

# Agri-Connection

Vol 3, Issue 4, December 2018



A quarterly newsletter of the Association of Nepalese Agricultural Professionals of Americas (NAPA)



## Happy New Year 2019



May the New Year bring great sense of generosity, prosperity & salubrity!

### President's Corner

Firstly, NAPA wishes Happy Holidays, safe travels, and Happy New Year 2019 to all of its distinguished members and beyond. Secondly, on behalf of the Executive Committee (EC), I salute all those hard-working NAPA members who have been tirelessly contributing to promote NAPA as a vibrant professional organization in the Americas and beyond. As the current president, I feel honored to express our great appreciation and sincere thanks to all generous donors and sponsors of 'Research Mini-Grant Pool Funds', which will initiate impactful collaborative mini-research projects effective 2019. We have generated over three thousand US dollars in a short period and this figure is continuously growing. We appreciate the magnificent generosity and solidarity of the big-hearted community leaders for a common cause towards making a 'change' by increasing people's access to sufficient and safe food for healthy living. Thirdly, we salute self-motivated volunteers for their great enthusiasm, dedication, and willingness to serving the NAPA community in one way or another (webinar speakers, contributing money/time/paper/book chapter/article/agri-poem, a positive idea/thought, serving on various committees, etc.).

Most importantly, we welcome on board and thank sincerely our community leaders for their willingness in serving the NAPA community with full energy, ideas,

and dedication through various flagship activities: Dr. Buddhi Prasad Lamsal, Chair, Resource and Capacity Building Committee; Dr. Prakriti Bista, Coordinator, Nepalese Women in Agriculture and Allied Professions; Mr. Resham Gharti, Coordinator, Community and Charitable Services Committee;



Mrs. Ambika Tiwari, Coordinator, NAPA Day; Dr. Bharat Pokharel, Managing Editor, *Global Journal of Agricultural & Allied Sciences*; and their respective team members. Similarly, we extend a warm welcome to Dr. Prakash Malla as our NAPA Advisory Council member as well as all new NAPA members on board. We feel honored having all of you 'distinguished professional' members as one NAPA family and look forward to working with all of you to heighten NAPA's identity. 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, especially Dr. Nityananda Khanal, Editor-in-Chief, for his outstanding leadership and hard work to bring this issue to fruition on time. Together, we can make a difference.

**Lila B. Karki, Ph.D.**

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(2018-2020)**

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**Editorial**

Nepal features a confluence of magnificent nature and decent culture. The Everest witnesses the sunrise earliest and the sunset last, that means longest brightness everyday. The southern slopes of Himalaya offer pristine soothing brightness for the existence of diverse living creatures, hence biodiversity. The descending hilly terrains stretch their bases to the plain Terai. Whispering wind passes through the venturis transacted along the murmur of streams and meandering rivers. What a magnificent nature, only thousand-tongued immortal python can describe about the nature's beauty !



Our ancestors carved the mountain slopes and portrayed the plains into the mosaics of homestead premises and cultivated terraces. They augmented the natural resources to attune their livelihoods to the nature. They invented the culture to enjoy among themselves with circadian seasons. The festivals bring the relics of the seasonal harvests and natural aesthetics. *Teej* releases merry of sisters coming back to the maternal place, with singing and dancing. Dashain attains the climax of blissful blessings from the elders and honorable kin. Tihar offers glorious bond between the sisters and brothers. Guru Purnima features the symbol of honor to the teachers. Dozens of festivals typify the essence of seasons and taste of provisions.

Agriculture is a livelihood culture. It was a common way of life in the past; it is still a source of livelihood for majority, but it remains and will remain to be the source of diet for all, for ever. Societies are merging to form the global community. Agriculture is transforming towards emerging needs of the society. The social and economic systems are continuously interacting within broad framework of the nature.

Still the culture makes the life colorful and relationships meaningful. Let's advance agriculture while nurturing the beauty of nature and tranquility of culture !

Thank you

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

**NAPA CONTACT INFORMATION:**

**Association of Nepalese Agricultural Professionals of Americas**  
E-mail: [napa2072@gmail.com](mailto:napa2072@gmail.com) website: [www.napaamericas.org](http://www.napaamericas.org)  
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**For Agri-Connection, please visit the link below:**

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

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Mr. Buddhi Achhami

Mr. Kshitiz Dhakal

Mr. Hari Krishna Poudel

Mr. Ram B. Khadka

Ms. Sangeeta Karki

Mr. Binod Gyawali

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## Recent NAPA Activities

NAPA was officially founded in 2016 as a philanthropic professional organization contributing towards promotion of human wellbeing and environmental stewardship through scientific research, capacity building, information dissemination and charitable activities. Within a short span of its inception, NAPA successfully geared its efforts towards the organizational development, professional networking, communication and outreach activities. One of the major accomplishment of NAPA is the First Biennial Conference 2018 themed “*Global Food Security through Agricultural Transformation*”, held in Oklahoma City, OK, USA on May 26-27, 2018.

Here is a brief account of recent and upcoming NAPA activities after the Oklahoma conference:

### Participation in the Non-Resident Nepali (NRN) Global Knowledge Convention

Dr. Pradeep Wagle, NAPA General Secretary, Dr. Drona P. Rasali, NAPA Member and Editor-in-Chief of NAPA Book Project, and Dr. Durga D. Poudel, NAPA life member delivered oral presentations in the NRN Global Knowledge Convention held in Kathmandu, Nepal on October 12 - 14, 2018. Dr. Wagle highlighted NAPA’s missions/goals and current activities/programs. He also requested eligible convention participants from Nepal to join NAPA as associate members by paying NRs 5,000.00 (one time for life). He also served as a rapporteur for the Agriculture and Food Security symposium at the Convention.



Similarly, Dr. Rasali delivered an oral presentation entitled ‘Securing sustainable, sufficient, safe and healthy food: Principles and practices of food security in Nepal’. His presentation featured NAPA’s book project and its progress thus far. Dr. Rasali also coordinated the Agriculture and Food Security symposium at the NRN Global Knowledge Convention.

Dr. Poudel delivered a video talk on ‘Agriculture and natural resources development and management strategy’.

### Roundtable meeting at Agriculture and Forestry University (AFU), Nepal

While in Nepal for the Convention, NAPA General Secretary Dr. Pradeep Wagle visited AFU, Rampur, Chitwan, Nepal on October 9, 2018. Dr. Wagle highlighted NAPA’s programs and activities in a roundtable meeting comprising Assistant Dean, Dr. Kalyani Mishra, staffs, faculties and graduate students.

### Memorandum of Understanding (MoU) between AFU and NAPA

An MoU was signed between AFU and NAPA amidst NRN Global Knowledge Convention in Kathmandu in October 2018. AFU Vice Chancellor Dr. I. P. Dhakal and NAPA Vice President Dr. Megha N. Parajulee signed the MoU. This MoU sets for the terms and understanding between NAPA and AFU to work in the areas of Education/Training, Research, and Extension activities in Nepal.

