr. Vet. Inst. Altory, A. Isr. Vet. Inst. Garcia, M. U Georgia GA Golander, N. Isr. Vet. Inst. Nagar, S. Isr. Vet. Inst.	App. Duration: 3 years
<b>IS-4105-08</b>	<b>Exploration of the Epidemiology of a Newly Emerging Cattle-Epizootic Hemorrhagic Disease Virus in Israel</b> Klement, E. Hebrew U Howarth, E. U Georgia GA Wilson, W.C. USDA, ARS WY Stallknecht, D. U Georgia GA Mead, D. U Georgia GA Yadin, H. Isr. Vet. Inst. Lensky, I. Bar Ilan U Galon, N. Haklait	App. Duration: 3 years
<b>IS-4106-08R</b> 3982	<b>Genomic and Organismal Studies to Elucidate the Mechanisms of Infectivity of Entomopathogenic Fungi to Ticks</b> Glazer, I. ARO, Min. Ag. Churchill, A.C.L. Cornell U NY Gindin, G. ARO, Min. Ag. Samish, M. Isr. Vet. Inst.	App. Duration: 3 years
<b>IS-4185-09F</b>	<b>Might Bacterial Symbionts Influence Vectorial Capacity of Biting Midges for Ruminant Viruses?</b> Gottlieb, Y. Hebrew U Mullens, B. UC, Riverside CA	App. Duration: 1 year
<b>US-4187-09C</b> 3315	<b>Control of Bovine Anaplasmosis: Protective Capacity of the MSP2 Allelic Repertoire</b> Brayton, K. WA State U WA Shkap, V. Isr. Vet. Inst. Palmer, G.H. WA State U WA Brown, W.C. WA State U WA Molad, T. Isr. Vet. Inst.	App. Duration: 3 years
<b>US-4190-09R</b> 8717	<b>Development of Fish Edible Vaccines on the Yeast and Redmicroalgae Platforms</b> Vakharia, V.N. UMBC MD Arad, S. Ben Gurion U Zohar, Y. UMD Marine MD BioTech Weinstein, Y. Ben Gurion U Abramovitch-Gottlib, L. Ben Gurion U	App. Duration: 3 years

## Animal Health and Invasive Species

IS-4192-09	<b>Development of a Plasmid-Based Reverse Genetics System for the Bluetongue and Epizootic Hemorrhagic Disease Viruses to Allow a Comparative Characterization of the Function of the NS3 Viroprotein in Viral Egress</b>	App. Duration: 3 years
	Ehrlich, M.                      Tel Aviv U	
	Parker, J.S.L.                  Cornell U                      NY	
	Dermody, T.S.                 Vanderbilt U.                 TN	
IS-4281-10R 4189	<b>Identification of genes involved in virulence of <i>Escherichia coli</i> mastitis by signature tagged mutagenesis</b>	App. Duration: 3 years
	Shpigel, N.Y.                  Hebrew U	
	Schukken, Y.H.                Cornell U                      NY	
	Rosenshine, I.                 Hebrew U	
IS-4287-10	<b>Discovery and reconstitution of cross-reactive vaccine targets for H5 and H9 avian influenza</b>	App. Duration: 3 years
	Gershoni, J.M.                 Tel Aviv U	
	Swayne, D.E.                  USDA, ARS                    GA	
	Pupko, T.                        Tel Aviv U	
	Perk, S.                          Isr. Vet. Inst.	
	Panshin, A.                      Isr. Vet. Inst.	
	Lublin, A.                        Isr. Vet. Inst.	
	Golander, N.                    Isr. Vet. Inst.	
IS-4290-10	<b>Honeybee modulation of infection with the Israeli acute paralysis virus, in asymptomatic, acutely infected and CCD colonies</b>	App. Duration: 3 years
	Chejanovsky, N.                ARO, Min. Ag.	
	Cox-Foster, D.L.                Penn State U                 PA	
	Soroker, V.                      ARO, Min. Ag.	
	Ophir, R.                         ARO, Min. Ag.	
US-4378-11	<b>Brucella second messenger coordinates stages of infection</b>	App. Duration: 3 years
	Splitter, G.A.                  U Wisconsin                    WI	
	Banai, M.                        Isr. Vet. Inst.	
	Harms, J.S.                      U Wisconsin                    WI	
US-4379-11	<b>Antigenic cartography of H9 avian influenza virus and its application to vaccine selection</b>	App. Duration: 3 years
	Spackman, E.                  USDA, ARS                    GA	
	Davidson, I.                      Isr. Vet. Inst.	
IS-4380-11C 4185	<b>An investigation of the role of bacterial symbionts in regulating the biology and vector competence of <i>Culicoides</i> vectors of animal viruses</b>	App. Duration: 3 years
	Gottlieb, Y.                      Hebrew U	
	Mullens, B.                      UC, Riverside                 CA	
	Stouthamer, R.                 UC, Riverside                 CA	

