

Kirkhouse Times

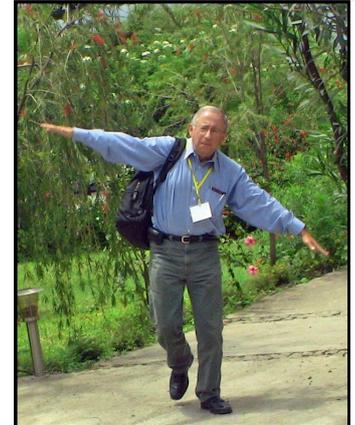


Professor Paul Gepts Edition

Greetings to all! This edition of the Kirkhouse Times is dedicated to Professor Paul Gepts as we bid him farewell as he enters retirement! Paul has been with the Kirkhouse Trust as a consultant since 2007. His advice and insight have been truly valued and appreciated by those who worked with him at KT.

In this edition of the Kirkhouse Times, we invite you to indulge in the articles written by those who have worked with him at KT as well as PIs and students who have had an impact from Paul's involvement in their work and studies. We thank all of the contributors to this edition of KT Times and we wish Professor Paul Gepts a very happy and peaceful retirement! Happy reading until next time!

Dr Cynthia Sam, KT project administrator



Paul Gepts at the ABC meeting in Kenya, 2014.

A moment of reflection

Sir Ed Southern



Ed, Robert and Paul taking a break during ABC meeting at RAB 2013.

When we set up the Kirkhouse Trust, Paul Nurse suggested we support work on crop improvement; we decided to support work on legumes as they are relatively neglected by donors. I went to meetings to learn more about these crops and it was at one of these that I met Paul Gepts. I was looking for breeders to set up a programme to be supported by the trust and suggested to Paul that we ask the breeders at the meeting to raise a hand if they would be interested in joining.

After a short pause, and much to my surprise and delight, Paul said "I'll raise my hand". We quickly arranged a meeting of East African bean breeders in Nairobi and developed a programme to tackle diseases of beans using molecular breeding. That was the beginning of KT's African Bean Consortium (ABC), and Paul's years as its leader.

Scientists of Paul's standing often spend most of their lives hopping from meeting to meeting. Paul is much more of a hands-on breeder. He is also a committed teacher: you will find a video of him showing how to cross beans on [KT's website – /resources/the hook method.](#)

He has hosted many African scientists for training in his laboratory at UC Davis. There is now a large cohort of bean breeders in East Africa who will have benefitted from this. Paul makes sure they are looked after during their stay. One visitor from Kenya gave birth prematurely to triplets. She was lucky to have Paul make arrangements for their care until they were mature enough to travel.

Typical of Paul, he has not left us leaderless. He passes the helm to Travis Parker, who has worked with Paul long enough to have learned the ropes. And I feel that Paul will always be there in the background keeping an eye on us. He won't want his legacy to be wasted – nor do we!

Plus ça change, the end of a 15 year partnership

Dr Robert Koebner

Paul has led the ABC since its inception, and will be stepping down later this year. You would never have betted on our ending up as working colleagues for around 15 years. After all, Paul was (and still is) a bean breeder/geneticist, based in California (via Belgium), while I was, at the time, a wheat geneticist, based in the UK.

Our first encounter took place at the inaugural meeting of the ABC. As I remember it, Paul had arrived in Nairobi, but his suitcase hadn't, a misfortune which he was to relive more than once over the course of our annual trips to Africa. So one of my first acts of collaboration with him was to lend him a shirt while he waited to be reunited with his luggage.



Left: Robert (left) and Paul (right) out in the fields during a 2010 trip to Sokoine University of Agriculture (SUA); Right: Robert, Ed and Paul discussing bean varieties during a trip to Kakamega, Kenya in 2014.

From the start, it was obvious to me that here was a person who both lived and breathed beans (not that I ever, even for a moment, thought of him as Mr. Bean!). He also loves to consume them, while making sure - for teaching purposes of course - that he first takes a picture of what is on his plate.