**Recent NAPA Activities (Cont..)**

**Community and Charitable Services Committee (CCSC)**

Coordinator

Mr. Resham Gharti/GT

Members

Dr. Laxman Adhikari  
Mr. Yubaraj Kumar Karki

**Resource and Capacity Building Committee (RCBC)**

Coordinator/Chair

Dr. Buddhi Prasad Lamsal

Members

Dr. Lila K. Khatiwada  
Dr. Manoj Karkee  
Dr. Ramjee Ghimire  
Dr. Aditya R. Khanal  
Dr. Surendra K.C.

**Nepalese Women in Agricultural and Allied Professions (WAAP)**

Coordinator

Dr. Prakriti Bista

Members

Mrs. Ambika Tiwari  
Mrs. Ranjana Rawal

**Memorandum of Understanding (MoU) between Institute of Agriculture and Animal Science (IAAS) and NAPA**

An MoU was signed between IAAS, Tribhuvan University and NAPA in December 2018. IAAS Dean Dr. Keshav Raj Adhikari and NAPA Vice President Dr. Megha N. Parajulee signed the MoU. This MoU sets for the terms and understanding between NAPA and IAAS to work in the areas of Education/Training, Research, and Extension activities in Nepal.

**Transfer of NAPA Scholarship fund to AFU and Institute of Agriculture and Animal Science (IAAS)**

General Secretary Dr. Wagle handed a NAPA scholarship fund of NRs 1,50,650.00 (US \$1,310.00 ) to AFU Assistant Dean, Dr. Kalynai Mishra for awarding the meritorious students at AFU and its branches/affiliate colleges, including the Colleges of Natural Resources Management located in Kapilkot - Sindhuli, Pakhirbas - Dhankuta, Tikapur - Kailali, and Puranchaur - Pokhara. The scholarships will be awarded based on the criteria as stipulated by the scholarship donors. Dr. Mishra stated that the scholarships would be distributed after Tihar festival in 2018. NAPA gratefully acknowledges the generous donors who contributed to the scholarship fund. The details will follow soon from the recipient institutions. Dr. Wagle and NAPA Liaison for Nepal, Mr. Kiran Ojha met in Kathmandu and discussed about NAPA activities and membership drive. Dr. Wagle handed a scholarship fund of NRs 25,875.00 (US \$225.00) to Mr. Ojha for awarding the meritorious students at IAAS - Paklihawa and Lamjung campuses, in consultation with Dr. Gopal K.C., Assistant Dean, IAAS, Tribhuvan University. Dr. Wagle also handed NRs 3,640.00 to Mr. Ojha to pay expenses related to the program felicitating the student writing contest prize winners in Kathmandu. The MoU has also been signed between IAAS and NAPA in December 2018. IAAS Dean Dr. Keshav Raj Adhikari and NAPA Vice President Dr. Megha N. Parajulee signed the MoU.

**NAPA Brochures and Banners**

Printed 1000 copies of NAPA Brochures and seven pieces of Banners (6 X 4 feet) in Kathmandu, and left 200 copies of Brochures and two banners to Nepal Liaison, to use when NAPA events occur in Nepal. Mr. Ojha will send some brochures and a banner to AFU, Rampur, Chitwan. Brochures and banners will be distributed to the areas in the USA where several NAPA members reside to display during local NAPA activities.



**Webinars**

NAPA organized three webinar sessions between September and November, 2018.

**1. Agricultural Automation & Robotics: Challenges & Opportunities in Small-Scale Farming;** September 30, 2018. Dr. Manoj Karkee, Associate Professor, Department of Biological Systems Engineering, Center for Precision and Automated Agricultural Systems, Washington State University, USA discussed the importance of precision and automated/robotic systems for the future of farming. He highlighted on past efforts and current status of agricultural automation and robotics, particularly for fruit crop production, and the novel systems being developed in his program. He also proposed the future directions in research and development of robotics in agriculture, and its potential to small-scale farming operations in countries like Nepal.



*Dr. Manoj Karkee*

**Recent NAPA Activities (Cont..)**

**2. Employment Based Immigration: Prospects and Challenges for Nepalese Students & Professionals;** October 7, 2018. Two distinguished speakers Bandita Sharma-Dahal, Esq. & Dr. Narayan Khadka discussed



**Bandita Sharma-Dahal**



**Dr. Narayan Khadka**

challenges to the Nepalese students and professionals due to changes in employment-based immigration to the US. They also shed light on the changes to recent immigration regulations of the US that have made it more difficult for international students who have recently grad-

uated from US universities. Mrs. Dahal is a member of the American Immigration Lawyers Association, New York Bar Association, and Montgomery County Bar Association. Dr. Khadka is the Refugee Program Director in North Carolina.

**3. National Planning Approach to the Economic Prosperity in the Federal Context of Nepal;** November 24, 2018. Dr. Ram Kumar Phuyal, Member of the National Planning Commission (NPC), Government of Nepal, discussed the national economic trends and how NPC has visualized and charted the developmental approach in the federal governance system.



**Dr. Ram Kumar Phuyal**

**NAPA Observed World Food Day 2018  
Introducing Research Mini-Grant**

Agriculture contributes 34% to the GDP and provides livelihood to 68% of Nepalese people. However, Nepal is still unable to meet the domestic food demand. In 2011, nearly 51% of districts were food insecure. Impactful strategic mini-research projects may serve as major contributing factors in improving the food insecurity situation in Nepal. Considering this situation, NAPA brings forward a ‘research mini-grant’ approach on the occasion of World Food Day, October 16, 2018 to celebrate the theme “Our Actions Are Our Future.” Through this approach, NAPA aims toward increasing food production capacity of rural producers and the professional development of students, faculty, and professionals engaged in agricultural and natural resources thereby greatly impacting the agricultural economy. NAPA hereby requests all research and development well-wishers to contribute to ‘research mini-grant pool fund.’ Your willingness and support toward increasing people’s access to sufficient and safe food for a healthy living is much appreciated as every dollar has the power of making an immense change.

Thanks in advance for your generous contribution.

**Community Service: Blood Donation**



Dr. Megha N. Parajulee NAPA Vice-President and Life Member, donated blood in Lubbock, Texas. One donation may save up to three lives in need.



“The soil is the great connector of lives, the source and destination of all. It is the healer and restorer and resurrector, by which disease passes into health, age into youth, death into life. Without proper care for it we can have no community, because without proper care for it we can have no life.”

