



Agri-Connection

Vol. 4, Issue 2, July 2019

A QUARTERLY NEWSLETTER

President's Desk



Greetings, NAPA community and beyond:

We salute all those committed and hardworking members whose tireless contributions have made NAPA a growing professional organization in the Americas and beyond. The executive committee (EC) along with the Advisory Council and various committees and sub-committees have been putting collective energy to serve and giving back to the community. Some of the major highlights in this quarter include but not limited to: 1) NAPA 2nd Biennial Conference has been scheduled for May 22-24, 2020 in Atlanta, Georgia, USA; 2) Twelve competitive research proposals have been awarded for Research Mini-Grants in Nepal; 3) Three professional Webinars/Zoom conferences have been organized; 4) NAPA membership has grown to 313 members in the short three years of professional journey; 5) Seven NAPA Scholarships for academic excellence and farm improvement (five in Nepal and two in Alabama, USA) have been awarded; 6) *Global Journal of Agriculture and Allied Sciences (GJAAS)* has received DOI and the editorial board is working diligently to launch online inaugural publication soon; and 7) The fourth AGM was conducted on July 6, 2019.

Membership in NAPA is steadily increasing; we warmly and gracefully welcome all new NAPA members on-board. We feel honored having all of you: distinguished professionals, emerging scientists, entrepreneurs, and students from agriculture and allied disciplines as one NAPA family. We will keep fueling momentum and elevating the scope and impact of NAPA with your collective expertise and energy. Please join us to share your expertise, time, energy, monetary contribution, and creative thoughts and ideas to serve the community at the highest possible level.

On behalf of Executive Committee, I sincerely thank all self-motivated professional volunteers for their great enthusiasm, dedication, and willingness in serving the NAPA community and its stakeholders through webinars, donations, time, expertise, creative thoughts, collective energy, serving on various sub-committees, serving as reviewers and editors, and many other ways. Our great appreciation is always extended to the generous donors and sponsors of NAPA's flagship program 'one dollar makes a difference.' Finally, we greatly appreciate all volunteer contributors to the Agri-Connection (AC) online newsletter. Last but not least, sincere appreciation and thanks to the AC Editorial Team specially Drs. Nityananda Khanal and Shushil Thapa.

We look forward to welcoming all of you to Atlanta, Georgia, USA for NAPA 2020, the 2nd NAPA Biennial International Conference, with the theme "Global Food Security through Agricultural Transformation."

Together, we can make a difference.

Lila B. Karki, Ph.D.

Association of Nepalese Agricultural Professionals of Americas (NAPA)

website: www.napaamericas.org

<https://www.facebook.com/napa2072/>

E-mail: napa2072@gmail.com; Twitter: [@napa2072](https://twitter.com/napa2072)

EDITORIAL

Please follow the link <http://www.napaamericas.org/newsletter.php> to review the past issues of Agri-Connection, a quarterly newsletter of NAPA. You will be able to track the evolution of NAPA that brings us together for a collective mission. You will appreciate how much time and efforts the founders of NAPA put to bring this organization up to this stage. It may not be overstated to call those dedicated souls as our heroes who exemplified the expatriate mode of philanthropy and patriotism through diverse initiatives and activities.

The publication of Agri-Connection is running in its fourth year, offering its 12th issue, Volume 4 - Issue 2, in your hand. The founder editorial board comprising Dr. Ramesh C. Khanal (Editor-in-Chief), Dr. Sanjay Lamsal (Editor) and Dr. Toya Nath Baral (Editor) successfully published seven issues of Agri-Connection till the spring of 2018. I would like to extend my sincere thanks to the founding editorial board for their exemplary legacy.

Following the 1st Biennial NAPA Conference, a new editorial board composed of Dr. Nityananda Khanal, Dr. Ananta Acharya, Dr. Mukti Ghimire, Mr. Sanjok Poudel and Mr. Shailes Bhattarai took on the editorial job and successfully published four Issues of the Agri-Connection till 2019 spring. After the publication of Volume 4 - Issue 1, Dr. Acharya and Dr. Ghimire are required to serve in the organizing committee of 2nd NAPA Biennial Conference to be held in May 2020, hence left the editorial board. I thankfully appreciate the contribution of Dr. Acharya and Dr. Ghimire in bringing out the past four issues.

The outgoing editors are succeeded by Dr. Sushil Thapa and Dr. Romy Das Karna, as new members of the editorial board, while Mr. Sanjok Poudel and Mr. Shailes Bhattarai continue to shoulder their editorial roles. I again take this opportunity to welcome Dr. Thapa and Dr. Karna on board. Thank you Dr. Thapa, Dr. Karna, Mr. Poudel and Mr. Bhattarai for your dedicated efforts in bringing the current issue to this shape.



The current issue documents diverse activities implemented and achievements made by NAPA in past four months. It presents wider array of contents, especially with three articles in a single issue covering the aspects of tourism, post-harvest technology, and prospect of integrating agricultural education, research and development in the Agriculture and Forestry University in Nepal.

Your contribution will help make the Agri-Connection increasingly informative and interesting. Please share your knowledge, ideas, views and thoughts in the form of articles, essays and literary creations.

Thank you!

Nityananda Khanal, Ph.D., P.Ag.
Editor-in-Chief



Agri-Connection
Vol. 4, Issue 2, June 2019

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For past issues of Agri-Connection, please visit the link below:

<http://napaamericas.org/agri-connection.php>

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NAPA Proudly Announces

NAPA 2020: 2nd Biennial Conference

“GLOBAL FOOD SECURITY THROUGH AGRICULTURAL TRANSFORMATION”

Join Us in Atlanta

May 22-24, 2020

Crowne Plaza (Atlanta-Airport)
1325 Virginia Ave., Atlanta, GA 30344, USA



Conference highlights:

- Student writing contest, Rapid-fire presentations
- Student competitive oral & poster presentations
- Professional oral & poster presentations
- Panel discussions on *Global/Nepal Food Security, Gender in Agriculture, Leadership in Agriculture*
- Professional workshops: Successful grant writing, Data analytics and report writing
- Research mini-grants and scholarship for academic excellence: review and future strategy
- Cultural night
- Charity event: Giving back to community and more

For details: <http://napaamericas.org/conference2020/index.php>

Crown Plaza Atlanta-Airport

1325 Virginia Avenue Atlanta, GA 30344, USA

Phone: 1-404-768-666

Description of the Hotel Booking

- Booking Website: <https://book.passkey.com/e/49941148>
- Reservations must be made on or before the cut-off date of MAY 15, 2020 to be eligible for the group rate.
- Reservations can be cancelled by 6 PM, 24 hours prior to the arrival without any penalties.
- Based on the availability of rooms under contracted rate, the group rate will be offered three days prior and three days following the official meeting dates.
- This hotel is located close (~2 miles) to Hartsfield-Jackson Atlanta International Airport and provides 24/7 free shuttle service to the domestic terminal.
- Many of the Atlanta attractions are in a short drive from the hotel. More information about the hotel location and nearby attractions is available at: <https://bit.ly/2Xhz556>





Call for Abstract

The Conference Organizing Committee (COC) is pleased to announce the call for abstracts on the theme "Global Food Security through Agricultural Transformation" for NAPA 2020, second Biennial Conference of the Association of Nepalese Agricultural Professionals of Americas (NAPA). Abstract submission is open on topics related to Agricultural and Allied Sciences that advance any aspect of NAPA disciplines and ultimately help achieve the secured and sustainable supplies of food, feed, fuel, and fiber (4F) to meet the needs of the current and the next generations without compromising the opportunities of future generations. This call solicits abstracts for oral and poster presentations. **Students will have opportunities for oral and poster presentation competitions. The first three of each of the student sessions will be recognized and awarded with cash prizes (\$250.00, \$150.00; and \$100.00) and certificates of appreciation.**

The abstract should be limited to 200 to 300 words and must be submitted using the abstract form available at NAPA website. Specifically, please adhere to the following format when developing and submitting the abstracts:

- Paper Title
- Author(s), Affiliation(s) and email of corresponding author
- Presenting Author
- Discipline
- Keywords: Three to five
- Abstract: Include a brief introduction, objectives, methods, results/expected results, and discussion/conclusions.
- Font Type and Size: Times New Roman; 12 points
- Margin: 1 inch all sides
- Line Spacing: Single

**SUBMIT YOUR
ABSTRACT**

TOPIC AREAS/DISCIPLINES (including but not limited to):

Crop and Soil Science; Plant Pathology; Entomology; Natural Resources; Plant Breeding and Genetics; Viticulture and Enology; Weed Science; Animal Sciences; Comparative and Veterinary Medicine; Aquaculture; Food and Nutrition Technology; Water and Environmental Sciences; Agricultural Education, Extension; Agricultural/Bio-system Engineering and Technology; Agricultural and Resource Economics; Rural Sociology; Agricultural Statistics and Research Methods; Biomedical Sciences; Precision Farming; Food Security; Gender and Agriculture; Remittances and Agriculture; Rural Livelihoods; Sustainable Agriculture; Organic Farming; and any related disciplines.