**BARD Approved Projects**  
**2008 - 2012**  
**Animal Production**

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<b>US-4113-08</b>	<b>Nutrition of the Developing Chick Embryo: Nutrient Uptake Systems of the Yolk Sac Membrane and Embryonic Intestine</b> Wong, E.A. Virginia Polytech VA Uni, Z. Hebrew U	App. Duration: 3 years
<b>US-4117-08R</b>	<b>Development and Use of Leptin Receptor Antagonists to Increase Appetite and Adaptive Metabolism in Ruminants</b> Boisclair, Y. R. Cornell U NY Gertler, A. Hebrew U	App. Duration: 3 years
<b>IS-4198-09C</b> 3836	<b>Development of Strategic Pre-Natal Cycling Thermal Treatments to Improve Livability and Productivity of Heavy Broilers</b> Yahav, S. ARO, Min. Ag. Brake, J.T. N Carolina St. U NC Meiri, N. ARO, Min. Ag.	App. Duration: 3 years
<b>IS-4199-09R</b>	<b>Epigenetic Adaptation: The Regulatory Mechanisms of Hypothalamic Plasticity that Determine Stress-Response Set Point</b> Meiri, N. ARO, Min. Ag. Denbow, D.M. Virginia Polytech VA Denbow, C.J. Virginia Polytech VA	App. Duration: 3 years
<b>IS-4201-09</b>	<b>Genome-Wide Association Study of Copy Number Variation and QTL for Economic Traits in Holstein Cattle</b> Seroussi, E. ARO, Min. Ag. Liu, G. USDA, ARS MD	App. Duration: 1 year
<b>IS-4202-09R</b> 3858	<b>Control of Synchronization of Puberty in the Russian Sturgeon</b> Sivan-Levavi, B. Hebrew U Doroshov, S.I. UC, Davis CA Chapman, F.A. U Florida FL Degani, G. MIGAL R&D Van Eenennaam, J. UC, Davis CA	App. Duration: 3 years
<b>IS-4296-10</b>	<b>Gastrointestinal osmoregulatory activity in <i>Tilapia</i> and its effects on growth, an opportunity for fish diet developments</b> Cnaani, A. ARO, Min. Ag. Grau, E.G. U Hawaii HI Lerner, D. U Hawaii HI Harpaz, S. ARO, Min. Ag.	App. Duration: 3 years
<b>IS-4300-10</b>	<b>The effects of enhanced hypertrophy, reduced oxygen supply and heat load on breast meat yield and quality in broilers</b> Cahaner, A. Hebrew U Bilgili, S.F. Auburn U AL Halevy, O. Hebrew U Lien, R.J. Auburn U AL Joiner, K. Auburn U AL	App. Duration: 3 years
<b>IS-4390-11</b>	<b>Exploring the role of the rumen microbiota in determining the feed efficiency of dairy cows</b> Mizrahi, I. ARO, Min. Ag. White, B.A. U Illinois IL	App. Duration: 3 years

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<b>IS-4394-11R</b>	<b>Optimization of methodology for genomic selection of moderate and large dairy cattle populations</b>		App. Duration: 3 years
4293	Weller, J.I.	ARO, Min. Ag.	
	Misztal, I.	U Georgia	GA
	Ron, M.	ARO, Min. Ag.	
<b>IS-4489-12F</b>	<b>Melanocortin signaling in fish: Investigation and utilization for increased food intake</b>		App. Duration: 1 year
	Gothilf, Y.	Tel Aviv U	
	Cone, R.	Vanderbilt U.	TN
	Harpaz, S.	ARO, Min. Ag.	
<b>IS-4493-12</b>	<b>Delivery of gene silencing agents for improving aquaculture production efficiencies</b>		App. Duration: 3 years
	Sagi, A.	Ben Gurion U	
	Du, J.S-J.	U MD, Baltimore	MD
	Zohar, Y.	UMBC	MD
<b>IS-4499-12CR</b>	<b>Multi-peptide control of puberty in fish and its application to aquaculture</b>		App. Duration: 3 years
8719	4393	Sivan-Levavi, B.	Hebrew U
		Zmora, N.	UMBC
		Zohar, Y.	UMBC
		Gothilf, Y.	Tel Aviv U

