



Nore of the Electron By Charles E. McCracken

n November 2009, I picked up a book to read on a flight from Philadelphia to Salt Lake City. Long story short—I couldn't put it down and finished reading late into the night. Written as an exposé of Israel's success in the area of innovation and development of new technology, the first chapter recounted Shai Aggassi's development of the Better Place concept for electrifying the auto industry.

Fast forward to May 10, 2011 to a gala reception hosted by the Consul General of Israel in celebration of *Yom Ha'Atzmaut* (Israel's Independence Day). Coincidentally, the event held at the Toronto Science Centre highlighted Israel's innovation and technological advancement. An electric car was prominently displayed in the stunning hall. A mere 18 months after first reading about the concept in Paul Singer and Dan Senor's book, *Start-Up Nation*, I was sitting in one of the Better Place cars! During the program, Consul General Gissin announced that Ontario was one of five places in the world where Better Place technology would be developed for public use.

INNOVATION

Seeing the Renault-Nissan "Laguna" Better Place car was a reminder that the speed at which innovative technologies are developed in Israel is truly mind boggling. Despite the fact that Israel is the 100th smallest country in the world and claims only 1/1000th of the world's population, it creates the largest number of start-up companies and venture capital funds in the world second only to the United States. It also has the highest per capita rates of patents filed and the greatest concentration of high-tech companies and research institutes in the world outside the Silicon Valley.¹

Israel's survival as a nation is dependent upon complex solutions. Commenting on the environment that makes such problem-solving the envy of the world, Avi Hasson, chief scientist for the Israeli government, shrugs it off saying, "In the army, it's 'here's an impossible problem, you don't have many resources – solve it yesterday.' When you leave [the army], setting up a company doesn't seem so hard."²

Ideas others write off as impossible are the very ones the tiny state of Israel specializes in making a reality.

Take a look at Israel's revolutionary fishing industry—in the desert of all places! Using what it calls Grow Fish Anywhere (G.F.A.) aquaculture technology, this Israeli company uses a unique ecology to raise fish in a closed system that utilizes less than 10% of the water required by conventional methods, and does it with no impact to the environment. The system features a 3-step process that



converts concentrated waste into carbon dioxide making the process environmentally sustainable.³

The Agro Mashov Exhibition held early this spring at the Tel Aviv Fairgrounds showcased the changing world of agriculture. Along with new varieties of strawberries, sweet potatoes and lemons all developed in Israel, the "Black Galaxy" tomato was recently introduced. This specialty, gourmet hybrid was created by crossbreeding domesticated and wild varieties yielding a dark-skinned artisan tomato with pigment similar to blueberries. The skin is photosensitive and ripens to a dark purple with more antioxidant value than grocery store varieties. Produced by Israel-based Seeds Technologies, look for the "Black Galaxy" in local markets as early as next year. 4

At the forefront of developing medical products, an unnamed plant material was featured that could provide a vegetarian alternative for insulin in managing diabetes and obesity. Vascular Dynamics, another Israeli-based company, devised a new approach for managing the rapidly rising global phenomenon of hypertension that accounts for 1 in 8 deaths worldwide. Using a passive stent implanted in cerebral arteries that carry



Charles McCracken and Consul General Amir Gissin

blood to the brain, the ability of baro-receptors to regulate blood flow and pressure is enhanced.⁶

And, wouldn't it be nice if you could have your annual health checkup without routinely having blood drawn for tests? Lior Golan, a graduate student in the biomedical engineering department



Better Place Car

at Technion (Israel Institute of Technology), has, "invented a new optical microscope that can see individual blood cells as they flow inside our body". About the size of a breadbox, the instrument is capable of providing, "high-resolution images of blood coursing through our veins without needles and the harsh short-lived fluorescent dyes".

One of the most incredible Israeli technological innovations developed offers, "an alternative mobility solution to the wheelchair for individuals with severe walking impairments enabling them to stand, walk, use stairs and more". The computerized exoskeleton produced by Argo Medical Technologies is easily strapped to the lower extremities permitting individuals with, "lower limb disabilities such as Spinal Cord Injury (SCI) and Spina Bifida to carry out routine ambulatory functions". The device not only aids in restoring mobile functions, but also reduces the need for physical therapy and re-hospitalization due to immobility related complications common among those using wheel chairs.

At the forefront of research, scientists at Tel Aviv University and Sheba Medical Center recently identified a substance that kills cancer without harming healthy cells. Professor Malka Cohen-Armon stated, "we actually found the Achilles heel of the cancer cell", which will allow doctors to treat cancer more aggressively without concern about harming healthy tissues alleviating suffering often associated with current treatment protocols. ¹¹

Seven Ways You Can Bless Israel...