Deadlines: The abstract must be submitted by **December 31, 2019 (11:59 pm ET)**. Abstract can be submitted through the conference website: <http://napaamericas.org> or by an email to napaconference2020@gmail.com and manoj.karkee@gmail.com. Abstracts will be reviewed by the Scientific Sub-committee and the corresponding author will be notified of decision via email by February 1, 2020.



Funding for the travel: A limited number of travel grants (registration waiver or gratis hotel room for three nights on a shared basis or meals for 3-day conference, or in combination) are available to support students and young professionals from developing countries.

Manoj Karkee, PhD
Chair, Scientific Sub-committee
Second Biennial NAPA 2020 Conference

Call for the Student Writing Contest

NAPA 2nd Biennial Conference Organizing Committee is pleased to announce the 2020 College and University Students' Essay Writing Contest. A full-time student enrolled in a college, including community or vocational college, and/or university around the globe pursuing a degree in agricultural or allied sciences is eligible to participate.

Essay Topic:

"Making the choice: feeding the world through agricultural innovation and transformation in 21st century"

General guidelines:

- The essay should be written in English language.
- The essay must be author's original work and should be attested by inserting a statement followed by author's full name.
- The essay should follow the standard academic essay structure and format that include an introduction with a thesis statement(s) followed by the body of supporting arguments logically organized using headings/sub-headings that lead to a conclusion(s) and future perspective.
- The essay can be developed based on student's own experience, online research, and scientific literature review.
- Appropriate credits must be given to the work of others through appropriate citation. The essay will be disqualified for the competition if any evidence of plagiarism is established. The committee strongly discourages plagiarism of any form and advises students to avoid engaging in such activity.
- The essay should contain **at least 2,000 words but not exceed 3,000 words**, excluding footnotes, tables, figures, and references, and should be formatted double-spaced.
- A complete list of references cited should be included in the reference section of the essay.
- The essay should have author's name, affiliated college or university, degree program, mailing address, and contact email. A proof of student status is required (e.g., student ID card with expiration date or unofficial transcript or a letter from the college or university certifying the student status).
- A pdf copy of the essay must be uploaded online at: <http://bit.ly/NAPA-SWC> The pdf file should be named "NAPA_2020_SWC_STUDENT_NAME_COLLEGE OR UNIVERSITY NAME". The deadline for submission is **January 31st, 2020**.
- Only one essay can be submitted per contestant.
- The results of the writing contest will be announced during the first week of April 2020.
- **The first, second, and third place winners will be awarded with a certificate and cash prizes of \$300.00, \$200.00, and \$100.00, respectively** at NAPA Second Biennial Conference on May 22-24, 2020 at Crowne Plaza Hotel, 1325 Virginia Ave, Atlanta, GA 30344, USA. Winners are encouraged (but not required) to be present at the award ceremony.

If you have any questions/concerns, please contact:



Dr. Bharat Pokharel

Chair, 2020 Student Writing Contest Sub-committee

Email: Bharat.Pokharel@gmail.com

Essay Writing
Contest

NAPA Awarded Competitive Research Mini-Grants to Researchers in Nepal

The Resource and Capacity Building Committee (RCBC) of Association of Nepalese Agricultural Professionals of Americas (NAPA, <http://napaamericas.org/>) has established a competitive Research Mini-Grants (RMG) program to fund applied research projects in Nepal. Through this grant, NAPA seeks to support Nepal-based educational and non-profit research organizations to conduct small-scale high-impact research in the fields of Agriculture and Allied Sciences. Overarching goal of this program is to help conduct utility focused research on education and extension projects for productive, economically viable, and environmentally sustainable plant- and animal-based agricultural systems.

The RCBC had received thirty-two (32) research proposals. The majority of the applicants were undergraduate students (20), followed by master (7), doctoral students (3), and university faculty (2). The applicants represent Agriculture and Forestry University (17), Tribhuvan University (13), and Kathmandu University (2). The proposals were in the field of horticulture, animal health, food science, plant protection, and cereal production, among others.

After two rounds of blind review of each proposal by three reviewers, NAPA Executive Committee with recommendations from RCBC funded 12 proposals amounting NRs. 360,865.00 (three lakh sixty thousand eight hundred and sixty five rupees) in support of each research not exceeding NRs. 30,000.00 (thirty thousand). Of 12 awardees, eight are from Agriculture and Forestry University, while Tribhuvan University and Kathmandu University have three and one awardees, respectively. Seventy-five percent (9) of the grant recipients are undergraduate students, while two master students and one faculty member also received the grant. Five of the grant recipients are females.

NAPA, with the coordination of its Nepal Liaison Mr. Kiran Ojha, organized a mini-grant contract signing Ceremony on May 27, 2019 in Lalitpur Nepal, and first half of the grant was distributed. The program began with an introduction of the participants, welcome note by Dr. Ramjee Ghimire, NAPA RCBC member and Editor-in-Chief, Research and Policy Brief, and a keynote by Mr. Kiran Ojha. Dr. Ghimire and Mr. Ojha congratulated awardees for being selected for this grant and wished them success in their research endeavors. They added that NAPA is encouraged by the enthusiasm Nepalese agricultural professionals



have shown to this program and looks forward to generating impactful research outcomes. Dr. Ghimire suggested awardees to keep in contact with and seek advice from their local and NAPA advisors as and when needed during their research. NAPA is anticipating researchers to produce publication worthy deliverables and some of them may be published in NAPA's own publications –GJAAS Journal and Research/Policy Brief. Awardees were excited and encouraged to be part of this grant program and to be able to get connected with NAPA. NAPA RCBC will follow-up with awardees to monitor the grants during the course of research and assess the outcome after completion of these funded projects.

In addition, NAPA RCBC also awarded *Jit-Shavitra Research Mini-grant* to three research proposals that were funded last year (2018) to continue for the second year at the Mid-West Academy and Research Institute, Campus of Live Sciences (MARICoLS), Dang, Nepal in the amount of NRs. 10,000.00 (ten thousand) each.

Congratulations to all award winners!

Policy/Research Brief series publication: Appeal for your contribution

Dear valued NAPA members,

NAPA publishes Research/Policy Brief (RPB) as a concise summary of original research or literature review pertaining to various aspects of agriculture and related areas in Nepal. This publication is intended to articulate evidential issues, and suggest policy alternatives and/or practical options for improving the situation. Previous issues of RPBs are available online at <http://www.napaamericas.org/research-and-policy-briefs.php>.

Please submit your articles in the area of Agricultural and/or Allied Sciences, including but not limited to Agricultural Ecology; Agricultural Economics; Agricultural Engineering; Agricultural Extension; Agroclimatology; Agronomy/Crop Science; Animal Science and Veterinary Medicine; Applications of Remote Sensing, Geographic Information System (GIS), and Crop Modeling in Agriculture; Climate Change; Environmental Science; Entomology/Plant Protection; Farming Systems and Sustainable Agriculture; Forestry/Agro-forestry; Horticulture; Natural Resources; Plant Breeding/Applied Genetics/Bio-technology; Plant Pathology; Soil Science; Weed Science, and related disciplines.

Here is a brief guideline on how to write RPB for your kind reference:

Title must be engaging and brief and of not more than **10 words**.

Abstract should have succinct statements of aim, problem, summary of research, and policy implications / recommendations - maximum of **100 words**.

The **Body** of the brief should consist of **aim, problem, methods, research findings, conclusion/discussion** with main takeaway messages, **policy implications, actionable recommendations** and references.

The brief should be written in **plain language with broad range of audience in mind**, such as agricultural professionals, stakeholders, and policy makers in Nepal.

Use **American English** with **active voice**.

The content should preferably be less than **six pages**.

Use **figures and graphs** to illustrate the facts and demonstrate patterns.

Use **12-point Times New Roman** font. Margins should be 2.5 cm (1 inch) on all sides.

Indent the first line of paragraphs by 0.5”.

Do not annex any appendices.

Limit references to 10. Format references in accordance with the **American Psychological Association (APA)**, 6th edition.

Submit the manuscript as a **Microsoft Word** document

For additional information please contact:



Dr. Ramjee Ghimire
Editor-in-Chief
Policy and Research Brief
Association of Nepalese Agricultural Professionals of Americas (NAPA)
E-mail: ramghi@gmail.com
<http://www.napaamericas.org/research-policy-brief-editorial-committee.php>

NAPA Publications Updates

Book publication

Sustainable, Sufficient, Safe and Healthy Food in Nepal: Principles and Practices of Food Security

NAPA Book Publication Committee (BPC) is actively working on reviewing the revised chapters received from the authors for the above-noted book. The six-member editorial board has been shouldering this voluntary mission to bring the book out by December, 2019. BPC thanks all the authors for their strong support and seeks continued and timely support from them for its timely publication.