— **Wendell Berry**, *The Unsettling of America: Culture and Agriculture*

**Book Publication Committee (BPC)**

Editor-in-Chief

Dr. Drona P. Rasali

Managing Editor

Dr. Prem B. Bhandari

Editors:

Dr. Megha N. Parajulee

Dr. Ram Acharya

Dr. Uma Karki

Dr. Raju Adhikari

**Global Journal of Agricultural & Allied Sciences (GJAAS)**

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Dr. Dharma Raj Dangol

Dr. Keshav L. Maharjan

Dr. Jagadish Timsina

Dr. Upendra M. Sainju

Dr. Uma Karki

Dr. Pradeep Wagle

**Research/Policy Brief (RPB)**

Editor-in-Chief

Dr. Ramjee Ghimire

Editors:

Dr. Suman Rimal-Gautam

Dr. Lila K. Khatiwada

**Update on Book Publication**

NAPA Book Publication Committee's (BPC) progress on publication of the forthcoming book, "**Sustainable, Sufficient, Safe and Healthy Food in Nepal: Principles and Practices of Food Security**" is moving in full swing. At this stage, chapters are being reviewed by the editors and external reviewers. Some authors have already received feedback on their chapters and have already incorporated. Other chapters are being reviewed. We plan to get back to all the authors as soon as possible. Despite the voluntary responsibility, the progress is moving smoothly and we plan to publish this book by December, 2019.



BPC is pleased to share that its progress was shared to participants of recently concluded NAPA Biennial Conference in Oklahoma. The audiences were highly excited to hear about the progress and the mission itself. BPC is now short-handed in the absence of Dr. Shanthi Johnson, one of the editors of this book. While we congratulate Dr. Johnson in her new responsibility, our team is committed to accomplish the mission in time. For information, Dr. Johnson has recently joined as a Dean of the School of Public Health, University of Alberta, Canada.

**Global Journal of Agricultural and Allied Sciences (GJAAS)**

**Request for Paper Submission**

Association of Nepalese Agricultural Professionals of Americas (NAPA) is in the process of publishing the *Inaugural Issue* of its flagship publication, **Global Journal of Agricultural and Allied Sciences (GJAAS)** (Online ISSN 2575-1670 and Print ISSN 2575-1662). We cordially invite you to submit your original (not published, submitted or under consideration elsewhere) research article(s) on any topic related to agricultural and allied sciences to the journal for publication consideration. You may also submit extension and review type of articles for consideration. Please refer to

<http://napaamericas.org/journal-authors-guidelines.php> for publication guidelines. All submitted papers are subject to double-blind peer review. **We have a firm plan to publish our INAUGURAL ISSUE BY MAY 31, 2019; therefore, we look forward to receiving your submission for this issue by January 15, 2019.** We also encourage you to submit articles throughout the year for consideration in future issues. The inaugural issue will be published at no cost to the contributing authors while the expectation is to set a high standard of the journal through the quality and scientific reputation of the authors. Therefore, it is our hope that you would strongly consider contributing your great scientific work to this journal. We are communicating with electronic journal hosting services such as ScholarOne for online submission, peer-review processing, indexing, and publication. We will share the information for online submission and review process soon. However, to expedite the review process for the first issue, we urge you to submit the papers via email to [gjaasjournal@gmail.com](mailto:gjaasjournal@gmail.com) or [m-parajulee@tamu.edu](mailto:m-parajulee@tamu.edu). We look forward to having your papers for GJAAS.



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>

## Author Guidelines for Policy/Research Brief Publication

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. A RPB is intended to articulate evidential issues, and suggest policy alternatives and/or practical options for improving the situation. RPBs are published online at <http://napaamericas.org/research-policy-brief-editorial-committee.php>. 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, policy implications and 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 elected political representatives 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.to:



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

## Appeal for donation for Scholarships and Endowment Funds

With the donation received from sponsors, NAPA has established a Scholarship Fund for awarding meritorious students of 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 the past donors and appeals to the potential donors for their generosity.

**Agri-Connection** Newsletter is an excellent medium to reach out to the world through your articles, essays, informative collections and literary creativities. Send them anytime !

**NAPA RESEARCH MINI-GRANT**

NAPA recently administered *Jit-Shavitra Research Mini-grant*, NAPA's first research grant of its kind, through its **Scholarships for Academic Excellence Program** to three groups of students of Mid-West Academy and Research Institute, Campus of Live Sciences (MARICoLS), Dang, Nepal in the amount of NRs. 10,000; 5,000 and 2,250. The recipient groups of students are conducting field experiments under the supervision of a faculty member Mr. Manoj Basnet.

The *Jit-Shavitra Research Mini-grant* is donated by **Dr. Prem Bhandari** and **Mrs. Usha Bhandari** of Michigan, USA (originally from Salyan/Dang, Nepal). Given the enthusiasm of students and faculties, the grant will be continued in the future as well. Interested donors/scholars are requested to join hands to improve the quality of institutions of rural areas of Nepal.

**Grant ID: 2018-001:**

**Title: Study on the Effect of Phosphorus on Growth and Flowering of Marigold (*Tagetes erecta*).**

**Award: NRs 10,000**

**Recipients:**

Surya Prakash D.C., Dikshya Shrestha, Punam Soti Magar, Sarika Gyawali, Sita Bhattarai, Kisha Aryal

**Objectives:**

- Study the effect of phosphatic fertilizer on flowering of marigold.
- Encourage farmers towards marigold production with high market demand.

**Grant ID: 2018-002:**

**Title: Germplasm Evaluation of Vegetable Cowpea (*Vigna unguiculata (L.) Walp.*) in Dang.**

**Award: NRs. 5,000**

**Recipients:**

Akash Kandel, Pooza Sharma, Pratikshya Subedi, Samjhana Bhattarai, Samikshya Gupta

**Objectives:**

- Evaluate the production performance and adaptability of different germplasms of cowpea.
- Characterize attributes of different germplasms.



[In the picture: Campus Chief Prof. Dr. Sah Deo Sah (center, back row), Faculty Mentor Mr. Manoj Basnet (left, back row) and Chairperson Mr. Uday Bohora (right, back row) with the grant recipient students]



**Grant ID: 2018-003:**

**Title: Effect of Different Types of Fertilizers on Vitamin C Content of Cauliflower.**

**Award: NRs. 2,250**

**Recipients:**

Biplav Acharya, Saugat Sapkota, Ramesh Devkota, Aadesh Mishra, and Ujwal Sedhai

**Objectives:**

- Examine the yield response of cauliflower to the different types of fertilizers on yield.
- Examine the relationship between the yield and vitamin C content of cauliflower.





**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 Pool Funds (RMG)** 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 mostly 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 (\$100 and \$200 levels). 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.