## Crop Health and Invasive Species

<b>IS-4155-08</b>	<b>One Host, Two Associated Pests: Responses of Tomato Plants to Whiteflies and Broad Mites</b>	App. Duration: 1 year
	Perl-Treves, R. Bar Ilan U	
	Walling, L.L. UC, Riverside CA	
	Soroker, V. ARO, Min. Ag.	
<b>US-4158-08</b>	<b>Broad-spectrum Resistance to Root-Knot Nematodes in Transgenic Cucurbits</b>	App. Duration: 3 years
	Davis, E.L. N Carolina St. U NC	
	Oka, Y. ARO, Min. Ag.	
	Gal-On, A. ARO, Min. Ag.	
	Wehner, T.C. N Carolina St. U NC	
	Zelcer, A. ARO, Min. Ag.	
<b>IS-4159-08C</b> 3785	<b>MAP Kinase Cascades Activated by SIMAPKKK<math>\epsilon</math> and their Involvement in Tomato Resistance to Bacterial Pathogens</b>	App. Duration: 3 years
	Sessa, G. Tel Aviv U	
	Martin, G.B. Boyce Thompson NY	
<b>IS-4163-08C</b> 3634	<b>Molecular Characterization of PBAN G-protein Coupled Receptors in Moth Pest Species: Design of Antagonists</b>	App. Duration: 3 years
	Rafaeli, A. ARO, Min. Ag.	
	Jurenka, R.A. Iowa St. U IA	
<b>US-4165-08C</b> 3623	<b>Post-transcriptional Regulation of Host Genes Involved with Symptom Expression in Potyviral Infections</b>	App. Duration: 3 years
	Whitham, S.A. Iowa St. U IA	
	Gal-On, A. ARO, Min. Ag.	
	Gaba, V.P. ARO, Min. Ag.	
<b>IS-4167-08C</b> 3793	<b>Fungal Iron Acquisition, Oxidative Stress and Virulence in the Cochliobolus-maize Interaction</b>	App. Duration: 3 years
	Horwitz, B.A. Technion	
	Turgeon, B.G. Cornell U NY	
<b>IS-4169-08R</b> 4058	<b>Identifying <i>Arabidopsis thaliana</i> Defense Genes to Phloem-feeding Insects</b>	App. Duration: 3 years
	Morin, S. Hebrew U	
	Walker, G.P. UC, Riverside CA	
	Walling, L.L. UC, Riverside CA	
	Aharoni, A. Weizmann Inst.	
<b>IS-4205-09C</b> 3356	<b>Rational Design of Insect Control Agent Prototypes Based on Pyrokinin/PBAN Neuropeptide Antagonists</b>	App. Duration: 3 years
	Altstein, M. ARO, Min. Ag.	
	Nachman, R.J. USDA, ARS TX	
<b>IS-4210-09</b>	<b>IQD1 Function in Defense Responses</b>	App. Duration: 3 years
	Levy, M. Hebrew U	
	Zielinski, R. U Illinois IL	
	Reddy, A.S. Colorado St. U CO	







**BARD Approved Projects**  
**2008 - 2012**  
**Crop Health and Invasive Species**

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**IS-4513-12**

**The role of RNA-dependent RNA polymerase 1 in plant virus  
defense**

App. Duration: 3 years

Gal-On, A.

ARO, Min. Ag.

Ding, S.W.

UC, Riverside

CA

Gaba, V.P.

ARO, Min. Ag.

Paris, H.S.

ARO, Min. Ag.

**BARD Approved Projects  
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<b>IS-4125-08C</b> 3332	<b>The Molecular and Biochemical Basis of Terpenoid Aroma Formation in Tomato</b> Lewinsohn, E.                      ARO, Min. Ag. Dudareva, N.                      Purdue                              IN Sitrit, Y.                              Ben Gurion U Pichersky, E.                      U Michigan                      MI	App. Duration: 3 years
<b>US-4128-08</b>	<b>Genetic Linkage Mapping of Basil (<i>Ocimum basilicum</i>)</b>  Belanger, F.C.                      Rutgers                              NJ Dudai, N.                              ARO, Min. Ag. Katzir, N.                              ARO, Min. Ag. Simon, J.E.                          Rutgers                              NJ	App. Duration: 1 year
<b>IS-4134-08R</b> 4019	<b>Identification and Allelic Variation of Genes Involved in the Potato Glycoalkaloid Biosynthetic Pathway</b> Ginzberg, I.                          ARO, Min. Ag. Veilleux, R.E.                      Virginia Polytech              VA Tokuhisa, J.                          Virginia Polytech              VA	App. Duration: 3 years
<b>IS-4137-08</b>	<b>Population Genomics and Association Mapping of Disease Resistance Genes in Israeli Populations of Wild Relatives of Wheat, <i>Triticum dicoccoides</i> and <i>Aegilops speltoides</i></b> Breiman, A.                          Tel Aviv U Dvorak, J.                              UC, Davis                          CA Korol, A.B.                              U Haifa Akhunov, E.                          Kansas St. U                      KS	App. Duration: 3 years
<b>IS-4222-09CF</b> 3123	<b>Chemical Genetics of the COP9 Signalosome: Identification of Novel Regulators of Plant Development</b> Chamovitz, A.D.                      Tel Aviv U Yang, Z.                                  UC, Riverside                      CA	App. Duration: 1 year
<b>IS-4223-09C</b> 3877	<b>System Approach to Understanding the Metabolic Diversity in Melon</b> Katzir, N.                              ARO, Min. Ag. Giovannoni, J.                      Boyce Thompson              NY Aharoni, A.                              Weizmann Inst. Fei, Z.                                      Boyce Thompson              NY Lewinsohn, E.                          ARO, Min. Ag. Schaffer, A.A.                          ARO, Min. Ag. Tadmor, Y.                              ARO, Min. Ag.	App. Duration: 3 years
<b>US-4228-09</b>	<b>The Role of FtsH11 Protease in Chloroplast Biogenesis and Maintenance at Elevated Temperatures in Model and Crop Plants</b> Chen, J.                                  USDA, ARS                          TX Adam, Z.                                  Hebrew U Admon, A.                                  Technion	App. Duration: 3 years
<b>IS-4229-09</b>	<b>Structure, Function and Utilization of Plant Photosynthetic Reaction Centers</b> Nelson, N.                              Tel Aviv U Yocum, C.F.                          U Michigan                          MI	App. Duration: 3 years