*Dr. Drona P. Rasali
Editor-in-Chief*



*Dr. Prem B. Bhandari
Managing Editor*

Journal publication

Global Journal of Agricultural and Allied Sciences (GJAAS)

Global Journal of Agricultural and Allied Sciences (GJAAS) is a multi-disciplinary, peer-reviewed (double-blind) international journal published by the Association of Nepalese Agricultural Professionals of Americas (NAPA). The editorial board is requesting all researchers to continue submitting research or review manuscripts throughout the year on various aspects of Agricultural Sciences, including but not limited to Agricultural Ecology; Agricultural Economics; Agricultural Engineering; Agricultural Extension; Agroclimatology; Agronomy/Crop Science; Animal Science and Veterinary Medicine; Applications of Remote Sensing, Geographic Information System (GIS), and Crop Modeling in Agriculture; Climate Change; Environmental Science; Entomology/Plant Protection; Farming Systems and Sustainable Agriculture; Forestry/Agro-forestry; Horticulture; Natural Resources; Plant Breeding/Applied Genetics/Bio-technology; Plant Pathology; Soil Science; Weed Science, and closely related disciplines.

The first issue of GJAAS is scheduled for publication this month. Accepted papers are being edited for publication and few have been already assigned DOI, whereas several papers are at various stages of review process. We have already created and deployed new journal management system. While the online submission system is expected to be operational soon, you may continue to submit the paper(s) via email (gjassjournal@gmail.com). We accept research articles as well as review papers, and the submission is accepted year-round.



Kind regards,

Megha N. Parajulee, PhD
Editor-in-Chief, GJAAS

Vice President, NAPA

<http://napaamericas.org/index.php>

<http://napaamericas.org/journal-editorial-board.php>

**Please renew your membership (become life member if possible)
if you have received renewal emails from NAPA before.
- Dr. Pradeep Wagle, Membership Drive Committee Chair**

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Recent NAPA Webinars/talk Sessions

Role of Agriculture on Post Conflict Peace and Economic Development in Nepal

Webinar background

Despite its immense importance for the nation's development, the agriculture sector was continuously neglected even after the restoration of multi-party democracy in 1990 and during the 10 years of insurgency from 1996 to 2006 in Nepal. Government's apathy towards agriculture was manifested through the insufficient budget allocation for agricultural research and agriculture value chain development. Nevertheless, some efforts have been made to support the agriculture sector after the Comprehensive Peace Agreement (CPA), especially, after 2010. Debate on the importance of agriculture in Nepal's development was started during the political transition period (2006 - 2016). The provisions of CPA were included in the Constitution of Nepal 2015, which provides a solid road-map for the advancement of agriculture with the provisions of scientific land reform, food rights and food sovereignty. Similarly, the government brought different policies, laws and regulations to implement the constitutional provisions. Despite some setbacks to agriculture sector due to the transition to federal system, the federal setup provides fundamental opportunities for the modernization, mechanization and commercialization of agriculture, protecting farmers' rights, diverse bio-genetic resources and indigenous knowledge and skills.

On June 22, Dr. Bishnu Raj Upreti discussed these issues with the aim of generating informed debate on the contribution of the agriculture sector in state building, achieving durable peace and social-political stability and prosperity. About 35 NAPA members and other interested professionals from around the world attended the webinar.

About Dr. Upreti

After getting a Bachelor in Agricultural Economics, a Master's in Sociology from Tribhuvan University and M.Sc. in Management of Agricultural Knowledge Systems, Dr. Upreti received his PhD in Conflict Management from the Wageningen University, the Netherlands in 2001. He did Postdoctoral studies from the University of London (King's College)/Centre for Environmental Studies, University of Surrey, UK (2001 -2003). During 39 years of professional experience, he has gained wider experiences from local, national, inter-regional to international levels. He served a South Asia Coordinator of a global research program called NCCR North-South and Senior Researcher focusing state building peace and unconventional security (water, food, health, environmental security), governance and North-South research partnership. His research activities in the past spanned throughout Asia, Africa, Europe and Latin America. Currently, he is working as a Research Director at Nepal Centre for Contemporary Research and leading or co-leading research project operating in Nepal, Myanmar, Laos, Rwanda, and Bolivia. He is also teaching and supervising graduate students at Kathmandu University and Agriculture and Forestry University. He has authored and co-authored 57 books and more than 500 newspaper and journal articles. He is one of the members of Board of Trustees of International Foundation for Science (2014.2021) and member of the Advisory Board of Centre for Unconventional Security Affairs, University of California, Irvine (2009 to date).



Join NAPA: Blend your professionalism with philanthropy

Visit <http://napaamericas.org/join-napa.php> for membership information. Here are NAPA membership categories and fee schedules:

Life membership (One-time payment)

Regular: US\$200 - Bachelor degree or equivalent qualifications in agriculture or related field.

Eligible spouse: US\$100

Senior (65 years or more): US\$100

Joint/family: US\$50

Associate (outside Nepal): US\$100

Associate (Nepal): NRs. 5,000

BECOME A
MEMBER
JOIN TODAY!

General membership (For 2 Years)

Regular: US\$50

Student: US\$25

Associate (outside Nepal): US\$25

Recent NAPA Webinars/talk Sessions

Planning for the Next Big Step in Agriculture Study



Santosh Dhakal, Ph.D.

Postdoctoral Fellow, Johns Hopkins University, Baltimore, Maryland, USA

Education:

PhD (2018), Comparative and Veterinary Medicine, The Ohio State University, USA

BVSc&AH (2011), IAAS, Tribhuvan University, Nepal

A common question a candidate has to go through, “Where do you see yourself in 5 years?” We strive to answer this question in a professional way; however, many of us lack the skills to present ourselves in the best way. In 6th webinar conducted by NAPA student coordination committee (SCC), Dr. Santosh Dhakal shared some important tips on how to prepare ourselves as an aspirant to higher degree/position in academia. Dr. Dhakal started off by outlining the basic steps in the process of getting into a graduate student position. The basic norms of communicating with potential professors that could help an aspiring student to get into higher education stature were discussed in the first section.

In the second section, Dr. Dhakal focused on ways graduating students could prepare themselves for getting into labs for post-doctoral research associate position. This section included topics on networking, communicating with PIs, preparing cover letter and resume. About 30 NAPA members and others attended this talk session. Thank you Dr. Dhakal.

Agri-Connection Newsletter is an excellent medium to reach out to the world through your articles, essays, informative collections, and literary creativities. Send them by email at napa2072@gmail.com anytime! - AC Editorial Board

Appeal for donation/sponsor for Research Mini-Grant Pool Funds

We are encouraged to have so many proactive donors and sponsors contributing to **Research Mini-Grant (RMG) Pool Funds** in a short period. NAPA respectfully requests all generous donors to spare a few dollars by sacrificing small expenses (such as coffee/tea/drinks/movie/dining out etc.) for the next few months in order to generate a mini-grant pool money for collaborative research in Nepal. More importantly, we seek RMG sponsors to support collaborative research for developing capacity of undergraduate/graduate students, local faculty, and post graduate professionals (\$200 and up). Therefore, you have been invited to make a difference in research-based agricultural education in Nepal by

sponsoring at least one mini-grant for an impactful scientific investigation. However, anyone willing to contribute to RMG for collaborative research may donate any amount to the RMG pool funds and the amount will be disbursed to support selected small-scale projects. Such pool-funded projects will be solicited, evaluated, selected, supported, and managed by Executive Committee in consultation and as per the recommendation by **Resource and Capacity Building Committee (RCBC)** depending on the amount of funds in the RMG pool fund. Your generosity is NAPA’s inspiration to serve the community back in the motherland and beyond.

Upcoming NAPA Webinar



NAPA

Association of Nepalese Agricultural Professionals of Americas
Student Coordination Committee (SCC)

Announces 7th webinar on

Cannabis as an Economic Crop:

Prospect and Possible Use in Nepalese Context

BY: **Niranjan Aryal, Ph.D.**

When: August 10, 2019 (Saturday in US)

Time: 9:00 PM US Eastern Standard Time/6:00 PM US Pacific Time (Sunday 6:45 AM, 11 Aug in Nepal)

How to Join the Session?

Join from PC, Mac, Linux, iOS or Android: <https://zoom.us/j/376928980>

Telephone: Dial: +1 669 900 6833 or +1 646 876 9923, Meeting ID: 376 928 980

Find your local number: <https://zoom.us/u/a1BVSSwpe>

Talk Summary



Human consumption of cannabis in various forms for medical and recreational purposes can be traced back to before-the-common era. During this time, human selection of specific cannabis strains has greatly altered the characteristics of the plant. Despite the long history of domestication and selective breeding, the evolutionary aspects and the underlying genetics have not been adequately understood. Due to increased legalization of cannabis in western countries, including several states in the USA, the plant has attracted researchers and industrialists. Studies on the medical values of different cannabinoids, terpenoids, and other secondary metabolites in the cannabis plant may yield

great utility to human society.