SN	Contributors	Amount pledged/donated (US\$)	SN	Contributors	Amount pledged/donated (US\$)
1	Dr. Ramesh C. Khanal	100.00	18	Dr. Uma Karki	200.00
2	Dr. Tilak B. Shrestha	50.00	19	Dr. Megha Nath Parajulee	200.00
3	Ms. Kemika Bhandari	105.00	20	Dr. Ananta Acharya	100.00
4	Mr. Kiran Ojha	100.00	21	Dr. Ramji Ghimire	50.00
5	Dr. Prem B. Bhandari	151.00	22	Dr. Nityananda Khanal	55.00
6	Dr. Monika Ghimire	100.00	23	Dr. Lila B. Karki	200.00
7	Dr. Pradeep Wagle	200.00	24	Dr. Lila K. Khatiwada	75.00
8	Dr. Manoj Karkee	100.00	25	Dr. Khushi Ram & Mrs. Ambika Tiwari	50.00
9	Dr. Budhi Prasad Lamsal	100.00	26	Dr. Bharat Pokharel	100.00
10	Dr. Aditya R. Khanal	50.00	27	Dr. Nilhari Neupane	85.27
11	Dr. Ram Acharya	100.00	28	Dr. Romy Das Karna	15.00
12	Ms. Anju Nepal Lamsal	50.00	29	Dr. Prakash Malla	100.00
13	Dr. Thakur B. Karki	50.00	30	Dr. Bhawani Mishra	50.00
14	Dr. Lekha Nath Paudel	50.00	31	Anonymous	50.00
15	Dr. Rajan Ghimire	100.00	32	Dr. Buddhi Gyawali	50.00
16	Ms. Sharmila Parajulee	100.00	33	Sanjok Poudel	20.00
17	Dr. Mukti Ghimire	100.00	34	Dr. Gandhi Bhattarai	100.00
				Total	3106.27

**Your Contribution to NAPA is Tax Deductible**

Effective January 6, 2016, Internal Revenue Service of the United States government has determined NAPA as an entity exempt from federal income tax under Internal Revenue Code (IRC) Section 501(c)(3). Now any contributions made to NAPA will be tax deductible under IRC Section 170.

**Celebrating the Success: Members' Achievements**



NAPA members **Dr. Kalyani Mishra-Tripathi, Dr. Bimala Poudel-Rai** received Nepal Vidyabhusan "Ka" from Honorable President of Nepal, Vidya Devi Bhandari.

**Congratulations to Drs. Mishra-Tripathi and Poudel-Rai !**

NAPA Legal Advisor, **Dr. Narayan Khadka** received 2018 Pacesetter Award from the School of Health and Human Sciences at University of North Carolina at Greensboro.



**Congratulations to Dr. Khadka !**

NAPA General Secretary **Dr. Pradeep Wagle** was awarded Quality Step Increase (Promotion) and Outstanding Performance Award for FY 2018 by the United States Department of Agriculture (USDA). Dr. Wagle had received Outstanding Performance Award for FY 2017 as well.

**Congratulations to Dr. Wagle !**



NAPA student members **Shailes Bhattarai** and **Sangita Karki** won Second Place Oral Presentation and Second Place Poster prizes, respectively, in the graduate student presentation in the 76th Professional Agricultural Workers Conference held at Tuskege University, USA on December 2 - 4, 2018.

**Congratulations to Mr. Bhattarai and Mrs. Karki !**



**NAPA Members Awarded at SONE Annual Meeting**

NAPA Vice President, Dr. Megha N. Parajulee, was invited and recognized as an invited keynote speaker at annual meeting of the Society of Overseas Nepalese Entomologists (SONE) in Vancouver, Canada, in connection with Entomological Society of America and Entomological Society of Canada joint meeting November 11-14, 2018. Several NAPA members attended the conference. NAPA member **Sudip Gaire** (PhD Candidate) of Purdue University was awarded the **Megha Parajulee SONE Student Award for Academic Excellence - 2018**.

**Congratulations to Mr. Gaire !**



NAPA student members **Vesh Thapa** won New Mexico Sustainable Agriculture Award - Second Place Poster prize in the New Mexico Sustainable Agriculture Conference held at Los Lunas, MN, USA on December 12, 2018.

**Congratulations to Mr. Thapa !**





# Congratulations New Graduates



## Dr. Keshav Sharma Graduated with his Doctoral Degree

Dr. Keshav Sharma graduated with PhD in Biological Science from Mississippi State University.

**Dissertation Title:** A functional developmental genomics analysis of RIN4 and exocyst genes as they relate to *Glycine max* defense to the plant parasitic nematode *Heterodera glycines* infection.

**Congratulations to Dr. Sharma on his academic accomplishment!**



## Mr. Vesh Raj Thapa (Rabin) Graduated with his Master's Degree

Mr. Vesh Raj Thapa graduated with Master's in Animal Plant and Environmental Science; Concentration: Soil Biogeochemistry from New Mexico State University.

**Thesis Title:** Agricultural Management Systems Affect Soil Health and Crop Production in the Drylands of Eastern New Mexico.

**Congratulations to Mr. Thapa on his academic accomplishment!**



## Dr. Dev Paudel Graduated with his Doctoral Degree

Dr. Dev Paudel graduated with PhD in Agronomy from University of Florida.

**Dissertation Title:** Genomic and breeding resources to produce seeded and high biomass interspecific hybrids of napiergrass and pearl millet.

**Congratulations to Dr. Paudel on his academic accomplishment!**



## Mr. Nabin Sedhain Graduated with his Master's Degree

Mr. Nabin Sedhain graduated with Master's in Biotechnology from Fort Valley State University.

**Thesis Title:** Approaches to Mitigate Peach Tree Short Life Syndrome Using In Situ & In Vitro Practices.

**Congratulations to Mr. Sedhain on his academic accomplishment!**



## Ms. Jasmine Neupane Graduated with her Master's Degree

Ms. Jasmine Neupane graduated with Master's in Plant and Soil Science from Texas Tech University.

**Thesis Title:** Cotton yield variability in relation to irrigation rates, soil physical properties and topography.

**Congratulations to Ms. Neupane on her academic accomplishment!**





# Congratulations New Graduates



## Dr. Laxman Adhikari Graduated with his Doctoral Degree

Dr. Laxman Adhikari graduated with PhD in Plant Breeding, Genetics and Genomics from University of Georgia.

**Dissertation Title:** Dissecting the genetic basis of various adaptation traits in alfalfa using QTL mapping.

**Congratulations to Dr. Adhikari on his academic accomplishment!**



## Ms. Ambika Pokhrel Graduated with her Master's Degree

Ms. Ambika Pokhrel graduated with Master's in Plant Pathology from Auburn University.

**Thesis Title:** Transcriptomic analysis to identify candidate genes conferring gossypol tolerance in *Fusarium oxysporum* f. sp. *vasinfectum*.