Paul's long experience of travel meant that he could always be relied upon to have the right tools for any emergency - such as when a power failure one evening at the Africana Hotel in Kampala made it impossible to see what was on the dinner menu - but Paul, naturally, had in his ever-present back-pack a powerful torch to help us out.

Paul has always been fully committed to the foundational KT philosophy that improving crop productivity can be best achieved by supporting local plant breeding programmes. He was always ready to share his breeding know-how with the ABC's PIs, students and technicians. He motivates those he is teaching by combining his obvious enthusiasm for beans with his extensive experience as a breeder and his enormous store of patience.

It's no secret that Paul and I have not always proposed the same strategy in order to achieve a particular programme's objectives. Most often, his way prevailed - and rightly so, given his leadership role in the Consortium; but any such differences in opinion never got in the way of our developing a positive working relationship.

The strength of our partnership was entertainingly illustrated one time while crossing the border on foot from western Uganda into Rwanda: the Rwandan immigration officer, sitting at his solitary desk in his lonely cabin, took much time to inspect our passports, after which he professed that he couldn't understand why our surnames were not identical given that we looked so much like each other that we must be brothers!



One of the early ABC trips in 2013, a visit at the Eldoret screenhouse, Kenya.

Paul, I wish you well for your retirement. I have no doubt that you will retain your interest in the ABC as we move into a new era for the Consortium, headed by Travis. Even though a number of faces will have changed, I suspect that, as the Francophones put it so well “plus ça change, plus c'est la même chose”.

Like all of us who travelled with him, I will miss Paul's many informed contributions to our scientific debate and his lively company during many a long journey across Africa. But I am sure that, at ABC meetings to come, I will still hear a ghostly voice whispering, in a Belgian accent, in my ear “the pathogen is just as important as the plant” or “it's not just the marker that's important, it's the phenotype”.



Paul planting a tree at Meru during an ABC meeting 2012.

Paul Gepts: A distinguished scientist, a dedicated mentor Dr Travis Parker

Before I met Paul, his distinguished reputation as a scientist already spoke for itself: he was a global leader in *Phaseolus* genetics, crop biodiversity, and domestication, who had pioneered much of what we know about grain legume diversity.

Today, his approximately 30,000 citations and h-index of 92 are testaments to the value of his scientific output to the broader research community. But how did Paul achieve this level of scientific productivity?