BE INFORMED - Take time to understand issues related to Israel and events in the Middle-east.

BE A VOICE - Speak-up and stop misinformation from being disseminated unopposed.

BE AN ADVOCATE - Write or email government leaders advocating on Israel's behalf and thank those who support Israel.

BE WILLING - Get involved in events where you can demonstrate solidarity with Israel and the Jewish people.

Buy Israeli Goods - Ask local stores to carry Israeli products and routinely shop Israel; tell businesses you support them because they support Israel.

BE ADVENTUROUS - Travel to Israel to show solidarity; and come home loving this amazing land and people.

BE A LIGHT - Let your light so shine before men, that they may see your good works and glorify your Father in heaven. Matthew 5:16

I will bless those who bless you [Israel]... Genesis 12:3

Background image courtesy Ministry of Tourism, Government of Israel

CONTRIBUTION

Hand-in-hand with Israel's cutting edge innovation is a collective attitude of sharing skills and helping others. One example is the number of Israeli teens who defer military training to volunteer engaging in civic service in communities, schools and with at-risk youth. *Ynet News* reports that over the last seven years, there has been an 85% increase in teens choosing to contribute to society through volunteer work beyond their three years of military service. When asked why, one graduate said, "we had people who were volunteers and they were a role model. They gave to me, and I feel the need to pass it on to others." ¹²

This attitude extends to Israel's relationship with other countries as well. Many nations benefit from Israel's willingness to share innovation and technology.

Earlier this year, Dr. Daniel Hillel, known for developing the drip irrigation method that helps provide food for some of the world's driest countries, was named the World Food Prize recipient. He is credited with revolutionizing agricultural practice in more than 30 countries over the past 50 years. World Food Prize Foundation president Kenneth Quinn noted, "It is significant that Dr. Hillel's nomination . . . contained letters of support from individuals and organizations in Jordan, Egypt and the United Arab Emirates". 13

A prime example is evident in the fact that some 50 years ago, carp was a staple in the diet of villagers living in proximity to Lake Victoria in Uganda. When Nile perch were introduced to the lake, the population of smaller fish including carp was decimated. Soon symptoms of protein deficiency became apparent among Ugandan children. In response, Israel began a multi-year project using technology developed for the Israeli fishing industry to renew this vital food source and train local farmers to dig the ponds necessary to raise carp.¹⁴

In August 2012, Israeli Deputy Foreign Minister Danny Ayalon and representatives from Kenya and Germany signed an agreement to participate

in a mutual project to use fish farming technology developed in Israel to purify Lake Victoria, thereby providing clean water to millions of people. Shedding light on the move, Danny Ayalon reflected, "While Iran tries to get a foothold in Africa with weapons, bombs and terror, Israel brings Africa progress, as well as agricultural and economic humanitarian aid. This is just an example of the difference between the fanatic ayatollahs' regime and the Israeli democracy." 15

This year, Israel is involved in a bold plan to share its agricultural expertise with India. Three of 28 promised Centers of Excellence have been established in India's western province of Gujarat. Two of the centers will focus on methods of cultivation, and the third will emphasize water recycling for agricultural purposes. When asked about the purpose for setting up such centres, Israel's Consul General Orna Sagiv, said, "Israel has been able to improve its agricultural productivity by employing scientific methods and making better use of technology. We want to transfer this expertise to India which has vast agricultural land".16

The goodwill shown to other nations is also unmistakable in dealings with those who are sworn enemies of Israel. Despite continued terrorist plots, the number of physical roadblocks in Israel was reduced from 40 to 10 in 2012; infrastructures at border crossings were upgraded; hours of operation extended, and prior to the Muslim feast of Ramadan, crossings were open for a full 48 hours to allow the passage of more than 25,000 Palestinians. In the wake of the Palestinian Authority's budget crisis in July, Israel advanced NIS180 million (\$45 million CAD) to help the PA pay salaries in time to celebrate Ramadan.¹⁷

Since 2006, 6,489 rockets were fired into civilian areas of Israel from Gaza—313 since the beginning of 2012. Those numbers don't include the more than 4,000 mortars that were also fired. ¹⁸ Despite these grim statistics, well over a million tons of humanitarian supplies enter Gaza from Israel in a given year equaling nearly a half ton of aid for every man, woman and child. Beef, chicken, fish, grain, legumes, oil, flour, salt, sugar,

vegetables, dairy products in addition to animal feed, hygiene products, clothing and medical supplies are delivered daily. Israel also coordinates the delivery of medical and school supplies distributed by UNRWA (United Nations Relief and Works Agency) including laptop computers for Gaza school children with potentially dangerous ramifications for Israel. 19