**Congratulations to Ms. Pokhrel on her academic accomplishment!**



## नापा (NAPA) अनलाईन कृषि कविता प्रतियोगिता संबन्धि सूचना

२०१९ को जनवरी ६ मा नापा दिवस (NAPA Day) मनाउने क्रममा हुन गइरहेको अनलाईन कृषि कविता वाचन प्रतियोगितामा संलग्न हुन इच्छुक सम्पूर्ण सर्जकज्युहरुलाई आफ्नो रचना तोकिएको समय अवधिभित्र पठाउन हार्दिक अनुरोध गर्दछौं। प्राप्त कविताहरु मध्येबाट छनोट भएका केहि उत्कृष्ट कविताहरु मात्र वाचन गरिनेछ।

### प्रतियोगिताका नियमहरू

१. कविता कृषि तथा सम्बद्ध विषयसंग आधारित हुनुपर्ने छ।
२. कविता शुद्ध नेपाली भाषामा २०० शब्दमा नबढाई लेखिएको हुनुपर्ने छ।
३. श्रष्टा आफैले अनलाईन वाचन गर्नुपर्ने छ।
४. ३ सदस्यीय निर्णायक समितिले कविताको मूल्यांकन गर्नेछ।
५. उत्कृष्ट ३ कविता वाचकलाई प्रमाणपत्रले सम्मान गरिने छ।
६. कविता डिसेम्बर ३१, २०१८ सम्म निम्न ठेगानामा पठाउन पर्नेछ।

### कविता पठाउने ठेगाना

ईमेल : [nityananda.khanal@gmail.com](mailto:nityananda.khanal@gmail.com)

[napa2072@gmail.com](mailto:napa2072@gmail.com)

डा. नित्यानन्द खनाल, संयोजक

कृषि कविता प्रतियोगिता समिति

**New Responsibilities: Welcome on Board**

**Dr. Prakash Malla** has been unanimously appointed as **NAPA Advisory Council Member** by the 3<sup>rd</sup> Executive meeting (Oct 28, 2018). Dr. Malla is a NAPA Life Member, former bylaws committee Chair and later committee member, a generous NAPA donor and a NAPA well-wisher. Please visit the link for details <http://napaamericas.org/advisory-council.php>



**Welcome onboard and congratulations, Dr. Malla !**



NAPA Book Editor-in-Chief, Dr. Drona P. Rasali offers Dr. Prem B. Bhandari the responsibility of Managing Editor of NAPA Book being published "Sustainable, Safe and Healthy Food in Nepal: Principles and Practices of Food Security." Please visit the link for details <http://napaamericas.org/napa-book-project.php>

**Welcome onboard and congratulations, Dr. Bhandari !**

**Global Journal of Agriculture and Allied Sciences (GJASS)** Editor-in-Chief, Dr. Megha N. Parajulee brings **Dr. Bharat Pokharel** in as **Managing Editor** of the GJASS. Please visit the link for details <http://napaamericas.org/journal-editorial-board.php>



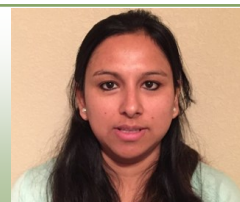
**Welcome onboard and congratulations, Dr. Pokharel !**



Mrs. Ambika Tiwari, NAPA life member and former NAPA Treasurer has been nominated as the Coordinator to observe NAPA Day event on January 6, 2019. NAPA was officially established on January 6, 2016 and hence the executive committee (EC) decided to celebrate NAPA Day on January 6. Mrs. Tiwari will coordinate the event in consultation with the EC and bring the program forward soon.

**Congratulations Mrs. Tiwari and best wishes for a successful NAPA Day Event !**

Dr. Prakriti Bista has been nominated as the Coordinator of Nepalese Women in Agricultural and Allied Professionals (WAAP)



**Welcome onboard and congratulations, Dr. Bista !**

**Resource and Capacity Building Committee (RCBC)**

Dr. Buddhi Prasad Lamsal  
Coordinator/Chair



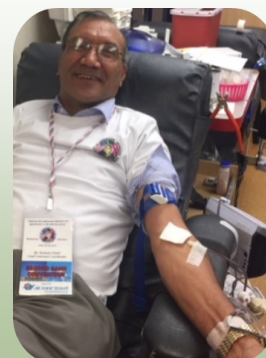
**Members:**

- Lila K. Khatiwada, PhD
- Manoj Karkee, PhD
- Ramjee Ghimire, PhD
- Aditya R. Khanal, PhD
- Surendra K.C., PhD

**Welcome onboard and congratulations, RCBC Team !**

**Community and Charitable Services Committee (CCSC)**

Resham Gharti/GT  
Coordinator



**Members:**

- Laxman Adhikari, PhD
- Yubaraj Kumar Karki, M.Sc.

**Welcome onboard and congratulations, CCSC team !**

Welcome New Members On Board !

**Life Member**

Dr. Romy Das Karna, North Carolina

Dr. Santosh Dhakal, Maryland

Dr. Ananta Acharya, Iowa

Dr. Shristi Ghimire, Ohio

Ms. Ambika Tiwari, Mississippi

Dr. Nirmala Adhikari, Texas

Dr. Khusi Ram Tiwari, Mississippi

Dr. Mohan Adhikari, Texas

Dr. Nityananda Khanal, Canada

Dr. Rajan Ghimire, New Mexico

Dr. Manoj Karkee, Washington

Dr. Prakriti Bista, New Mexico

Dr. Prakash Malla, Georgia

**Regular Member**

Dr. Srinivasa Rao Mentreddy, Alabama

Dr. Sanjeev Joshi, Oklahoma

**Associate Member**

Dr. Ram Kumar Phuyal, Nepal

Dr. Jagannath Adhikari, Nepal

Dr. Devendra Gauchan, Nepal

**Student Member**

Mr. Pradip Sapkota, Texas Tech University, Texas

Ms. Bandana Bhusal, Tennessee State University, Tennessee

Ms. Ishwora Dhungana, University of Hawaii, Hawaii

Mr. Sudip Gaire, Purdue University, Indiana

Mr. Tej Acharya, University of Georgia, Georgia

**Join NAPA: Blend your professionalism with philanthropy**

Visit <http://napaamericas.org/join-napa.php> for membership information and procedure for paying membership fees. The following are NAPA membership categories and fee schedules:

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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

**General membership (For 2 Years)**

Regular: US\$50

Student: US\$25

Associate (outside Nepal): US\$25

Joint/family: US\$15

Please join, support NAPA and see your name in next issue.

## Member's Publications and Presentations

**Journal Publications**

\*Mishra, B., \*Gyawali, B. R., \*Paudel, K. P., Poudyal, N. C., Simon, M. F., Dasgupta, S., & Antonious, G. (2018). Adoption of sustainable agriculture practices among farmers in Kentucky, USA. *Environmental management*, 1-13.

Kazachkova Y., Eshel G., \*Pantha P., Cheeseman J., Dassanayake Maheshi Barak S. (2018) Halophytism: What have we learnt from Arabidopsis relative model systems? *Plant Physiology*. *Plant Physiol.* doi: 10.1104/pp.18.00863

Fan L., Wang G., Hu W., \*Pantha P., Tran K-N., Zhang H., An L., Dassanayake M., Qiu Q-S. (2018) Transcriptomic view of survival during early seedling growth of the extremophyte *Haloxylon ammodendron*. *Plant Physiol Biochem* 132: 475–489

Jiang, S., Dai, Y., Lu, Y., Fan, S., Liu, Y., Bodlah, M. A., \*Parajulee, M. N. and Chen, F., (2018) Molecular Evidence for the Fitness of Cotton Aphid, *Aphis gossypii* in Response to Elevated CO<sub>2</sub> From the Perspective of Feeding Behavior Analysis. *Frontiers in Physiology*, 9, p.1444.