Nepalese civilization has a religious, medical, and recreational relation with this valuable plant. With an increased global focus on the medical and economic aspects of cannabis, Dr. Aryal will be talking about the cannabis plant, its use, history, and potential socio-economic importance as an economic crop in Nepalese context.

Speaker's Bio: Dr. Niranjan Aryal is a scientist at VRX labs, Long Beach California. He completed his Ph.D. in Plant Biotechnology from Montana State University, Bozeman, Montana in 2018. Dr. Aryal believes that the pharmaceutical exploitations of Nepali herbs could boost the country's economy and bring back the prosperity to Nepalese people.

Respected NAPA members & beyond,

NAPA & SCC would like to invite all of you to attend upcoming 7th NAPA SCC webinar on the topic as stated above. Please take advantage of this interesting topic from home.

Featured NAPA Member of the Quarter (April - June 2019)



Aditya R. Khanal, Ph.D.
Assistant Professor
College of Agriculture
Tennessee State University

Education:

B.Sc., Agriculture, IAAS, Tribhuvan University
M.S., Finance, Louisiana State University (LSU)
M.S., Economics, Virginia Tech
M.S., Agriculture Economics, Louisiana State University (LSU)
Ph.D., Agricultural Economics, Louisiana State University (LSU)

Dr. Aditya R. Khanal is a young and early career agricultural economist, currently working as an assistant professor in the college of agriculture at Tennessee State University. Dr. Khanal joined his current position in November of 2015 after completion of his PhD in agricultural economics from Louisiana State University (LSU) in August of the same year and his brief work as a visiting assistant professor of economics in the college of business at University of Nebraska-Kearney. Before earning his PhD degree, he completed three Masters degrees-MS in finance (LSU), MS in economics (Virginia Tech), MS in agricultural economics (LSU) and an Undergraduate degree-BSc in agriculture (IAAS, Tribhuvan University, 2006).

Dr. Khanal's current job position is primarily focused on research, teaching, and student advisement in the area of agribusiness, agricultural finance, production economics, and economic development. As an agricultural and applied economist, he has been involved in many interdisciplinary research projects and has obtained nearly 1.1 million dollars of research grants as principal investigator and co-principal investigator. He teaches graduate and undergraduate courses in agribusiness management & analysis, applied microeconomics, and agricultural finance.

He is also actively involved in student advisement and mentoring: after he took the position of assistant professor, he has already graduated two MS students with thesis and is currently advising three graduate students and three undergraduate students as a major advisor.

Dr. Khanal's involvement in agricultural and multi-disciplinary research has resulted around 30 peer-reviewed journal publications and many national and international conference papers, including scientific and policy level studies in Nepalese agriculture, cited from scholars across the globe. More information can be found on his google scholar page (<https://scholar.google.com/citations?user=N49anKsAAAAJ&hl=en&oi=ao>) or ResearchGate profile (https://www.researchgate.net/profile/Aditya_Khanal). One of his publication was named as "2017 outstanding journal article: highly commended" from Emerald Publishing. He received "2018 Outstanding Young Researcher Award" from the College of Agriculture at Tennessee State University. More notably, recognizing his early career achievements, he was awarded as "2018 Outstanding Young Scholar of Agricultural Finance" from Agricultural and Applied Economics Association (AAEA), professional society of agricultural economists. Dr. Khanal is actively involved in professional societies. In addition to his active membership to AAEA and Southern Agricultural Economics Association (SAEA), he is also recently appointed as one of the three members in the selected poster committee of SAEA for three years. He also serves as reviewer for dozens of scientific journals related to agriculture and applied economics.

Dr. Khanal is a life member of Nepalese Agricultural Professionals of Americas (NAPA) and is involved as a member in Resource and Capacity Building Committee (RCBC) and Scientific Sub-committee (SSC) of 2020 NAPA conference organizing committee. Dr. Khanal values NAPA as a common forum to discuss and share ideas among Nepalese agriculturist across the globe and as a potential platform to contribute to agriculture sector and to agricultural institutions in Nepal in some meaningful ways.

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Every issue of Agri-connection has been featuring one of the outstanding NAPA members in different areas of agriculture and allied sciences. In consultation with NAPA Executive Officers, Agri-Connection Editorial Committee identifies a member who is highly active in various NAPA roles and can be seen as a rising star in NAPA Community.

Article

Postharvest Handling of Fresh Produce in Nepal: A Neglected Journey

- Sunil Dulal and Bed P. Khatiwada

Fruits and vegetables (fresh produce hereafter) are important sources of carbohydrates, vitamins, minerals and fiber, and play a vital role in human nutrition. Specific production, transport and storage are necessary to provide appropriate physiological conditions that optimize and preserve the nutritive value of the fresh produce. All the activities after the harvest of crops are considered postharvest operations which have large bearing on retention of product quality. Quality is the overall excellence of the produce and can be expected only if all the freshness and nutrients are retained during postharvest handling. Nepal experiences a postharvest loss of 20-50% in fresh produce (Gautam and Bhattarai, 2012). Efforts are needed to reduce the postharvest loss and improve the quality and safety of fresh produce which needs thorough analysis of our handling practices along the supply chain. The cost effectiveness of the intervention and demand of the quality fresh produce from the market could be the major drivers to apply postharvest management system.



Figure shows an example of fresh fig packing

Pathetic Present

Agricultural produce, in general, and horticultural fresh produce, in particular, have been receiving poor postharvest management and handling in most of the instances. Farmers and other stakeholders are putting their efforts more on increasing productivity through better management of available resources. Unfortunately, hardly grown produce starts facing harsh treatment right at the time of harvest and thereafter at each point of supply chain. Improper postharvest management results in the loss of qualitative (edibility, nutritive value, caloric value, and consumer acceptability) and quantitative (physical) integrity of the fresh produce (Kader, 2005). The degree of negligence and postharvest losses may differ from crop to crop, but the practice of postharvest handling remains pathetic despite various efforts in rising awareness on postharvest management.

Fruit picking has rarely been done using a clipper and kept in a harvesting bag, but throwing directly to the ground. It is very common to see people washing leafy vegetables (mustard green, spinach, etc.) and root crops (carrot, radish) polluted water and selling on roadsides and other markets. Since there has been several training and demonstration sessions by various organizations, these examples are not an excuse of 'not knowing' rather a negligence.

The Starting Point

Harvesting using appropriate tools and collection in a suitable harvesting bag/container are starting points to maintain postharvest quality. Fresh produce are physiologically active undergoing metabolic activities such as respiration and transpiration, which should be brought to their minimum level immediately after picking, by using temperature maintained warehouse or polyhouse/shelter in the field. Sorting, grading, packaging and cleaning of the fresh produce are vital postharvest operations to render produce free from disease and pest or make them uniform and attractive in presentation. Manual sorting and grading operations are feasible for any produce if machines are not available or affordable. These operations will add value to the produce making them salable at premium price. Following cleaning, sorting, and grading, the fresh produce must be carefully packaged in bags, punnets, crates, or any containers inlaid with soft liners which protect the produce from bruising and excessive pressure from

external loads during transportation and handling. Vegetative produce such as leafy vegetables are better suited to pack in bunches covered by plastic film while produce like oranges and apples are better packed in crates, cartoons, and trays. Proper palletizing through aggregation of cartoons or crates in a wooden/plastic pallet for safe transportation is one of the important steps of produce handling. These pallets should be properly wrapped to hold the fresh produce intact in the pallets. Management of temperature during long or short distance transport is vital for fresh produce as temperate fruits require a temperature of 4-8°C and tropical fruits need 12-15°C temperature during supply chain. Leafy vegetables and fresh cut produce need further consideration of humidity management.

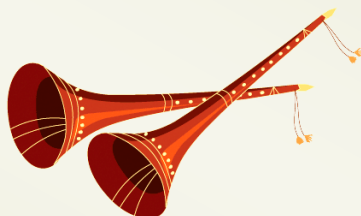
Major Drivers

Consumers seeking for better quality fresh produce and willing to pay more are major drivers for better postharvest management and investment in horticultural industry. Producers and stakeholders should be careful about the rapid loss of nutrients in perishable produce due to the lack of proper temperature management and efforts should be integrated to ensure the postharvest quality. Reducing postharvest loss is easier than increasing productivity. Thus, efforts should be directed to raise awareness among consumers on health benefits of quality fresh produce and invest on facilities and equipment to maintain the quality of fresh produce along the supply chain.

References

- Gautam, D.M. and D.R. Bhattarai. 2012. Postharvest horticulture. Bhawani Printers. Chabahil, Kathmandu, Nepal.
- Kader, A.A. 2005. Increasing food availability by reducing postharvest losses of fresh produce. Proceedings of 5th International Postharvest Symposium. F. Mencarelli and P. Tonutti (Eds). Acta Horticulture, 682. USA.

(S. Dulal is an Agriculture Officer at Nepal Public Health Foundation, Bharatpur, Nepal, and B.P. Khatiwada, NAPA member, is a Fresh Produce Postharvest Specialist in Brisbane, Australia)



Congratulations to our NAPA Member Sushil Nyaupane and Sita Poudel on their marriage !