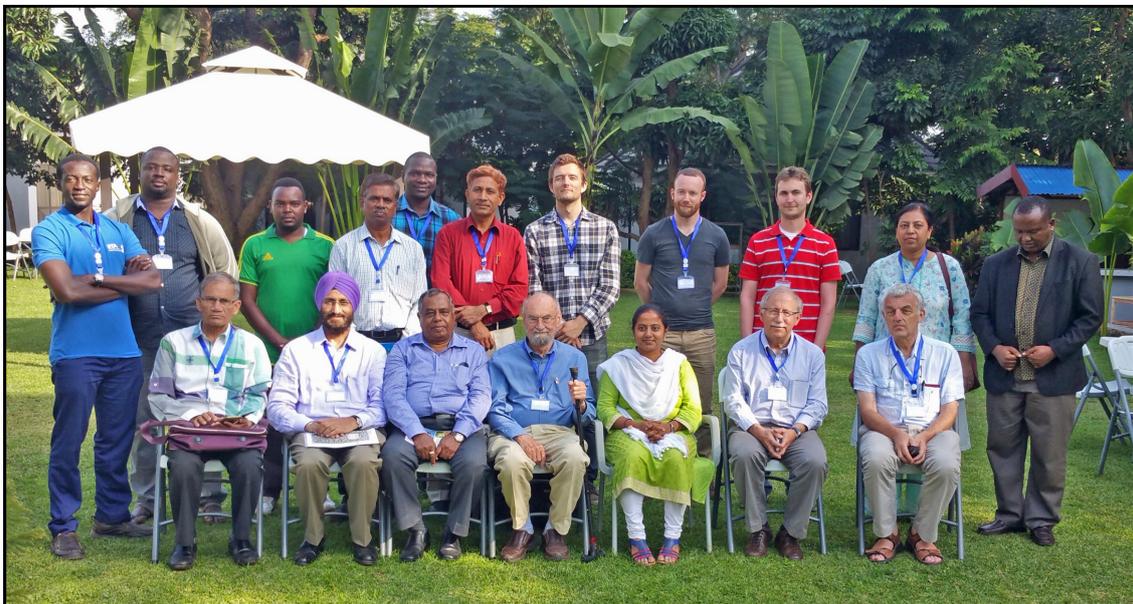


Travis (left) on a STOL trip in 2017 to Arusha, Tanzania. Paul is taking a group photo.

One of the drivers of Paul's success is his genuine commitment to his students, mentees, and colleagues. Paul has mentored more than forty graduate students, who are now leaders in academia and the private sector. Paul gives his students the academic freedom to explore projects and approaches that they find interesting and promising, which inspires scientific curiosity and creativity.

Simultaneously, he always makes himself available to meet with his students and colleagues, offering tremendously useful guidance. Paul takes the initiative to secure funding and publications for his students, and always advocates on their behalf. Throughout his career, he has demonstrated a commitment to diversity, hosting numerous international students and researchers from Africa, Latin America, Asia, and elsewhere. These relationships have been mutually beneficial, providing visitors with new genomics skills while simultaneously promoting the ultimate goals of Paul's research: to promote global food security and sustainability through biodiversification.

Paul has left a lasting mark on the scientific community. We wish him all the best as he moves into the next stage of his career as a professor emeritus in 2022!



A group photo from the STOL 2017 trip to Arusha, Tanzania.

My interaction with Prof Gepts

Dr Esther Arunga

Before I met Prof. Paul Gepts, I had read many of his publications in journals and books. My first interaction with him was in 2010 in the Annual Bean Consortium Meeting in Sokoine University in Tanzania. Professor Gepts had been very helpful in the French bean Improvement Program through his wise advice and interactions with the project team. Professor Gepts has opened my eyes in the world of common bean research following his rich contributions in the subject.

Currently, we are supervising a PhD student together and from his immense experience, I am learning a lot, he is such an excellent mentor!. I really wish Professor a peaceful and enjoyable retirement time as he continues mentoring us.

Drawing inspirations from Professor Paul Gepts

Dr Reuben Otsyula

Paul Gepts Distinguished Professor of Plant Sciences University of California, Davis, as you go into retirement from active service just remember that your contribution in plant science has changed bean research in Kenya. I hope that the upcoming and especially young scientist will embrace your wonderful methodologies that you applied for more than 15 years of your presence and involved in active research in Kenya.

Some of Professor Gepts research that inspires me was as early as 1988 on dissemination pathway of common bean (*Phaseolus vulgaris*, *Fabaceae*) deduced from phaseolin electrophoretic variability. Also the genomic mapping resources in common bean unifying linkage map in recombination inbred populations of *Phaseolus vulgaris* 1998. I relied heavily on these studies for my PhD thesis.



Later on I met Professor Paul Gepts in Kenya in 2006 or there about, when he joined KT and started a resistance breeding research that aimed at producing multiple disease resistant varieties for fragmented and fragile environment of Kenya. Under this program I have had an opportunity to supervise a number of PhD and MSc students with Professor Gepts.

Thanks for everything and happy retirement.

Paul Gepts having a fruitful discussion with Dr Otsyula during an ABC field trip to KALRO station in 2018.

Dedication to Professor Paul Gepts

Dr Yayis Rezene

Working with Professor Paul Gepts has been an immense pleasure for the past couple of years. He is passionate, calm, and professional all at the same time. His politeness about the people with whom he works and his pleasure in and acknowledgment of our successes, and his ability to make our team the champion, have always impressed me. His work brought a huge, new capacity to my work that is helping me to live out my own personal and professional mission.