Li, Z., Song, Y., Li, L., Wang, L., Liu, B., \*Parajulee, M. N., & Chen, F. (2018). Influence of elevated CO<sub>2</sub> on development and food utilization of target armyworm *Mythimna separata* fed on transgenic Bt maize infected by nitrogen-fixing bacteria. *bioRxiv*, 292565.

\*Poudel, S., \*Karki, U., McElhenney, W., \*Karki, Y., Tillman, A. (2018). Behavior and Distribution Pattern of Katahdin Rams in Southern-Pine Silvopastures with Cool-Season Forages. *Agroforestry System*. DOI: <https://doi.org/10.1007/s10457-018-0294-7>

**Presentations**

\* Karki, L. B., \*Parajulee M. N., \*Bhandari P. B. and \*Wagle P. (2018). Global Food Security through Agricultural Transformation: How can Agricultural Expatriates Contribute? NRN Global Knowledge Convention, Kathmandu, October 12-14, 2018.

\*Khanal, N. (2018). Adaptive but static: seed yield responses of creeping red fescue (*Festuca rubra* L. ssp. *rubra*) to environmental and management factors in the peace river region of western Canada. A keynote presentation in the 13<sup>th</sup> International Conference on Agriculture and Horticulture, held in Zurich, Switzerland on September 10-12, 2018. <https://agriculture-horticulture.conferenceseries.com/speaker/2018/nityananda-khanal-agriculture-and-agri-food-canada-canada>

\*Khanal, N. & Azooz, R. (2018) Decades of Dominance: Seed yield performance of creeping red fescue (*Festuca rubra* L. ssp. *rubra*) cultivar Boreal compared to proprietary cultivars in western Canada. Poster Abstract, 2018 ASA, CSSA, CSA Meeting held in Baltimore, MD, November 4-7, 2018. <https://scisoc.confex.com/scisoc/2018am/meetingapp.cgi/Paper/113735?clearcache=1>

\* NAPA Member

Member's Publications and Presentations (Cont.)



**Posters:**

**Presented in the 76th Professional Agricultural Workers Conference (PAWC) 2018 at Tuskegee University**

**Variability and path coefficient analysis for yield attributing traits of mungbean (*Vigna radiata L.*)**

**\*B. Subedi** , (Tuskegee University), G. Kohar (Advisor) (Tribhuvan University), A. Khanal (Tribhuvan University), S. Poudel (Tribhuvan University), A. Basnet (Tribhuvan University), P. Kandel (Tribhuvan University), B. Acharya (Tribhuvan University), K. Dhakal (West Virginia State University) and J. Shrestha (Nepal Agricultural Research Council)

**Growth period of different browse species suitable for grazing small ruminants**

**\*B. Paneru, \*U. Karki, \*S. Bhattra** , and N. Ellis

Tuskegee University

Corresponding author's Email: bpaneru9661@tuskegee.edu

**Impact of land management practices on selected soil properties, enzyme activities and soil bacterial communities**

**\*S. Karki** , R. Shange , and R. Ankumah.

Tuskegee University

Corresponding author's Email: sngtkarki@gmail.com

**Cutting non-target vegetation improved solar radiation influx and biomass production in woodlands**

**\*S. Bhattarai**, (Tuskegee University), **\*U. Karki** (Tuskegee University), **\*S. Poudel** (Virginia Polytechnic Institute and State University), W. McElhenney (Tuskegee University) and **\*B. Paneru** (Tuskegee University)

“Agriculture must mediate between nature and the human community, with ties and obligations in both directions. To farm well requires an elaborate courtesy toward all creatures, animate and inanimate.”

— **Wendell Berry**, [Bringing it to the Table: On Farming and Food](#)

“When it is understood that one loses joy and happiness in the attempt to possess them, the essence of natural farming will be realized. The ultimate goal of farming is not the growing of crops, but the cultivation and perfection of human beings.”

— **Masanobu Fukuoka**, [The One-Straw Revolution](#)

**NAPA CONTACT INFORMATION:**

Association of Nepalese Agricultural Professionals of Americas

E-mail: napa2072@gmail.com

website: www.napaamericas.org

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Twitter: @napa2072



## साहित्यिक कुना

## कृषि कविता

### कीट तृष्णा

"लामखुट्टे उपियाँ उडुस यी सखी छन्,  
इन्कै लहडमा बसी/  
लामखुट्टेहरु गाऊछन् यी उपियाँ,  
नाच्छन म हेर्छु बसी //"  
- भानुभक्त

तृष्णा छ हृदय जलन भो, अब गर्ने के पो हो भनी /  
चियाउछु अगन्य झ्याली मार्फत दिन रात, कब होला झरी अनी /

गाउछु जुनकिरी र चखोरा साथ, निर्धक्क छन् दम्पती //  
उठ्छिन मालिकिनी प्रभात पखमा, खोल्लिछन ढिकुटी रमी//

भाग्छु यत्र तत्र भण्डार जगतमा, कुरुवा देखी डरी //  
अलपत्र नहोऊन सन्तति मेरा, चिन्ता छ बर्षै भरी//

होओस अविरल वर्षा दिन र रात, रम्ने छु उफ्री र उडी //  
यै नै हो परिकल्पना



पिताम्बर दाहाल

### धुरु धुरु रोको छु

धुरु धुरु रोको छु आमा, तिमीलाई सम्झेर/  
दुशी र कीरा तिम्रो पेटमा, झलझलति देखेर// धुरु धुरु...

भण्डारको अन्न कीराले खादा, मन रोयो जलेर /  
कसोरी पाल्येउ ती लालाबाला, खाना के दीएर // धुरु धुरु..

अन्नादी फलफुल सागमा, बीष बढ्या हेरेर/  
दुशीको बीष आमाको पेटमा, पर्या छ भनेर // धुरु धुरु...

खाई हाल्छ बीष बच्चाले पेटमा, मिठो झैँ मानेर /  
Einstein हुने नानी कोखमा, बढ्दै छ गनेर // धुरु धुरु...

पोषण हुन्न बुझौँ विश्वमा, बीष पान गरेर //  
खानाको बीष कम गर्न जगमा, जुटू एक भनेर// धुरु धुरु...