May this beautiful couple have happy, healthy, and fortunate family life !

Members' Publications and Presentations



Journal Articles

- Mishra, B., Sandifer, J., & Gyawali, B. R.** (2019). Urban Heat Island in Kathmandu, Nepal: Evaluating Relationship between NDVI and LST from 2000 to 2018. *International Journal of Environment*, 8(1), 17-29. DOI: <https://doi.org/10.3126/ije.v8i1.22546>.
- Antonious, G. F., Turley, E., **Mishra, B.**, Heist, Q., Upadhyaya, Y., Trivette, T., & Nkuwi, L. (2019). Characterization of eggplant grown in animal manure amended soil. *International Journal of Environmental Health Research*, 1-12. DOI: <https://doi.org/10.1080/09603123.2019.1602252>.
- Wagle, P.,** Gowda, P. H., & Northup, B. K. (2019). Dynamics of evapotranspiration over a non-irrigated alfalfa field in the Southern Great Plains of the United States. *Agricultural Water Management* 223: 105727. DOI: <https://doi.org/10.1016/j.agwat.2019.105727>.
- Liu, Y., Dang, Z., Wang, Y., **Parajulee, M. N.** & Chen, F. (2019). Effects of various CO₂ and temperature combinations on plant chemistry of transgenic Bt rice and population dynamics of a non-target plant-hopper, *Nilaparvata lugens* (Stål) under different levels of soil nitrogen. *Toxins*, 11, 261. DOI: <https://doi.org/10.3390/toxins11050261>.

Oral Presentations

- Bhattra, S., Karki, U., Paneru, B.,** Ellis, N., & **Poudel, S.** (2019). Landscape-use pattern and performance of small ruminants in woodlands with altering understory vegetation heights. 2019 ASAS-CSAS Annual Meeting and Trade show., July 8-12, 2019, Austin, Texas.
- Bhattra, S., Karki, U., & Poudel, S.** (2019). Vegetation height and diurnal period influenced the behaviors and distribution patterns of small ruminants in woodlands during fall. 16th AFTA Biennial Conference, June 24-27, 2019, Oregon State University, Corvallis, Oregon.
- Hakeem, A., & **Parajulee, M. N.** (2019). Biological control of sugarcane aphids, *Melanaphis sacchari* (Homoptera: Aphididae) on sorghum in the Texas High Plains. Entomological Society of America International Branch Virtual Symposium, April 8-10.
- Hakeem, A. & **Parajulee, M. N.,** Vyavhare, S. and Lewis, K. (2019). Management of early-season insect pests in Texas High Plains cotton: Transitioning to dryland production. ESA Southwestern Branch Annual meeting, April 14-18, Tulsa, OK.
- Joshi, G.,** Min, B., Shahi, N., & Kpombrekou-A, K. (2019). Screening Lignocellulosic Fibers Derived from Organic Cover Crops for Potential Bio-Composite Materials. ARD Research Symposium 2019, March 30 - April 3, 2019, Jacksonville, FL.
- Karki, U., Karki, L. B., & Gurung, N.** (2019). Integrated approach for controlling diseases and parasites in small ruminants: extension education and adoption. 2019 ASAS-CSAS Annual Meeting and Trade show., July 8-12, 2019, Austin, Texas.
- Karki, U., Bhattra, S., Poudel, S., & Paneru, B.** (2019). Southern pines performed better in silvopastures than in woodland grazing system. 16th AFTA Biennial Conference, June 24-27, 2019, Oregon State University, Corvallis, Oregon.

Bold – NAPA members

Members' Publications and Presentations

Oral Presentations

Khanal, N., Azooz, R., Lupwayi, N., Otani, J., & Yoder, C. (2019) Integrating perennial forage seed crops in the cropping systems in western Canada: An agroecological and economic assessment. Plant Canada 2019 -Communicating Innovation in Plant Science, July 7–10, Guelph, Ontario.

Yoder C.L., **Khanal N.** & Gauthier T.M. (2019) Response of meadow brome-grass seed crops to plant growth regulators in Canada; pp 36-40. In Proceedings of the 10th International Herbage Seed Group Conference, Corvallis, Oregon, USA; 12-19 May 2019.

Parajulee, M. N., and Carroll, S. C. (2019). Survey of possible incidence of *Helicoverpa armigera* invasion in Texas. ESA Southwestern Branch Annual meeting, April 14-18, Tulsa, OK.

Parajulee, M. N. (2019). Cotton Integrated Pest Management in the United States: History, Current Progress, and Lessons Learned. Nanjing Agricultural University Invited Lecture Series, June 13, 2019.



NAPA Vice President delivered a lecture at Nanjing Agricultural University Invited Lecture Series in Nanjing, China, June 13, 2019.

Poster Presentations

Karki, S., Shange, R., Ankumah, R., McElhenney, W., & Idehen, O. (2019). Comparative Assessment of Microbial Structure and Enzyme Activities in Two Forest Management Practices. The 2019 In Vitro Biology Meeting, June 8-12, 2019, Tampa, FL.

Karki, S., Shange, R., & Ankumah, R. (2018). Microbial Populations in Rhizosphere of Different Crucifers Grown in Tunnel House. ARD Research Symposium 2019, March 30 - April 3, 2019, Jacksonville, FL.

Khanal N., Yoder C.L., & Gauthier T.M. (2019) Seed Crop Agronomy of Creeping Red Fescue in Canada's Peace Region, p 111. In Proceedings of the 10th International Herbage Seed Group Conference, Corvallis, Oregon, USA; 12-19 May 2019.

Paneru, B., Karki, U., Bhattra, S., Ellis, N., & Biswas, P. K. (2019). Availability of the Browse Vegetation during the Fall Season for Grazing Small Ruminants. ARD Research Symposium 2019, March 30 - April 3, 2019, Jacksonville, FL.



Bold – NAPA members

Welcome New NAPA Members on Board

We are growing !

Our total NAPA membership is at 313 that includes 58 Life Members, 66 General/Regular Members, 134 Student Members, 42 Associate Members, and 13 Family/Joint Members. We are greatly privileged to welcome the following 33 new members in this quarter !

Senior Life Members

◆ Dr. Drona Rasali, Canada

Associate Life Members

◆ Dr. Jay Dhungel, Australia

Associate Members

- ◆ Mr. Anil Regmi, Nepal
- ◆ Dr. Ujjal Tiwari, Nepal
- ◆ Mr. Bibek Sapkota, Nepal
- ◆ Mr. Gehendra B. Gurung

General/Regular Members

- ◆ Dr. Sameer Khanal, Georgia
- ◆ Dr. Yadu Pokhrel, Michigan
- ◆ Mr. Govinda Baral, Virginia
- ◆ Dr. Bhim Chaulagain, Oregon
- ◆ Dr. Keshav Sharma, Minnesota

Life Members

- ◆ Mr. Dhananjaya Dhakal, Texas
- ◆ Dr. Shiva Makaju, Georgia
- ◆ Dr. Dirgha Ghimire, Michigan
- ◆ Dr. Kabindra Adhikari, Arkansas
- ◆ Dr. Mukti Ghimire, Georgia
- ◆ Mr. Shiva K. Rai, New Hampshire
- ◆ Dr. Narayan P. Nyaupane, Texas
- ◆ Dr. Buddhi Gyawali, Kentucky
- ◆ Dr. Krishna P. Paudel, Louisiana

Students Members

- ◆ Mr. Hari Regmi, University of Tennessee,
- ◆ Dr. Manoj Gurung, Oregon State University
- ◆ Mr. Sulakshan Neupane, University of Georgia
- ◆ Ms. Bhawana Ghimire, University of Georgia
- ◆ Mr. Sunil Shrestha, Michigan State University
- ◆ Mr. Sameer Pokhrel, University of Florida, Florida
- ◆ Mr. Sandeep Chapagain, Louisiana State University
- ◆ Mr. Dipendra Shahi, University of Florida
- ◆ Ms. Sangeeta Sapkota, Virginia Tech
- ◆ Mr. Anil Koirala, University of Georgia
- ◆ Mr. Anjan Bhatta, Auburn University
- ◆ Ms. Anjali Arpan, Mississippi State University

Enjoy privileges with your NAPA membership: Just a few examples

- Peer-to-peer networking and research collaboration opportunities
- Opportunity to publish scientific works in NAPA's various outlets (
- Opportunity to sponsor scholarships and research mini-grants in preferred agricultural institutions and disciplines in Nepal through NAPA
- Eligibility for NAPA awards, scholarships, and endowment funds
- Share expertise via NAPA's Talk Sessions (Webinars) and Online Teaching/Learning Programs
- Discounted rates for registration and hotel reservation during scientific conferences organized by NAPA; and many more !

Celebrating the Success: Members' Achievements

AFTA new president!!

Dr. Uma Karki, Professor at Tuskegee University is elected as the president of Association for Temperate Agroforestry (AFTA) for the term 2019-2021. Congratulations Dr. Karki on your achievement and best wishes for your successful tenure.