Paul's visit to the lab in Embu in 2017 and having discussions with the ABC principal investigators.

My team at SARI Ethiopia benefits from his contributions every day. On a personal level, I have enjoyed our friendship and will hope to continue it into his retirement, even when we no longer work together regularly. While I've only had the chance to work with Paul briefly, it's clear that your dedication to our team has made a huge positive impact on our research institute.

I hope retirement brings you wonderful things. Paul you will be greatly missed. Lots of love and best wishes to our retiring professor and mentor.

Bidding farewell and well wishes to Professor Gepts

Dr Kelvin Kamfwa

It has been a great pleasure to have met and known Paul for the last eight years. My major interaction with him has been through the African Bean Consortium (ABC) which he has led for over 12 years supporting the research and training of African bean scholars in Ethiopia, Kenya, Rwanda, Tanzania, Uganda and Zambia. Through Paul's strong leadership the ABC has become one of the most interactive platforms that bring together annually the bean breeding community in Africa.

Paul has strongly contributed to the adoption of marker-assisted selection in common bean breeding in at least these six African countries. This has accelerated development of common bean varieties resistant to major diseases of common bean of which some are currently available to farmers. Every year Paul has spent two weeks in Africa, engaging with the bean breeders and their staff, and providing valuable advice on wide range of research topics undertaken in respective breeding programs.



Left; Having a lunch break at the ABC meeting in 2010. Right; A group photo in the lab during an ABC trip to Zambia in 2017.

Paul has been instrumental in fostering the exchange of research ideas and germplasm between his lab at UC Davis and African Universities. Paul's lab has hosted bean breeders and graduate students from several countries including those from Africa for both short and long-term training. These contributions have proved critical as several bean scholars who may not have had an opportunity were given the chance of acquiring knowledge and skills set from UC Davis.

On a more personal note, Paul has provided valuable advice, and recommendations on the implementation of my projects. As African breeders, we feel privileged to have had Paul as our mentor and his vast knowledge and experience in bean breeding and genetics is invaluable.

I wish him all the best in his retirement.



Paul taking a look at the crops growing at the Eldoret screenhouse during an ABC trip to Kenya in 2013.

My personal experience with Professor Paul Gepts

Serah Njau

I came across the Kirkhouse Trust at the University of Nairobi, College of Agriculture and Veterinary Sciences. In one of the labs at the Plant Science and Crop Protection department, there were facilities and reagents labelled “Kirkhouse Trust”. I was eager to know who they are and I approached one of the lab technicians and she gave me the details. The fact that they work on molecular and biological sciences, I believed one day I will do research with them irrespective of how I’m going to get in touch with them.

It was a dream come true when I received an invitation letter for an interview to defend my PhD proposal during Kirkhouse Trust annual meeting at KALRO Kakamega. During the meeting, that was the first time I met Paul. He was chairing the meeting. He gave a brief background introduction of Kirkhouse Trust activities and welcomed the members’ presentations. To my surprise, he was also the one who was leading my interview. I was nervous at the beginning of the interview but he was able to calm my anxiety down by elaborating the questions and giving me more time to respond. Through our interaction during interview, I came to like him and we interacted more often throughout the meeting. It was during one of our conversations that I asked him to be one of my supervisors and he accepted. That was where our close interaction started.



Left; Serah posing in front of the Plant and Environmental Sciences building at UC Davis, Centre; Working hard in Paul Gepts’ lab during the trip in 2021 to UC Davis for some training during her PhD. Right; Sowing some seeds.

Paul has always been a caring supervisor. Due to lack of research facilities in Kenya, he invited me to his lab in University of California, Davis to do my QTL analysis for my PhD research. He has been making a follow up about my trip to the USA until I made it. It was challenging to get a visa due to COVID-19 pandemic, but Paul did not give up on it. We continued pressing on. I remember him writing a supporting letter to the consulate to expedite an appointment. His words of encouragement in my research have been very instrumental. I remember his countless emails giving me hope that they look forward to my visit at UC Davis.