भुइचालो बाढी आयो नेपालमा, त्रसित पारेर/  
नबसम चुप विज्ञ विश्वका, सकिन्न भनेर// धुरु धुरु...  
म शुक्ष्म कीटको, अन्न कोमल होउन जुनी जुनी //

### हजुर म कृषि हुँ, संसारको भोक मेटाउने



शैलेस भट्टराई

म सुन हिरा बनाउछु माटो  
डोर्याउछु उन्नती र प्रगतिको बाटो  
सिच म माथि पसिना र धन  
खाडी नगइ देशमै लगाउ मन  
हजुर म कृषि हुँ  
संसारको भोक मेटाउने।

दिन्छु शक्ती गहु, मकै, धान  
औषधी बन्छ म बाटै जान  
पोसिलो खाना खाइ मेटे भोक  
बन्छ स्वस्थ शरीर, लादैन रोग  
हजुर म कृषि हुँ  
संसारको भोक मेटाउने।

राम्रो रसयान भन्दा प्रांगारिक मल  
मिसाउ ठीक्क चाहिने मात्रामा जल  
प्रयोग गरौ बिउको उन्नत जात  
गोडमेल बेलाबखत छाटे पात  
हजुर म कृषि हुँ  
संसारको भोक मेटाउने।

किराहरु सबै गर्ने हूदैनन् हानी  
मार्नु पर्छ शत्रु, मित्र किरा छानी  
तरकारी फलफुलबाट मनग्य आम्दनी  
ब्यबसायिक कृषि गरौ सबै कुरा जानी

हजुर म कृषि हुँ  
संसारको भोक मेटाउने।

गरौ गाई, बाखा, बंगुर पालन  
कृषिबाटै हुन्छ देशबिकासको थालन  
मासु, दुधको देशमै नपुग माग  
युवाहरु कृषिमा सम्भावना धेरै जाग  
हजुर म कृषि हुँ  
संसारको भोक मेटाउने।

हाते मालो गरौ तिमी र म मिली  
पौरख गरौ मुल मन्त्र एही बोली  
"कृषिमा लगाउ तन, मन, धन  
जाग हे सबै युवा जन "  
हजुर म कृषि हुँ  
संसारको भोक मेटाउने।

## Global Food Security through Agricultural Transformation

Concise version of the essay that won First Place Award in the Student Writing Contest organized by NAPA in 2018

By Prashant Bhandari,  
Agriculture and Forestry University, Rampur, Nepal  
Email: prash87.pb@gmail.com



### 1. Introduction

Agriculture lies at the heart of human survival. Agriculture is arguably the biggest turning point in present day evolution of human life and it continues to remain a fundamental part of our society and economy. The Green Revolution transformed the way of farming and addressed the famine and looming economic crisis in the post-World War-II world. While the use of antibiotics, fertilizers, and pesticides helped increase food production to feed millions of people in short span and saved so many lives; such chemicals destabilized the ecosystem, reduced diversity and disturbed symbiotic relationship existing in nature. There are estimates which point us that we need to increase food production by 60-70% by 2050, which means developing countries like Nepal and those in Africa may have to double their food production. While agricultural transformation is indispensable to feed the world, it must be realized with due considerations to land degradation, water shortages, nutrient status and cycle, greenhouse gas emissions, and pollution.

“Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life” (World Food Summit, 1996). This definition identifies four dimensions of food security - availability, accessibility, affordability, utilization, and stability. After a decline since the 2000s, the number of chronically undernourished people started rising again in parts of Asia and Africa recently. Much of this increase in food insecurity has been traced to conflicts, and mass migration elicited by conflicts and climate-related shocks. More than 840 million people are chronically undernourished, and two billion people face nutrient deficiency; which potentially impair their physical and mental development. Research has shown that the first 1000 days of a child life are most critical for its physical and mental growth. On the other hand, the rise in the obesity is also negatively impacting society. These contrasting circumstances suggest that food security is directly linked to health and nutritional goals. Lying in the center of food security framework, agricultural systems must adapt to climate change, transform to meet nuanced biological, geographical, socio-economic and cultural challenges.

### 2. Complexities in achieving food security

#### 2.1 Climate Change

Climate change is complicating food production. It is changing the length of the growing period; which is affecting total yields in many regions. The spread of pests and diseases to wider geographical regions is another harmful impact. Drought brought by climate change is arguably the biggest factor exacerbating food insecurity in countries like Nepal where most of the food crops are produced under rainfed conditions. Certain cash crops such as coffee, vegetables have shown increase in cultivation area and yield. These new pockets need to be cashed upon while appropriate coping strategies need to be in place to combat the climatic uncertainties. Climate change risks on agricultural production translate into risks for the food security and nutrition of the people whose livelihood is directly based on agriculture. It is likely to affect future food security by causing trade disruptions and price volatility.

#### 2.2 Smallholder farmers and rural poverty

Small farmers are vital to the food supply chain and to the economy of the nation and smallholder farmers are at the core of the sustainable farming. Small farmers, however, face myriad of challenges like lack of capital, legal and land rights issues, access to the market, bargaining power etc. Women are key players in agriculture, but are relatively deficient in resources. Research has shown that women produce 20-30% greater output than men when provided with the same resources. Developing countries must be quick to adopt new technologies that fit the geographical and cultural landscape and innovative business model that can survive uncertainties, overcome resource limitations and enhance competitiveness in the market. It is evident that market-based interventions which assists towards increasing the purchasing power of people go a long way.

#### 2.3 Unhealthy diets & food waste

It is indeed ironic that 650 million people are suffering from obesity, diabetes, heart diseases whereas about equal number of people are suffering from malnutrition and hunger. To an alien, the solution to food security may appear as simple as effective distribution of food. Our food distribution system is so skewed and the gap between rich and poor countries/people so large that the situation seems abysmal.

## Global Food Security through Agricultural Transformation (Cont..)

### 3. Agriculture transformations for meeting the challenges

#### 3.1 Sustainable intensification of agriculture (SIA)

This approach is based on increasing yields of nutritious food on current farmland rather than expansion of existing farmland, through environmentally friendly practices. SIA approach also emphasizes that food is accessible to all without compromising the health of people, animals, the environment. The needs and priorities may vary between communities and nations. It is why one simplistic universal solution will not work at all places; it requires customized, tailored strategies, solutions that work at regional, national level. Successful models ensure local participation, are flexible and are built on local knowledge.

#### 3.2 Regenerative food systems

A regenerative food system is a critical counter-narrative to industrial agriculture and its notion of agriculture is that it is an outcome of designful stewardship of nature and its resources rather than simple food growing. It considers food as a human right rather than a commodity. Development of perennial cropping system that can integrate with the current monocropping system could be one of the solutions. Perennial crops for cereal grains could be our moon shot but there is already evidence of legumes with prolonged growing season with multiple harvests. Such a success could mean that we could grow cereals, legumes as plants that exists in harmony with nature rather than those we grow through vigorous human interventions.

#### 3.3 Efficient system of distribution, policy, and politics

As pointed out earlier 800 million people currently hungry can be fed with a proper channel of distribution and this is where the breakthrough technology of our time needs to pivot towards. For example, the blockchain technology for the efficient supply chain of agriculture products and food comes to mind. The blockchain is based on a shared ledger which is updated in real time and requires validation from each network participant (Gro-intelligence, 2017). Researchers have pointed out that one of the main reasons farmers getting marginalized is due to the presence of an inefficient supply chain. The marketing margin is higher in the farm to wholesale market as compared to the wholesale to retail market (Shrestha, 2012). This inefficiency erodes the bargaining power of farmers, while the middlemen, take the major chunk of the profits.