Although Israel was forced to limit its operation after the fuel depot at Nahal Oz was repeatedly attacked by terrorists, gas for cooking and heating is supplied in accordance with demand.²⁰

Israel also continues to maintain a corridor for the transfer of patients out of Gaza, and about 200 medical staff pass through the crossing every month. In addition to medical evacuations, the Erez Crossing enables two-way traffic of international organizations' staff between Israel and Gaza, as well as Palestinian residents with various humanitarian needs.²¹ IDF commander Col. Bentzi Gruber astutely observes, "A lethal combination of ignorance, misconceptions, and outright lies has led communities and governments around the world to vilify the State of Israel and its armed forces."²²

OBSTRUCTION

Since Israel's rebirth, the tiny nation has weathered three wars of survival, two major Intifadas and continuous terrorist threats costing hundreds of billions of dollars.

In 1943, the twenty-three nation Arab League launched a punitive boycott banning the purchase of, "products of Jewish industry in Palestine", that continues to the present day.²³

A new line of attack began in 2005 with a "Palestinian civil society' call for boycott, divestment and sanctions [BDS] against Israel."²⁴ The World Council of Churches (WCC) joined the call issuing the Kairos Document in 2009 advocating, "a system of economic sanctions and boycotts to be applied against Israel."²⁵

In its June 2012 newsletter, Palestine Israel Ecumenical Forum (PIEF) reports the status of

ongoing measures being taken against Israel to bring an end to the so-called "occupation". A few examples are as follows: the Friends Fiduciary Corporation with \$200 million in assets pulled \$900,000 worth of shares out of Caterpillar, Inc.; FinnChurchAid and the Ecumenical Accompaniment Program in Palestine Israel Finland demanded that, "the government ban labeling of settlement products as 'made in Israel'".²⁶

In June 2011, the United Church of Canada voted, "to boycott six companies (Caterpillar, Motorola, Ahava, Veolia, Elbit Systems and Chapters/Indigo)," joining, "others in Canada and around the world who act in solidarity with Palestinians." On August 17, 2012, the General Council voted to adopt the boycott as the formal policy of the United Church. The influence of the WCC can be seen in the fact that, "Today, most of the divestment campaign against Israel is driven by Christian groups."

Powerful political action groups are also involved in the economic war against Israel. One of those groups is the CAIA (Coalition Against Israeli Apartheid). Since 2006, the CAIA has spearheaded a Boycott, Divestment and Sanctions Day of Action organizing flash mobs appearing at Chapters Indigo, Mountain Equipment Co-op, Starbucks and other organizations with owners or board members who support Israel, even when they don't use corporate funds to do so.³⁰



Sea Bream, Grow Fish Anywhere, Israel Image property of GFA Advanced Systems; used with permission.





"Black Galaxy" Tomato Image courtesy Seeds Technologies.

Another Canadian organization, CJPME (Canadians for Justice and Peace in the Middle East) has put out a pseudo "fact sheet" calling for the boycott of Sears, Canadian Tire, Costco, Remax, Home Depot, Ikea, Toys R Us, and others because these companies either sell Israeli products or have locations in what they condemn as, "disputed" or "occupied territories".³¹

Israel is a miniscule sanctuary in a geopolitical landscape of hostile neighbors. Its land mass is only 20,770 square kilometers—smaller than Vancouver Island.³² By comparison, Israel's surrounding enemies inhabit over 5 million square kilometers—an area 640 times greater than Israel.³³ Looking at other statistics, Israel's Jewish population recently topped the Jewish population of New York City at a little over 5 million. Conservative estimates rank the populations of Israel's 21 hostile neighbors at over 300 million. Amazingly, despite its small population, unusually small land mass and unrelenting enemies, Israel is a vibrant and productive nation.

RETION

Israel is changing the planet for the better and should be applauded, not punished. Evangelical Christians who love God's Word and recognize their responsibility to bless God's Chosen People must react to the hatred by tangibly standing with Israel (Gen 12:3). We must not fall victim to misinformation, and recognizing Israel's contributions to the world is only the first step in the right direction. Get the facts and act on behalf of Israel by patronizing businesses that sell Israeli products. If they aren't available in your area, ask stores to carry Israeli products and launch a "buycott" in your hometown. Despite its miniscule size, tiny population and continual need to defend itself against aggressive enemies, Israel exports blessings to the world through innovation and solutions that improve the quality of life for everyone!