Paul is very considerate for his students. Upon arrival in the US, he organized for my accommodation, transport, orientation, registering for my class, getting school ID and getting a bank account. He accompanied me to open a bank account. He gave me all the support I needed to ensure my stay at UC Davis was comfortable for me. Despite his busy schedule, he is always available for consultation for his students. In case of research emergency, he is quick in response. He gives equal opportunities to all students and very supportive to students’ research ideas. He spearheaded my visit to Oregon State University to get experience on green bean breeding techniques.

Working with Paul in my research, especially in UC Davis has been so motivating. I admire the zeal and passion he has in research. He always shares the current publication papers in beans and we could review them during our weekly meetings. He recognises students' strength and weaknesses and offers guidance where needed. He understands the challenges that come with research and always gives hope. Many are the times that he reminds me that there is no research which is 100% perfect. He acknowledges the sacrifices that comes with good results and he always say 'research is 90% perspiration and 10% inspiration'. Paul is so selfless and he always look forward to his students achieving their goals. He is the best supervisor a student would like to have in research. I'm grateful to Kirkhouse Trust for the opportunity to work closely with Paul, especially in his lab.

A new journey in bean breeding at NaCRRI with support of Professor Paul Gepts

Dr Stanley Nkalubo

At the National Crops Resources Research Institute (NaCRRI), our first encounter with Professor Paul Gepts was way back in 2008. This is the time when our bean breeding program was among other programs from Kenya and Tanzania selected by the Kirkhouse Trust for support of research in beans breeding to improve for multiple disease resistances using marker assisted selection (MAS) under the African Bean Consortium (ABC).



Left; Photo opportunity during a field visit to Kisoro district in Uganda in 2017 (featuring Robert, Annet Namusoke, Jane Mukabaranga, Jason the field officer and Professor Gepts. Right; Jane and Annet viewing some promising bean lines in the field at Kisoro with Dr Koebner and Professor Gepts.

Meeting Professor Gepts was such a privilege to us because through several common bean literatures most of us had ever come across the name "Paul Gepts" and cited it, without knowing we shall ever have a chance to meet him face to face. As one of the Kirkhouse Trust ABC project consultants, Professor Gepts has guided the bean breeding program at NaCRRI in many important aspects. The most important was on the practical application of MAS. Use of MAS in the bean breeding program was a new tool and so we relied much on his constant guidance either through face to face interactions when he visited NaCRRI or during the ABC annual meetings or even through emails.

Today the NaCRRI bean breeding program has developed the needed capacity for applying MAS through this constant guidance. We chose to improve two commercial bean lines for disease resistance (NABE14 and NABE12C), applying MAS and towards the end of this year, we expect to officially release some of the improved bean lines that have come from this MAS work.

The great scientific talks of Professor Gepts during all the ABC annual meetings that have been held in the different partner countries (Uganda, Tanzania, Rwanda, Ethiopia, Kenya) have provided great learning moments for the NaCRRRI staff attached to the Kirkhouse Trust project. And during all these annual ABC meetings, we have been privileged to learn from him. It has always been very evident that Professor Gepts is a dedicated researcher of the bean crop, sharing all the knowledge and practical experiences he has about this important crop. He has visited Uganda several times to monitor the progress of the MAS breeding program at the Research Institute and in June 2017, he also visited our field trials planted in Kabale and Kisoro districts in southwestern Uganda.



A visit to Kisoro in South West Uganda in June 2017 to monitor progress of MAS breeding program.

We are grateful to the Kirkhouse Trust, for with their support, the NaCRRRI bean breeding program was able to benefit from such a distinguished Professor of plant breeding.



From us all at KT — Farewell Paul, we wish you a happy and peaceful retirement! Thank you for everything you have done, we appreciate it all.