Political instability and conflicts have been resulting in famine and food insecurity in regions. Hunger and undernutrition are significantly worse when conflicts pro-

long and the political vacuum erodes institutional capacities. Addressing food insecurity and malnutrition in conflict-affected situations cannot be “business as usual”. It requires a conflict-sensitive approach that aligns actions for immediate humanitarian assistance, long-term development and sustaining peace.

#### 3.4 Biotechnology and plant breeding research

Human beings have used biotechnology for thousands of years, but now with advances in gene modification technology, the options available are huge. There has been a lot of debate over genetically modified organisms (GMOs), both the good and bad aspect of it. It is undeniable that GMOs can increase the food production and arguably nutrient content; however, we cannot put all our eggs on one basket and bet it all on GMOs. GMOs as a tool should definitely be in our arsenal to combat food insecurity, however, GMOs should not be a vessel to sell more corporate products and corporate control and ownership of these products need to change. The solution could be the promotion of GMOs crops and with an equal incentive for small farmers to carry on the production with SIA principles. Organic agriculture definitely has its merits, but biotechnology could very well hold the key to the balance between sustainable agriculture and large-scale cultivation. How biotechnology can best contribute to future food and nutritional security for feeding the hungry poor people needs to be answered clearly.

#### 3.5 Collaboration

It may sound like a cliché but collaboration is pivotal in deciding whether we can transform in time to address this looming challenge of global food insecurity. Farmers, entrepreneurs, policy makers, agriculture professionals, professors, extension workers, researchers, social activists and scientist need to work in collaboration. It is important to have effective working model to share necessary resources, information, tools, recognition, and platform so that problems can be tackled jointly, efficiently and sustainably.

### 4. Conclusion

It is true that the present & looming problem of food insecurity will take a toll, most severely on the poor, underprivileged, small farmers; yet we cannot give up now and should try to find the best in us to contribute to this global battle from our own front. John F. Kennedy said: "By defining our goal more clearly, by making it seem more manageable and less remote, we can help all people to see it, to draw hope from it, and to move irresistibly towards it." We need to heed on to this advice more than ever.

## Global Food Security through Agricultural Transformation (Cont..)

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### [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](mailto: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**  
General Secretary and Chair Membership Drive Committee

## On the Occasion of Fortnightly *Pitri Paksha*: Cherishing the elegance of traditional wisdoms - Nityananda Khanal

The 16-day synodic lunar period between the full-moon and new-moon, which is flanked by two major festivals - Teej and Dashain, is the period of commemorating the departed ancestors in the Hindu tradition. The period is called *Pitri-Paksha* or *Sohra-Shraaddha*. When I was paying homage to my ancestors this season, I started reflecting on the legacy that my father and mother left for us to live a moral life. Unfortunately, I lost my mother when I was six, but I remember an advice she would give to people around her; that is "refrain from gossiping". My father grew me up to the age of 25, hence I could have learned great deal of knowledge and life-skills from him to live an honorable life. But I failed to take advantage of inheriting that great resources - the wealth of wisdom he could transfer to me.

Yes, I now regret for the fact that I missed the opportunity to learn meritorious wisdoms from my father. He was an apt farmer, craftsman, healer, folk poet, Bhajan- and Fagu-singer, and a great story teller. I grew up in the transition time, when all traditional values were considered inferior to the modern western manners. I thought what my father was doing would epitomize the way of life as a traditional village dweller, which would become obsolete and irrelevant for me, as I would be an educated person enjoying a lucrative career with modern amenities, scientific medicines, affluence and luxury of life. However, the more I went higher up with my education and experienced the world more widely, I started appreciating progressively more and more the moral values, creativity and meaningful wisdoms my father and contemporary locale had. Unfortunately it was too late for me to learn from him; he was gone, when I became educated enough to fully appreciate him and his wisdoms.

### Herbal healing

My father was a local healer, curing ailments with the use of herbal medicine, and use of shamanic practice. I did not care to know how he would be doing that. But sometimes he would ask me to collect some leaves and roots of local herbs to extract medicine for some ailments such as colic pain, fever, constipation, diarrhea, dysentery, cough etc. I remember some of them, which have come to great rescues at desperate times.

One of the unforgettable occasion of using herbal medicine was for my second child Sushil, when he was just over two years old, while I was working at Pakhribas Agricultural Research Centre, Dhankuta, Nepal. He had some kind of stomach trouble accompanied with fever and nausea. He was put through series of 3 phases of antibiotic medication prescribed by a doctor for three weeks. There was no betterment in his condition. He terribly lacked appetite and became weaker progressively. In this despair, I collected some herbs such as *Abijale*, *Topre-Jhar*, *Chariamilo* and prepared an extract with *Birenun* (Himalayan brown salt). We drenched the child with one tea-spoonful of the extract twice. It changed our despair to sigh of relief. He defecated bluish slimy, odorous mucous, and within a

few hours, he asked for food ! He was completely healthy in a few days.

A second incident I never forget is a healing of sickness of our first child Ramesh in Canada. He was an 11-grader then. He had nausea and lack of appetite for several weeks. We visited a doctor multiple times and got his medication intensified and extended for weeks; which after all turned into a vain. I wished I were in Nepal and could collect some herbs to cure him. We had brought some *Triphala Churna* (a powder containing *Harro*, *Barro*, *Amala* and *Birenun*) given by our neighbor in Nepal, who would prepare those products for sale. I crushed some garlic and *Timur* to make viscous paste and mixed with the *Triphala Churna* to make round pills. Taking two marble-sized pills for 3-4 times improved the condition of our son. He was so appreciative; he went to the doctor to tell his experience. The doctor was so curious to know about the detail. So, I was invited by the doctor to tell the story about how I was able to cure my son's illness.

### Transplant survival:

Our family homestead was on the south-facing slope in the foothills area, where growing a kitchen garden would require frequent watering for establishing transplants of vegetable seedling raised in the nursery. The seedlings transplanted from nursery would be prone to desiccation very quickly. Our neighbors would say, they lost most of the transplanted seedlings. But I witnessed that almost all seedlings transplanted by my father survived, providing us with plenty of vegetables during slack seasons. He would transplant the seedling making basin-like circles around the plant base. He would then water the plants, cover them with *Shorea* leaf-bowl during scorching daylight and remove the cover for the period from late afternoon to half of the next morning time. He would repeat the practice of covering and uncovering for 5-6 days until the seedling established well. All seedlings would survive and grow vigorously afterwards!

Until my PhD, I simply thought that the success of seedling establishment was due to water conservation at the base of the plants. I recently understood that the leaf-bowl cover during high light intensity would protect the photosynthetic apparatus of the leaves from photo-inhibition and photo-destruction, thereby preventing the plants from the chain effect of oxidative stress leading to devitalization of the whole plants. Removing the cover to allow plant exposure to light in the low light intensity in the morning and late afternoon would maximize photosynthetic efficiency and facilitate the plants to acclimate to the field condition. This would also discourage the damaging insect pests to refuge under the cover at night.

There are numerous examples of valuable wisdoms I could have inherited from my father. Despite sparing memory about those, I wish to continue to sharing those legacies to the people around me.