Congratulations

Dr. Uma Karki, PhD, NAPA's founding life member, Editor NAPA's flagship Journal 'Global Journal of Agricultural and Allied Sciences (GJAAS)' and NAPA Book 'Food Sustainability, Food Sufficiency, Food Safety and Healthy Food in Nepal' (upcoming) has been promoted to **Professor** position at Tuskegee University, College of Agriculture, Environment and Nutrition Sciences in July, 2019. Congratulations Dr. Karki on her outstanding accomplishment and wish her all the best in the future.

Honors

The National Extension Association of Family and Consumer Sciences (NEAFCS) honored NAPA President **Dr. Lila B. Karki** as the **President-Elect** of 11 Members' Executive Committee of NEAFCS Alabama in April 2019. Congratulations Dr. Karki on leading Alabama for one of the largest professional association of Extension professionals in America.



National Extension Association
of Family & Consumer Sciences

<https://www.neafcs.org/assets/documents/affiliates/2019-Lists/alabama-officers-updated.pdf>

Graduate Assistantship

Mr. Shailes Bhattarai, PhD assistantship in Poultry Science at the Department of Poultry Science, University of Georgia, Athens. Best of luck on your career!



Mr. Gaurab Bhattarai, PhD assistantship in Plant Breeding, Genetics, and Genomics in the Department of Crop and Soil Science at University of Georgia, Athens. Best of luck on your career!

Student Presentation Award

Mr. Mahesh KC, a PhD student at Ohio State University won Ben S. Pomeroy Award for Best Student Oral Presentation at the 70th North Central Avian Disease Conference 2019 organized at Minneapolis, Minnesota. His presentation entitled, "Understanding Toll-like receptor 3 mediated immune responses in chicken and quail fibroblast cell line using knock-out model".



Celebrating the Success: Members' Achievements



Congratulations New Graduates



Mr. Kshitiz Dhakal Graduated with his Master's Degree

Mr. Kshitiz Dhakal graduated with a Masters in Biotechnology;
Concentration: Plant Breeding from West Virginia State University.

Thesis title: Improving Vintage Tomato Varieties with Tobacco Mosaic Virus Resistance Using Marker Assisted Selection and Background Genome Selection to Speed Recovery of Vintage Types

Congratulations to Mr. Dhakal on his academic accomplishment!



Mr. Sujan Bhattraai Graduated with his Masters Degree

Mr. Sujan Bhattraai graduated with a Masters in Aquaculture & Aquatic Sciences;
Concentration: Aquaculture from Kentucky State University.

Thesis Title: Evaluation of Density for Holding Live Food Fish in Small Recirculating Aquaculture System

Congratulations to Mr. Bhattraai on his academic accomplishment!



Mr. Saruj Khadka Graduated with his Master's Degree

Mr. Saruj Khadka graduated with a Masters in Environmental Studies;
Concentration: GIS and remote sensing from Kentucky State University

Thesis title: Exploring relationships among Land Ownership, Landscape Diversity, and Ecological Productivity in Kentucky.

Congratulations to Mr. Khadka on his academic accomplishment!



All NAPA Members:

To be featured in this page, please send your graduation information including the University name, degree received, area of research, and thesis/dissertation title to:

napa2072@gmail.com

Celebrating the Success: Members' Achievements



Congratulations New Graduates



Mrs. Sijan Pandit Poudel Graduated with her Master's Degree

Mrs. Poudel graduated with a Masters in Environmental Studies from Kentucky State University

Congratulations to Mrs. Poudel on her academic accomplishment!



Mr. Aman Bhatta Graduated with his Master's Degree

Mr. Aman Bhatta graduated with a Masters in Environmental Studies; Concentration: GIS and Remote Sensing from Kentucky State University

Thesis title: Effect of Land Cover Change on Sediment Yield in Bell Watershed, Kentucky from 1992 to 2013.

Congratulations to Mr. Bhatta on his academic accomplishment!

Donation Appeal for Scholarships and Endowment Funds

With the donation received from sponsors, NAPA has established:

- ♦ *A Scholarship Fund for awarding meritorious students in Nepal*
(<http://napaamericas.org/napa-scholarships-sponsors.php>) and
- ♦ *An Endowment Fund for awarding emergency relief and charitable support*
(<http://napaamericas.org/endowment-fund-announcement.php>).

NAPA extends gratitude to its bountiful donors and appeals to the potential donors for their generosity.



Article

Conquering the Top of the World: A Story of Success, Failure, and Death

- Keshab Subedi

The Mount Everest is a global spotlight of mountaineering, a mark of our global identity and direct or indirect livelihood of some of our communities. More than its geographical peak, the Everest represents stories of human dreams, human courage, struggles, success, failure and death. This year, deaths on the Everest due to overcrowding became head news of many of the western news agencies, including CNN and BBC. But, back home in Nepal, the news did not receive much attention. We should understand our Himalayas deeper and better from mere geographical and other scientific perspective or heart rendering stories of death and survival of mountaineers. This is important for not only improving policies that involve the safety of mountaineers and sustainability of the Himalayas, but also to understand ourselves and our history.

This article explores Everest, using different matrices related to mountaineering, the relative historical trends of Everest expeditions and success, failure, and death on Mount Everest using the mountaineering data from the Himalayan Database. There are several scientific publications using the data.

The Himalayan Database

The Expedition Archives of Elizabeth Hawley (https://en.wikipedia.org/wiki/The_Himalayan_Database) is a large digital and published record of mountaineering in the Nepalese Himalayas since 1903 and has since been maintained and digitized by Richard Salisbury. The Himalayan Database (HDB) was developed by Elizabeth Hawley, who remained involved until her death in 2018. The data are publicly available.

The Historical Trend of the Everest Summits

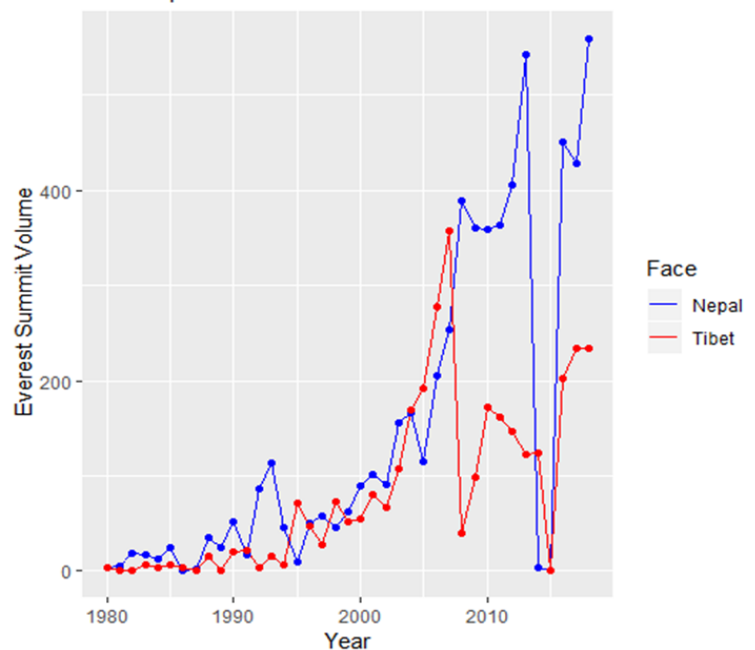
Summitting Mount Everest first began when Edmund Hillary and Tenzing Norgay Sherpa first reached the peak in 1953. However, even up until the 1990s, only few expeditions occurred each year from either the Nepal or Tibet side of the mountain. The momentum of the expeditions started after the 1990s and entered a phase of exponential growth after 2005, which coincided with the end of the decade long armed conflict in the country. There seems to be a similar growth pattern in the number of Everest summits in both Nepal and Tibet side until 2008. After 2008, the summits from Nepali side substantially outnumbered the summits from the Tibet side except for 2014 and 2015. In 2014 there were only 4 summits from Nepal side, which might be due to huge avalanche in the Everest and the strike by Sherpas. In 2015, there was no Everest summit from Nepal side due to the earthquake.