ENDNOTES |

- 1 http://www.newsoftheday.com/israel/blog.html
- ² James Hurley, "Israelis race to stay ahead of the start-up pack",
 The Telegraph http://www.telegraph.co.uk/finance/yourbusiness/
 9526109/Israelis-race-to-stay-ahead-of-the-global-start-up-pack.html
 ³ http://growfishanywhere.com
- ⁴ Katie Silver, "A dark day for the salad counter Israeli scientists breed black tomato", Mail Online http://www.dailymail.co.uk/ sciencetech/article-2094331/Israeli-scientists-breed-Black-Galaxy-tomato.html
- 5 "Agro Moshav 2012 Presents Israel's Agricultural Innovation", Israel National News http://www.israelnationalnews.com/ News/News.aspx/153521#.UGNSUFGuWOw>
- 6 http://www.globes.co.il/serveen/globes/docview.asp?did=1000731532&fid=1725
- 7 http://israelseen.com/2012/05/29/israeli-medical-innovation-high-res-images-of-blood-to-replace-needles-in-blood-tests/> 8 Ibid.
- ⁹ Merav Turel, "Will Israeli Product 'ReWalk' Make Wheel Chairs Obsolete?" http://nocamels.com/2012/09/will-an-israeli-product-make-wheelchairs-obsolete/
- 10 Ibid.
- ¹¹ Ofri Ilani, "Scientists find stroke drug could help cure cancer" Haaretz <http://www.haaretz.com/print-edition/news/israeli-scientists-find-stroke-drug-could-help-cure-cancer-1.4755>
- ¹² Tamar Trabelsi-Hadad, "Record number of volunteering teens", Ynet News, http://www.ynetnews.com/articles/0,7340, L-4275912.00.html>
- ¹³ Natasha Mozgovaya, "Israeli irrigation expert wins World Food Prize", Haaretz, http://www.haaretz.com/news/national/ israeli-irrigation-expert -wins-world-food-prize.premium-1.436021>



- ¹⁴ http://israel21c.org/technology/the-top-12-ways-israel-feeds-the-world/
- 15 http://www.algemeiner.com/2012/09/20/israeli-technology-fuels-new-fish-farm-that-is-europes-largest/
- 16 http://articles.timesofindia.indiatimes.com/2012-03-23/ vadodara/31229614_1_centres-cultivation-orna-sagiv>
- 17 http://www.mfa.gov.il/MFA/HumanitarianAid/Palestinians/ Economic_situation_West_Bank_Gaza_Israeli_measures_PA_ Aug_2012.htm>
- 18 http://www.btselem.org/israeli_civilians/qassam_missiles
- 19 http://www.mfa.gov.il/mfa/humanitarianaid/overview/
- 20 Ibid.
- 21 Ibid.
- 22 <http://www.bentzigruber.com/?page id=160>
- ²³ Dan Senor, Saul Singer, Start-up Nation: The Story of Israel's Economic Miracle, (Hatchet Book Group, Kindle Edition, 2011) 59.
- ²⁴ http://www.bdsmovement.net/2012/bds-at-7-9206
- ²⁵ http://www.oikoumene.org/gr/resources/documents/otherecumenical-bodies/kairos-palestine-document.html
- 26 http://oikoumene.org/index.php?id=8709
- ²⁷ http://www.bdsmovement.net/2011/united-church-presbytery-7322#.UGRxkFGuWOw
- ²⁸ http://www.theglobeandmail.com/news/national/united-church-of-canada-approves-israeli-settlement-boycott/article4487724/
- ²⁹ Giulio Meotti Bio, "The Churches Against Israel" http:// frontpagemag.com/2011/giulio-meotti/the-churches-against-israel/>

- ³⁰ http://rabble.ca/rabbletv/program-guide/2010/03/best-net/bovcott-israel-campaign-hits-chapters-and-mountain-equipment>
- 31 http://www.cjpme.org/TabbedEnhancedItemList.aspx?EITID=5&MNITEM=100000366>
- 32 http://www.factsofisrael.com/en/stats.shtml
- 33 < http://www.masada2000.org/geography.html>



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Cover and title bar, Aerial View Of Tel Aviv At Sunset - Tel Aviv Cityscape (iStockphoto/Dmitry Pistrov).



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