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**2008 - 2012**  
**Crop Production**

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<b>IS-4234-09</b>	<b>Understanding Cuticle Development in Tomato through the Study of Novel Germplasm with Malformed Cuticles</b> Schaffer, A.A.                      ARO, Min. Ag. Rose, J.K.                              Cornell U                              NY	App. Duration: 3 years
<b>IS-4237-09C</b> 3917	<b>Inactivation of SGS3 as Molecular Basis for RNA Silencing Suppression by TYLCV V2</b> Gafni, Y.                              ARO, Min. Ag. Citovsky, V.                          NYSU, Stony Brook              NY	App. Duration: 3 years
<b>IS-4243-09R</b> 4146	<b>Calcium-regulated Transcription Factors Mediating Carbon Metabolism in Response to Drought</b> Fromm, H.                              Tel Aviv U Hasegawa, P.M.                      Purdue                                      IN Fait, A.                                      Ben Gurion U	App. Duration: 3 years
<b>IS-4245-09</b>	<b>Type IV Secretion System of <i>Agrobacterium tumefaciens</i>: Components and Structures</b> Elbaum, M.                              Weizmann Inst. Christie, P.J.                              U Texas, Houston              TX	App. Duration: 3 years
<b>IS-4246-09</b>	<b>Precise Mapping of Growth Hormone Effects by Cell-Specific Gene Activation Response</b> Savaldi-Goldstein, S.              Technion Mockler, T.                              Oregon St. U                              OR	App. Duration: 3 years
<b>IS-4248-09R</b> 4068	<b>The Role of Cysteine Partitioning into Glutathione and Methionine Synthesis During Normal and Stress Conditions</b> Amir, R.                                      MIGAL R&D Oliver, D.J.                              Iowa St. U                              IA Galili, G.                                      Weizmann Inst. Shanks, J.V.                              Iowa St. U                              IA	App. Duration: 3 years
<b>IS-4249-09</b>	<b>Exploring General and Specific Regulators of Phase Transitions for Crop Improvement</b> Eshed, Y.                                      Weizmann Inst. Hake, S.                                      USDA, ARS                              CA	App. Duration: 3 years
<b>IS-4321-10</b>	<b>A three crops test for the ODO breeding method</b>  Tadmor, Y.                                      ARO, Min. Ag. Lippman, Z.B.                              Cold Spring Harbor              NY Jackson, D.                                      Cold Spring Harbor              NY Zamir, D.                                      Hebrew U	App. Duration: 3 years
<b>US-4322-10</b>	<b>Scent biosynthesis in petunia flowers under normal and adverse environmental conditions</b> Pichersky, E.                              U Michigan                              MI Vainstein, A.                              Hebrew U Dudareva, N.                              Purdue                                      IN	App. Duration: 3 years