The Everest Crowding

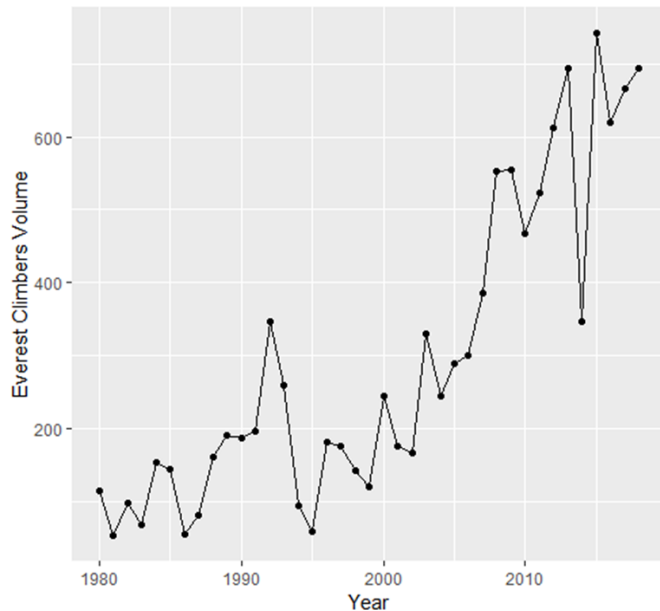
Crowding in the Everest during peak climbing season has become a subject of global concern. This year reportedly 11 people died mostly due to crowding and human traffic on the peak. The numbers of Everest climbers including support staff are continuously increasing, except for a few years. The volume of climbers increased from less than 200/year for most of the years before 2000 to more than 600/year after 2011. The statistics for the year 2019 are not yet fully available. However, the numbers of climbers are expected to have increased as indicated by the reports on record high number of expedition permits issued by the Nepal government. Now, with better political stability and the Nepal government's renewed focus on tourism, the Everest expedition will continue to increase unless Nepal government implements restrictive policies or substantial proportion of climbers choose the Tibet side. This may further worsen the Everest crowding issue in the years to come.

Historical Trend of the Everest Summits

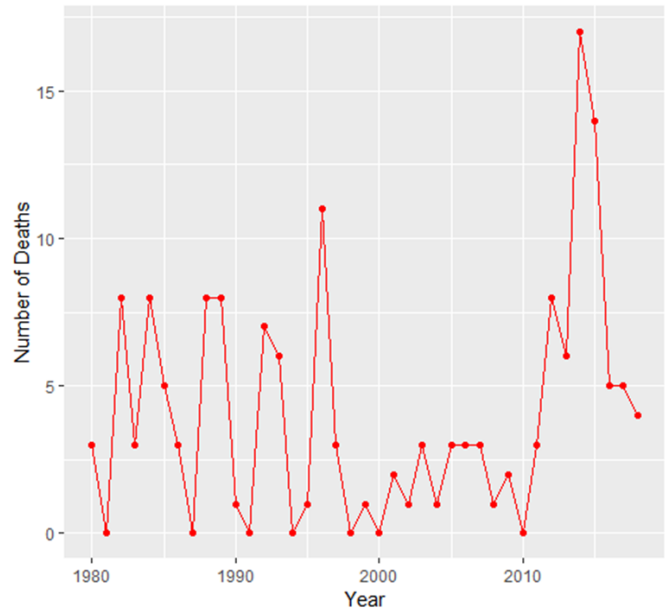
From Nepal and Tibet face



Number of Everest Climbers Over Year
Including hired support staff (from Nepal side)



Number of Death in the Everest
Including hired support staff



The Everest as global melting point of the mountaineers

Throughout the history, the Everest remained the ultimate goal of the mountaineers and became a global melting point of mountaineers from across the globe. Between the period of 1980 and 2018, after Nepal, the largest proportion of the Everest climbers were from the USA, followed by India, United Kingdom, South Korea, Japan, Spain, France, Canada, China, Italy, and Germany. In the same period mountaineers from more than 100 countries attempted to climb the Everest. The diversity of nationality of the Everest climbers is shown in the word-cloud-pyramid.



Deaths on the Everest

In the period between 1980 and 2018, 157 climbers, including the support staff died on the Everest. Among the 157 people died, 82 were expedition members and rest 75 were hired support staff. The year with the largest death on the Everest were 2014, 2015, and 1996 with reported deaths of 17, 14, and 11 climbers, respectively. The historical trend of the death is presented in the above time plot. In further exploring the nature and cause of death, 47 of those deaths were caused by avalanche and 42 of them were caused by fall. Other leading cause of deaths were acute mountain sickness (AMS), illness (non-AMS), and exposure/frostbite.

Final remarks

It is high time for the Nepal government to start a serious discourse on how to shape the future of the Everest expeditions and the life of the Everest itself. We need to decide how many expeditions a season that we are going to permit, and we need to come up with plans on how we are going to keep the Everest clean and avoid it being labeled as a ‘world’s highest garbage dump’. The better understanding of these historical trends of different matrices on mountaineering could be helpful in devising a better policy plan for the safety of the mountaineers and the sustainability of the Himalayas.

(K. Subedi is a Biostatistician based in Philadelphia Metro Area, USA)

Dear NAPA members: Please renew your membership (become life member if possible) if you have received renewal emails from NAPA before.

An Appeal To Join/Renew NAPA Membership

NAPA would like to remind all members other than Life Members and Associate Members from Nepal to renew membership for another term (2018-2020) that started from the Oklahoma Conference (May 26-27, 2018). If you are not sure of your renewal date, please contact us at napa2072@gmail.com. Your contributions thus far to bring NAPA to the current level is greatly appreciated. Meanwhile, we would like to request potential members to join NAPA. We look forward to receiving your continued support and contribution (time, money, expertise, and creative ideas/thoughts) to advance NAPA to the next level - *'a common professional platform -for all of us.'*

A few reasons to join/renew NAPA membership:

NAPA is a member-driven voluntary organization. NAPA offers various benefits to its members to advance their career growth and successes at all stages. NAPA member benefits include (but not limited to):

- Peer-to-peer networking and research collaboration opportunities
- Professional development and advancement
- Serving on various committees
- Opportunity to publish scientific works in NAPA's various outlets (Journal, Book, Research/Policy Brief, and Agri-Connection)
- Opportunity to sponsor scholarships and research mini-grants in preferred agricultural institutions and disciplines in Nepal through NAPA
- Eligibility for NAPA awards, scholarships, and endowment funds
- Opportunity to share scientific works, experiences, and expertise via NAPA's Talk Sessions (Webinars) and Online Teaching/Learning Programs
- Joining global expert repository to contribute to Nepalese Agriculture and beyond
- Keeping up-to-date on NAPA's programs and activities
- Volunteering and charitable opportunities
- Discounted rates for registration and hotel reservation during scientific conferences organized by NAPA



NAPA has adjusted its life membership fees from \$500.00 to \$200.00 (\$300.00 for eligible couples) to encourage eligible members to become life member of the organization. Please check for more details on Joining NAPA at <http://napaamericas.org/join-napa.php> and membership type and fees at <http://napaamericas.org/membership.php>. We look forward to welcoming you for a great cause. Please let us know if you have any questions and willingness to volunteer in various committees.



Thank you.

On behalf of NAPA Executive Committee,
Dr. Pradeep Wagle
NAPA General Secretary
Chair Membership Drive Committee
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Article

Agricultural research for Nepal's development: Redefining role of Agriculture and Forestry University¹

Part I

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Key message:

The main objective of this paper is to generate constructive debate on need for advancing agricultural research within the scope of Agriculture and Forestry University (AFU) to contribute to the economic development of the nation. I vehemently argued for the need of fundamental restructuring of the existing AFU to make fully autonomous, free from any possible interference. Restructuring is needed in: a) defining national agricultural research priorities, b) AFU Act and regulatory provisions, c) institutional arrangements, d) contents and syllabus e) research infrastructures, f) role and responsibilities of executives, professors, students and staff. Without total restructuring of AFU, it will not be able to meaningfully contribute to the sustainable economic development need of the country. In this context, the paper highlights the scope of restructuring for advancing future research in the country. AFU must reorient its agricultural academic and research activities to meet national need. AFU has to expand collaboration with private/business sector, cooperative sector, international agricultural research and academic institutions. The NARC sponsored 'Deemed to-be-University' debate will not only deviate national priorities but also create conflict, waste resources and ultimately weaken the national state university. Similarly, the role of student union must be limited by Act, stipulating liability to those who obstruct the research and academic program, while making the culprits who show violent behaviour or vandalize the University properties, ineligible to continue their study. International standard must be used for the selection of executives and academic staff.

The Context

Globally it has been proven that agriculture plays a crucial role in reducing poverty and achieving economic growth and overall development, especially in developing countries (Coulson and Bitrina, 2012). History of developed countries has demonstrated that agriculture was one of the great contributors for their economic development. Investment in agriculture research was one of the major factors contributing to the agriculture-led economic development. The developed countries were able to achieve rapid growth in agricultural productivity in 2nd half of the 20th century, which was due to channelling public and private investment in agricultural research and development (R&D) (Evenson *et. al.*, 1979; Evenson, 2002). Unfortunately, agricultural research in developing countries is not getting enough attention despite the fact that agriculture is the most important basis of livelihoods, generator of employment, and contributor to poverty and hunger reduction. One of the reasons policy makers in developing countries are not prioritizing investment in agricultural research is because of its complex nature, long time horizon and uncertainty of outcomes, especially long gap perhaps decades, for research to affect productivity between initial investment in research and achieving the returns (Alston *et al.*, 2010). Hence, developing countries have persistently underinvested in agricultural research.

Even when agricultural research is marginalized, agriculture is the main basis of economic development, food security and livelihoods of vast majority of population in developing nations in general and Nepal in particular (Gauchan 2012). Regrettably, investment in agricultural research and innovation is largely ignored by both public and private sector.

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and therefore it is either lagging behind or excluded from the global agricultural markets, as its contribution is only 5% of global agricultural exports in the early 1970s which is even reduced to barely 1% in the late 1990s (FAO, 2002). One of the main reasons for such a situation was lack of investment in agriculture research.

According to Alston et al., (2010), developing countries in the past have heavily relied on spill-overs of knowledge and technology resulting from agricultural research undertaken by a few developed countries (like USA, Australia and some EU members). In developing countries, even if agricultural research provisions are made, they are narrowly focused without giving proper attention to the entire value chain and system approaches, as well as market, climatic, geographical and cultural needs.

There are several interrelated factors responsible for the poor performance of agriculture in developing countries such as low productivity, narrow & selective production base and trade structures, poor agricultural knowledge, poor infrastructure, and inadequate institutional and policy frameworks (FAO, 2002) as well as constraint related to geography, gender integration and the fragmented land ownerships. Agricultural research still could provide ways and options to address these challenges. Since the past few decades, the hegemonic approach of the developed countries (e.g., extraction of genetic resources and patenting, development of genetically modified organisms and terminators technologies, sanitary and phytosanitary provisions and unfavourable trade rules imposed, etc.) has added further challenges in the agriculture sector in developing countries. Therefore, strong agricultural infrastructures and resource allocation to produce high quality research in is a pre-condition to address these challenges.

Experiences of countries having advanced agriculture research indicate that addressing internal and external barriers of the agricultural development is to invest in the agricultural research and innovation, integrate research as an integral part of academic programmes, develop competent human resources, and ensure responsive institutional arrangements, conducive legal provisions and adequate resource allocation (Coulson and Bitrina,

2012; FAO, 2002; Lele et al., 2010; Upreti 2012). However, it is not easy. For example, Pardey et al., (2006) highlight that several developing countries are facing serious funding and institutional constraints including governance that inhibit the effectiveness of agricultural research and consequently causing serious food shortages and hunger. The reason is mainly the lack of political commitment and negligence and or resistance of decision makers. On one hand, agricultural research in developing countries has weak performance because of inadequate capacity of individual and institutions engaged in research. On the other hand, Capacity enhancement of individual researchers and agricultural research institutes/universities is not getting proper attention both at the highest political and policy decision levels without which high quality research is impossible. So far, research in general and agriculture research in particular in Nepal is not a priority of political decision makers, lawmakers as well as policy makers & planners. Further, neither academic institutions themselves are serious about research nor international development partners consider research as an integral component of development. Even business or private sector does not give priority to research in Nepal. Hence, research is a totally marginalized issue in Nepal as there is neither political commitment, nor priority at the policy levels.

Different research approaches, knowledge systems and the AFU

In a general definition, research is a systematic inquiry process that entails problem context, objectives, methodology, specific questions and finding definitive answers with interpretation and analysis of the collected data or information based on conceptual or theoretical frameworks, and generalisation of the findings (Upreti 2012). The main aim of research is to generate knowledge and understanding. Two schools of thought are prominent. One school emphasizes the generation of knowledge for better understanding of unknown, while the other goes beyond and adds that generation of knowledge for understanding leads to solutions to problems. In this paper, I am emphasizing the second school of thought, i.e., research has to contribute to solving individual/specific societal problems.

I argue that science and technology becomes irrelevant if it is not able to address the challenges brought by local and global change process. Hence, AFU has to conduct all four types of research (fundamental/basic, action, applied and development oriented) to harness contemporary scopes and options and to address looming challenges. Different types of research AFU has to conduct are presented below:

Fundamental research: it is a process of inquiry or examination to seek facts or principles. In other words, it is a systematic observation of phenomena for the purpose of learning new facts or testing the application of theories to known facts. It is also referred to as scientific research or basic research (Upreti, 2012). It generates findings which are not for immediate applications but provide theoretical basis for developing technology. It is often driven by curiosity to develop or generate new knowledge in particular topic.

Action research: It is a reflective process of inquiry specifically aimed at solving immediate problems faced by people and society. Therefore, it is the simplest form of research. This type of research is often aimed at improving day-to-day strategies, practices, and solving immediate problems. Hence, it is a process of learning about consequences of different forms of social action. It focuses on interpretative approach and social reality (reality interpreted by people), and therefore, it fits with the concept of trans-disciplinary approach of solving societal problems (Hadorn et al. 2008).

Applied research: This is a scientific inquiry process, which aims to solve practical everyday problems (develop technology or techniques to by using scientific theories or fundamental research to address societal problems or practical applications). It is more advanced than the action research in methodology and is oriented to applications of findings for the societal betterment (Upreti, 2012).

Development-oriented research: It is a special type of inquiry process that generates targeted knowledge for solving development related problems. Hence, participation of local people, development practitioners and policy-makers is key in this research to ensure that research findings

are accepted by the stakeholders. Hadorn et al. (2008, p 26) argue that active participation of local people in research process helps bring diversity and complexity of social, political, economic and environmental problems into inquiry processes and address them.

Agricultural research of AFU must embrace all four types of research discussed above. Agriculture research provides evidences for policy and decision makers for resource allocation, human resources planning, new knowledge and technologies for solving problems of farmers, agricultural entrepreneurs, policy makers, decision makers and implementing agencies. Agricultural research in the contemporary context has to innovate knowledge and technologies that are environmentally friendly, adaptive to climate change risks, cost effective, equity based and market relevant and beneficial for the society and nation. Many of the challenges brought by the current global change process are also related to agriculture and natural resources and therefore, demand a holistic approach of addressing them. Hence, AFU in specific and agriculture & natural resources research institutes in general need to tackle them in a holistic way.

In recent decades debates are going beyond the conventional research approaches. In this context, AFU has to develop its capacity for conducting disciplinary, multidisciplinary, interdisciplinary and trans-disciplinary research, which are briefly discussed below:

Disciplinary research approach: It is an inquiry process executed by experts of individual disciplines and is still dominant in the academic and research community. This approach believes that the solutions of the problems are possible to be found within a single discipline (Upreti, 2012). AFU research activities are so far concentrated in this category.

Multidisciplinary approach: Multidisciplinary research approach (Pohl and Hadorn, 2008, p 429), deals with the issues through a range of disciplines but each discipline works in a self-contained manner with little overlap among the disciplines, or synergy in the outcomes (Upreti, 2012). AFU has to expand its research activities in this category.

Interdisciplinary research approach: Hadorn et al., (2008: p28) referring to National Academics, (2005) defines interdisciplinary research approach as "a mode of research by teams of individuals that integrates information, data, techniques, tools, perspectives, concepts and/ or theories from two or more disciplines of bodies of specialised knowledge to advance fundamental understanding or to solve problems whose solutions are beyond the scope of a single discipline or area of research practice". AFU has to start and expand its research activities in this category.

Transdisciplinary research approach: It is relevant when disciplinary or scientific or expert knowledge alone is not enough to tackle the societal uncertainties or problems and require bringing societal actors to grasp the complexity of dealing with different perception of life-world situations together with a scientific perception of problems (Pohl and Hadorn, 2008). AFU has to develop understanding of transdisciplinary research and internalize it, prepare ground and start research activities within this category too.

AFU to produce and use different knowledge systems in research:

Knowledge is defined as human faculty resulting from interpreted information; understanding that germinates from combination of information, experience, and individual interpretation. It is a capacity of individuals to act effectively. Of course, knowledge is contextual. However, often, the purpose of generating knowledge is debated into two ways. The first school of thought focuses on knowledge for understanding (generally anthropological perspective). The second one goes beyond the understanding and focuses on 'knowledge for understanding and understanding for action'. Hence, the second school of thought is directly related to the development-oriented research. AFU has the responsibility to generate all types of agricultural knowledge discussed below:

Pohl and Hadorn (2007) have categorised knowledge from the perspective of transdisciplinary research. They are:

Systems knowledge: focuses on understanding the functioning of system in a society, to be generated from fundamental or basic research,

Target knowledge: focuses on understanding specific problems to find solutions, and therefore to be generated from action research,

Transformation knowledge: focuses on changing situation through corrective actions.

(to be continued in the forthcoming issue)

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Each member irrespective of their geographic location and profession brings insight, creative ideas, and willingness to serve the community to accomplish the long-term goal of **“Global Food Security through Agricultural Transformation.”** The more members we bring into the community, the stronger NAPA becomes and quicker it expands services to achieve the set objectives. In addition to an aggressive agenda to further NAPA activities to its stakeholders, this two-year tenure (2018-2020) is earmarked for Membership Expansion and Outreach. Therefore, we want to encourage our dedicated members and well-wishers to promote NAPA to the next level by recruiting eligible friends/colleagues/students in your network. In addition to numerous professional benefits and networking, we have created the following incentives to recognize your hard work and dedication for Membership Expansion and Outreach. The highest three recruiters will be recognized at the 2020 Biennial Conference.

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