**BARD Approved Projects**  
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US-4323-10C 4024	<b>Molecular characterization and deployment of the high-temperature adult plant stripe rust resistance gene Yr36 from wheat</b> Dubcovsky, J. UC, Davis CA Fahima, T. U Haifa Blechl, A.E. USDA, ARS CA	App. Duration: 3 years
IS-4325-10	<b>Towards improved grape nutrition and defense: The regulation of stilbene metabolism under drought</b> Fait, A. Ben Gurion U Cramer, G.R. U Nevada NV Perl, A. ARO, Min. Ag.	App. Duration: 3 years
US-4334-10	<b>Protection of the photosynthetic apparatus during desiccation in resurrection plants</b> Kirchhoff, H. WA State U WA Reich, Z. Weizmann Inst.	App. Duration: 3 years
IS-4336-10R 4242	<b>Genetic and cellular networks regulating cell fate at the shoot apical meristem</b> Eshed-Williams, L. Hebrew U Zilberman, D. UC, Berkeley CA	App. Duration: 3 years
IS-4341-10	<b>Whole genome approach for genetic analysis in cucumber: Fruit size as a test case</b> Sherman, A. ARO, Min. Ag. Grumet, R. Michigan St. U MI Ophir, R. ARO, Min. Ag. Katzir, N. ARO, Min. Ag. Weng, Y. USDA, ARS WI	App. Duration: 3 years
US-4423-11	<b>Characterization of the <i>Or</i> regulatory network in melon for carotenoid biofortification in food crops</b> Li, L. USDA, ARS NY Burger, J. ARO, Min. Ag. Katzir, N. ARO, Min. Ag. Tadmor, Y. ARO, Min. Ag. Schaffer, A.A. ARO, Min. Ag. Fei, Z. Boyce Thompson NY	App. Duration: 3 years
IS-4427-11C 3870	<b>Winter chickpea; towards a new winter pulse for the semiarid Pacific Northwest and wider adaptation in the Mediterranean basin</b> Abbo, S. Hebrew U Zhang, H. Texas A&M TX Coyne, C. USDA, ARS WA Sherman, A. ARO, Min. Ag. Shtienberg, D. ARO, Min. Ag. Vandemark, G.J. USDA, ARS WA	App. Duration: 3 years
IS-4428-11F	<b>Wild wheat: a genetic resource for wheat breeding</b> Distelfeld, A. Tel Aviv U Dvorak, J. UC, Davis CA Steffenson, B.J. U Minnesota MN	App. Duration: 1 year

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IS-4429-11C 3896	<b>Gibberellin signaling in tomato: a possible DELLA-independent response pathway</b> Weiss, D. Olszewski, N.E.	Hebrew U U Minnesota	MN	App. Duration: 3 years
US-4443-11	<b>New factors and approaches for in vitro reconstitution of higher plant Rubisco</b> Stern, D.B. Schuster, G. Azem, A.	Boyce Thompson Technion Tel Aviv U	NY	App. Duration: 3 years
IS-4447-11F	<b>Efficient allele mining in a model sequenced crop via the compressed sequencing approach</b> Shental, N. Xin, Z. Erlich, Y. Fridman, E.	Open U USDA, ARS Whitehead Inst. Hebrew U	TX MA	App. Duration: 1 year
IS-4523-12R 4424	<b>Elucidating the impact of enhanced conversion of primary to secondary metabolism on phenylpropanoids secondary metabolites associated with flavor, aroma and health in tomato fruits</b> Galili, G. Klee, H.J. Aharoni, A.	Weizmann Inst. U Florida Weizmann Inst.	FL	App. Duration: 3 years
IS-4531-12C 4140	<b>Specific mediators of auxin activity during tomato leaf and fruit development</b> Ori, N. Estelle, M.	Hebrew U UC, San Diego	CA	App. Duration: 3 years
US-4535-12	<b>Regulation of growth habit in complex sympodial plants: Applying the tomato model to cotton</b> Ayre, B.G. Lifschitz, E. Eshed, Y. Chapman, K.D.	U No. Texas Technion Weizmann Inst. U No. Texas	TX TX	App. Duration: 3 years
IS-4536-12C 4249	<b>Shaping plant architecture by age dependent programs: implications for food, feed and biofuel</b> Eshed, Y. Hake, S.	Weizmann Inst. USDA, ARS	CA	App. Duration: 3 years
IS-4540-12	<b>The genetics of pod-filling in peanut under water-limiting conditions</b> Hovav, R. Ozias-Akins, P. Jackson, S.A.	ARO, Min. Ag. U Georgia U Georgia	GA GA	App. Duration: 3 years
IS-4541-12	<b>Novel regulation of transpiration by sugar signals within guard cells</b> Granot, D. Assmann, S.M.	ARO, Min. Ag. Penn State U	PA	App. Duration: 3 years

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**IS-4546-12R**      **Combining diversity within Sorghum bicolor for genomic and fine**  
<sup>4436</sup> **mapping of intra-allelic interactions underlying heterosis**  
Fridman, E.                      Hebrew U  
Yu, J.                              Kansas St. U                      KS

App. Duration: 3 years

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<b>IS-4080-08FR</b>	<b>Physiological and Biochemical Characterization of the Effects of Oxidant Air Pollutants, Ozone and Gas-phase Nitric Acid, on Plants and Lichens for their Use as Early Warning Biomonitoring of these Air Pollutants</b>	App. Duration: 1 year																		
3954	<table border="0"> <tr> <td>Hochman, A.</td> <td>Tel Aviv U</td> <td></td> </tr> <tr> <td>Nash III, H</td> <td>Arizona St. U</td> <td>AZ</td> </tr> <tr> <td>Padgett, Pamela</td> <td>USDA-FS</td> <td>CA</td> </tr> </table>	Hochman, A.	Tel Aviv U		Nash III, H	Arizona St. U	AZ	Padgett, Pamela	USDA-FS	CA										
Hochman, A.	Tel Aviv U																			
Nash III, H	Arizona St. U	AZ																		
Padgett, Pamela	USDA-FS	CA																		
<b>IS-4090-08R</b>	<b>Development of Predictive Tools for Contaminant Transport through Variably-Saturated Heterogeneous Composite Porous Formations</b>	App. Duration: 3 years																		
3957	<table border="0"> <tr> <td>Russo, D.</td> <td>ARO, Min. Ag.</td> <td></td> </tr> <tr> <td>Tartakovsky, D.M.</td> <td>UC, San Diego</td> <td>CA</td> </tr> <tr> <td>Neuman, S.P.</td> <td>U Arizona</td> <td>AZ</td> </tr> </table>	Russo, D.	ARO, Min. Ag.		Tartakovsky, D.M.	UC, San Diego	CA	Neuman, S.P.	U Arizona	AZ										
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<b>US-4262-09</b>	<b>Separating Components of Evapotranspiration to Improve Efficiency in Vineyard Water Management</b>	App. Duration: 3 years																		
	<table border="0"> <tr> <td>Heitman, J.L.</td> <td>N Carolina St. U</td> <td>NC</td> </tr> <tr> <td>Ben-Gal, A.</td> <td>ARO, Min. Ag.</td> <td></td> </tr> <tr> <td>Sauer, T.</td> <td>USDA, ARS</td> <td>MD</td> </tr> <tr> <td>Agam, N.</td> <td>ARO, Min. Ag.</td> <td></td> </tr> <tr> <td>Havlin, J.</td> <td>N Carolina St. U</td> <td>NC</td> </tr> </table>	Heitman, J.L.	N Carolina St. U	NC	Ben-Gal, A.	ARO, Min. Ag.		Sauer, T.	USDA, ARS	MD	Agam, N.	ARO, Min. Ag.		Havlin, J.	N Carolina St. U	NC				
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<b>US-4264-09</b>	<b>Shaping Plant Beneficial Rhizosphere Communities</b>	App. Duration: 3 years																		
	<table border="0"> <tr> <td>Crowley, D.E.</td> <td>UC, Riverside</td> <td>CA</td> </tr> <tr> <td>Minz, D.</td> <td>ARO, Min. Ag.</td> <td></td> </tr> <tr> <td>Hadar, Y.</td> <td>Hebrew U</td> <td></td> </tr> </table>	Crowley, D.E.	UC, Riverside	CA	Minz, D.	ARO, Min. Ag.		Hadar, Y.	Hebrew U											
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<b>US-4266-09R</b>	<b>The Effect of Combined Solarization and in Solum Compost Decomposition on Soil Health</b>	App. Duration: 3 years																		
4085	<table border="0"> <tr> <td>VanderGheynst, J.S.</td> <td>UC, Davis</td> <td>CA</td> </tr> <tr> <td>Raviv, M.</td> <td>ARO, Min. Ag.</td> <td></td> </tr> <tr> <td>Stapleton, J.J.</td> <td>UCA, Kearney Ag Center</td> <td>CA</td> </tr> <tr> <td>Minz, D.</td> <td>ARO, Min. Ag.</td> <td></td> </tr> <tr> <td>Cytryn, E.</td> <td>ARO, Min. Ag.</td> <td></td> </tr> <tr> <td>Dahlquist, R.</td> <td>Fresno Pacific</td> <td>CA</td> </tr> </table>	VanderGheynst, J.S.	UC, Davis	CA	Raviv, M.	ARO, Min. Ag.		Stapleton, J.J.	UCA, Kearney Ag Center	CA	Minz, D.	ARO, Min. Ag.		Cytryn, E.	ARO, Min. Ag.		Dahlquist, R.	Fresno Pacific	CA	
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Dahlquist, R.	Fresno Pacific	CA																		
<b>IS-4353-10</b>	<b>Interactions of engineered nanoparticles with dissolved organic matter (DOM) and organic contaminants in water</b>	App. Duration: 3 years																		
	<table border="0"> <tr> <td>Chefetz, B.</td> <td>Hebrew U</td> <td></td> </tr> <tr> <td>Xing, B.</td> <td>U Mass</td> <td>MA</td> </tr> <tr> <td>Chen, Y.</td> <td>Hebrew U</td> <td></td> </tr> </table>	Chefetz, B.	Hebrew U		Xing, B.	U Mass	MA	Chen, Y.	Hebrew U											
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Chen, Y.	Hebrew U																			
<b>IS-4356-10</b>	<b>Role of microbiological and geochemical heterogeneity in the fate and transport of nitrogen through the vadose zone</b>	App. Duration: 3 years																		
	<table border="0"> <tr> <td>Furman, A.</td> <td>Technion</td> <td></td> </tr> <tr> <td>Harter, T.</td> <td>UC, Davis</td> <td>CA</td> </tr> <tr> <td>Weisbrod, N.</td> <td>Ben Gurion U</td> <td></td> </tr> <tr> <td>Parikh, S.J.</td> <td>UC, Davis</td> <td>CA</td> </tr> <tr> <td>Scow, K.M.</td> <td>UC, Davis</td> <td>CA</td> </tr> <tr> <td>Shaviv, A.G.</td> <td>Technion</td> <td></td> </tr> </table>	Furman, A.	Technion		Harter, T.	UC, Davis	CA	Weisbrod, N.	Ben Gurion U		Parikh, S.J.	UC, Davis	CA	Scow, K.M.	UC, Davis	CA	Shaviv, A.G.	Technion		
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<b>IS-4360-10</b>	<p><b>A novel physical-chemical-biological treatment process for swine wastes</b></p> <p>Lahav, O.                      Technion  Ergas, S.J.                    U So. Florida                FL  Green, M.                      Technion  Cunningham, J.                U So. Florida                FL</p>	App. Duration: 3 years
<b>US-4453-11</b>	<p><b>Development of near zero-discharge land-based recirculated mariculture systems: recycling solid waste for bioenergy</b></p> <p>Sowers, K.                    UMBC                            MD  Gross, A.                      Ben Gurion U  Ronen, R.                      Ben Gurion U  Zilberg, D.                    Ben Gurion U  Mozes, N.                      Fisheries and     Aquaculture     Department</p>	App. Duration: 3 years
<b>US-4455-11</b>	<p><b>Desalination of brackish water for agricultural application via novel bio-electrochemical approaches</b></p> <p>He, Z.                            U                                    WI     Wisconsin-Milwauk     ee  Dosoretz, C.G.                Technion  Semiati, R.                      Technion</p>	App. Duration: 3 years
<b>US-4465-11</b>	<p><b>Novel streaming potential and thermal sensor techniques for monitoring water and nutrient fluxes in the vadose zone</b></p> <p>Jones, S.B.                    Utah St U                      UT  Friedman, S.P.                ARO, Min. Ag.  Communar, G.                ARO, Min. Ag.</p>	App. Duration: 3 years
<b>US-4550-12</b>	<p><b>Improving nitrogen availability indicators by emphasizing correlations between gross nitrogen mineralization and the quality and quantity of labile soil organic matter fractions</b></p> <p>Castellano, M.J.              Iowa St. U                      IA  Shaviv, A.G.                    Technion  Linker, R.                      Technion  Liebman, M.                    Iowa St. U                      IA</p>	App. Duration: 3 years
<b>US-4551-12</b>	<p><b>Environmental fate of antiepileptic drugs and their metabolites: Biodegradation, complexation, and photodegradation</b></p> <p>Borch, T.                        Colorado St. U                CO  Hadar, Y.                        Hebrew U  Polubesova, T.                Hebrew U</p>	App. Duration: 3 years

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<b>IS-4179-08R</b>	<b>Study of the Physiological, Molecular and Genetic Factors Associated with Postharvest Water Loss in Pepper Fruit</b>		App. Duration: 3 years
4071	Fallik, E.	ARO, Min. Ag.	
	Joly, R.J.	Purdue	IN
	Paran, I.	ARO, Min. Ag.	
	Jenks, M.A.	Purdue	IN
<b>IS-4180-08</b>	<b>Analysis of Small RNAs Associated with Plant Senescence</b>		App. Duration: 3 years
	Lers, A.	ARO, Min. Ag.	
	Green, P.J.	U Delaware	DE
<b>IS-4181-08</b>	<b>Application of Pre-storage Short Anaerobiosis to Alleviate Superficial Scald and Bitter Pit in Granny Smith Apples</b>		App. Duration: 3 years
	Pesis, E.	ARO, Min. Ag.	
	Mitcham, E.J.	UC, Davis	CA
	Ebeler, S.E.	UC, Davis	CA
	Lers, A.	ARO, Min. Ag.	
<b>IS-4267-09</b>	<b>Desiccation Tolerance in Salmonella and its Implications</b>		App. Duration: 3 years
	Sela, S.	ARO, Min. Ag.	
	McClelland, M.	UCA, Irvine	CA
<b>IS-4268-09</b>	<b>The Role of Reactive Oxygen Species (ROS) in Tritrophic Interactions in Postharvest Biocontrol Systems</b>		App. Duration: 3 years
	Droby, S.	ARO, Min. Ag.	
	Wisniewski, M.E.	USDA, ARS	WV
	Porat, R.	ARO, Min. Ag.	
	Macarisin, D.	USDA, ARS	WV
<b>US-4273-09</b>	<b>Ultra-Fast Methods and Instrumentation for the Analysis of Hazardous Chemicals in the Food Supply</b>		App. Duration: 3 years
	Lehotay, S.J.	USDA, ARS	PA
	Amirav, A.	Tel Aviv U	
<b>IS-4368-10</b>	<b>Identification of key aroma compounds and optimization of postharvest handling procedures in order to improve sensory quality of mandarins</b>		App. Duration: 3 years
	Porat, R.	ARO, Min. Ag.	
	Plotto, A.	USDA, ARS	FL
	Baldwin, E.A.	USDA, ARS	FL
	McCollum, T.G.	USDA, ARS	FL
	Arpaia, M.L.	UC, Riverside	CA
	Obenland, D.	USDA, ARS	CA
	Lewinsohn, E.	ARO, Min. Ag.	
<b>IS-4371-10C</b>	<b>Elucidating the ripening signaling pathway in banana for improved fruit quality, shelf-life and food security</b>		App. Duration: 3 years
3803	Friedman, H.	ARO, Min. Ag.	
	Vrebalov, J.	Boyce Thompson	NY
	Giovannoni, J.	Boyce Thompson	NY

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IS-4469-11R 4367	<b>Mechanisms activated by fungal-based host pH modulators during quiescent infections and active postharvest disease development</b> Prusky, D. ARO, Min. Ag. Mengiste, T.D. Purdue IN Fluhr, R. Weizmann Inst.	App. Duration: 3 years
US-4471-11F	<b>Antimicrobial and antioxidant functionalized nanoparticles for enhancing food safety and quality: proof of concept</b> Choudhary, R. So Illin U IL Rodov, V. ARO, Min. Ag. Kohli, P. So Illin U IL Haddock, J. So Illin U IL Droby, S. ARO, Min. Ag.	App. Duration: 1 year
IS-4473-11	<b>The therapeutic potential of a desert plant and its active compounds for Alzheimer's Disease</b> Elmann, A. ARO, Min. Ag. Lazarov, O. U of Il at Chicago IL Kashman, J. Tel Aviv U Ofir, R. Tamar Regional Council	App. Duration: 3 years
IS-4476-11	<b>The role of potassium in quality of grapes after harvest</b>  Lichter, A. ARO, Min. Ag. Smilanick, J.L. USDA, ARS CA Obenland, D. USDA, ARS CA Bernstein, N. ARO, Min. Ag. Hashim, J. UC, Davis CA	App. Duration: 3 years
US-4561-12F	<b>Genetic and transcriptomic analysis of postharvest decay resistance in <i>Malus sieversii</i> and the identification of pathogenicity effectors in <i>Penicillium expansum</i></b> Wisniewski, M.E. USDA, ARS WV Droby, S. ARO, Min. Ag. Norelli, J.L. USDA, ARS WV Prusky, D. ARO, Min. Ag. HersHKovitz, V. Hebrew U	App. Duration: 1 year
US-4571-12C 4073	<b>Elucidation of signaling pathways that regulate ethylene-induced leaf and flower abscission of agriculturally important plants</b> Tucker, M.L. USDA, ARS MD Meir, S. ARO, Min. Ag. Lers, A. ARO, Min. Ag. Philosoph-Hadas, S. ARO, Min. Ag. Jiang, C. USDA, ARS CA	App. Duration: 3 years
IS-4573-12R 4475	<b>Renewable, long-term, antimicrobial surface treatments through dopamine-mediated binding of peptidoglycan hydrolases</b> Rahimipour, S. Bar Ilan U Donovan, D. USDA, ARS MD	App. Duration: 3 years

**Model System and Functional Biology in the Service of  
Agriculture**

<b>IS-4140-08C</b> 3453	<b>The Role of GOBLET and Auxin in Controlling Organ Development and Patterning</b> Ori, N. Estelle, M.	Hebrew U UC, San Diego	CA	App. Duration: 3 years
<b>IS-4141-08</b>	<b>A Novel Lectin Controls Wound-responses in Arabidopsis</b>  Fluhr, R. Bar-Peled, M.	Weizmann Inst. U Georgia	GA	App. Duration: 3 years
<b>IS-4143-08R</b> 4028	<b>Studying the Involvement of the Linker Protein CWLP and its Homologue in Cytoskeleton-plasma Membrane-cell Wall Continuum and in Drought Tolerance</b> Zilberstein, A. Liu, B. Sadot, E.	Tel Aviv U UC, Davis ARO, Min. Ag.	CA	App. Duration: 3 years
<b>US-4150-08</b>	<b>Controlling Early Stages of DNA Repair for Gene-targeting Enhancement in Plants</b> Wilson, T.E. Levy, A.A. Tzfira, T.	U Michigan Weizmann Inst. Ben Gurion U	MI	App. Duration: 3 years
<b>IS-4152-08C</b> 3605	<b>Integrated Studies of Chloroplast Ribonucleases</b> Schuster, G. Stern, D.B.	Technion Boyce Thompson	NY	App. Duration: 3 years