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INTERNATIONAL YEAR OF PULSES

E-Magazine

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CELEBRATING THE INTERNATIONAL YEAR OF PULSES

Ahmad Farooq

ALTERNATE PERMANENT REPRESENTATIVE OF PAKISTAN TO FAO
AND CO-CHAIR OF THE STEERING COMMITTEE
FOR THE INTERNATIONAL YEAR OF PULSES



The year 2016 promises to be an important and exciting year for agriculture as the international community celebrates the International Year of Pulses (IYP 2016). Following approval by the Food and Agriculture Organization of the United Nations (FAO), the United Nations General Assembly in December 2013 through its resolution A/68/231 approved 2016 as the International Year of Pulses. Pakistan and Turkey co-sponsored the initiative for IYP 2016. The Year was launched in Rome on 10 November 2015 by Director General FAO Dr. Jose Graziano da Silva.

The idea for an international year dedicated to pulses was rooted in the fact that pulses have health benefits, and can play a significant role in providing food security and nutrition, maintenance of soil fertility, climate change mitigation and sustainable development as well as poverty eradication.

The health and nutritional benefits of pulses are well known. Pulses are rich in proteins, fiber, and essential vitamins and minerals. A pulse-based diet helps in lowering the risk of developing several diseases such as cardiovascular, diabetes and cancer. Pulses do not contain gluten and are suitable for celiac patients and contain important minerals.

Pulses and legumes fix atmospheric nitrogen into the soil and have been used for maintaining soil fertility through crop rotation, mixed and intercropping.

Pulse crops can provide ready cash to farmers and can play an important role in promoting development, poverty eradication and fostering sustainable food

production thereby contributing to food security and nutrition. Pulses can be grown in a variety of soil and climatic conditions.

Increasing the production of pulses could help feed the global population expected to surpass nine billion by 2050 in a sustainable manner and contribute to the achievement of Sustainable Development Goal 2 of the 2030 Agenda for Sustainable Development.

The implementation of IYP 2016 is being coordinated by a Steering Committee, which Pakistan and Turkey are co-chairing. It comprises all the important stakeholders that have a role in the production and trade of pulses including Member States, the Rome-based UN Agencies (FAO, WFP and IFAD), Bioversity International, research organizations such as ICARDA and GFAR, and representatives from the civil society, private sector and farmers' organizations.

The Steering Committee has developed an Action Plan that lists activities organized by all stakeholders for implementation of IYP 2016. It is a living document and will be continuously updated for new activities organized in connection with the Year. The list includes a series of impressive events that will be held in all parts of the world to highlight the significance of various aspects of pulses. FAO has set up a dedicated page on its website related to IYP 2016 (<http://www.fao.org/pulses-2016/en/>).

An important activity during the International Year will be the development of a Food Composition

Database on Pulses by FAO. This database will provide information on pulses with special emphasis on biodiversity and their relation to agriculture and processing features.

IYP 2016 comes at a critical juncture. It follows the International Year of the Family Farmers 2014 and the International Year of the Soils 2015. As such there are important linkages between the three years. These include strategic role of family farmers in agricultural and rural development; central role of sustainable soil management for the provision of key ecosystem services including food security and nutrition, climate change adaptation and overall sustainable development; and various benefits of pulses in addressing food insecurity, malnutrition and climate change.

IYP 2016 also comes on the heels of the adoption of the 2030 Agenda on Sustainable Development by the United Nations. 2016 will be the first year of the implementation of the 2030 Agenda. The International Year of Pulses will link the contribution of pulses to critical targets under SDG 2, particularly on food access, malnutrition, smallholder incomes, and sustainable and resilient agriculture.

Member States, have the most important role to play for promoting pulses and implementing the Year including through constitution of national committees. Member States should also take actions that help in increasing production and productivity of pulses as well as support R&D activities towards these ends. The private sector and civil society also have an important role. The private sector has stepped-in in a major way for organizing various activities connected with IYP 2016.

Farmers and farmers' organizations too must actively participate in the celebration of the Year. The objectives of the IYP 2016 have a direct impact and relevance for the lives of farmers. Sustainable family farming systems account for the largest share of pulses' production. Through promoting diversified agricultural systems, including multi-cropping and association with livestock through animal feed etc. farmers can contribute to healthy soils and the maintenance of biodiversity.

Legumes are important from an economic point of view in family farming systems since they generally have a higher value than cereals and even a small area can provide a valuable source of income for smallholders, as well as providing a valuable source of protein, particularly among the poorest sections of the population who cannot afford animal protein. Farmers' organizations such as the World Farmers' Organization must, therefore, promote practices that assist farmers globally in getting the maximum benefits from the production of pulses.

Focus must be given to the following aspects to achieve the desired results from IYP 2016:

- IYP 2016 seeks to promote consumption of pulses particularly due to its dietary and nutritional benefits. In doing so it would be important to avoid adverse impact on the populations that are dependent on pulses as their main dietary source including price increase as pulses consumption grows. The promotion of pulse consumption must be balanced by an increase in production particularly in the main pulse consuming countries.
- The Year must focus on improving productivity in developing countries, where pulse crops are planted on marginal lands and grown under rain-fed conditions, which is the main reason for low yields and large year-to-year variability in production.
- The absence of technology and quality seeds is a key reason for low productivity of pulse crops. Pulse crops are also vulnerable to natural disasters and effects of changing environmental conditions. Investment in R&D, both in the public and private sectors, focused on improved seed varieties that are resistant to pests, adaptable to effects of climate change as well as having improved productivity is critical for enhancing production of pulses.
- Enhanced extension services for the farmers in developing countries will go a long way in improving productivity of pulses and income levels of the farmers. Extension services must connect the lab to the farm.
- Partnerships across the food chain are critical for improving the pulse sector. Fostering of such partnerships particularly between governments, private sector and the civil society can be an important outcome of IYP 2016. It can also have spill over benefits for other sectors related with agriculture.

Let's all work together to deliver the promised objectives of IYP 2016 and make the Year a success.

PULSES: GREAT VALUE GLOBALLY

Fritz Glauser

PRESIDENT, SWISS FEDERATION
OF CEREALS PRODUCERS
WFO BOARD MEMBER

The last two years have highlighted the fact that, both for family farming and for the soil, it is possible to communicate on important topics for us and sometimes unknown to the general public.

In many countries, pulses are part of basic foodstuffs, which is very important for the supply of small farms. It would also be unfortunate to overshadow the contribution of pulses to improve the situation of many producers, particularly through their efficiency and sustainability.

At the north of the Alps, pulses are of vary but equal importance: forage production, whether raw materials for concentrate feed or basic foods.

Crops such as peas, faba beans and lupins are sources of protein and are involved in the balancing of rations for cattle, pigs or poultry.

These crops extend the rotations and contribute to the sustainability of big crops. A balanced crop rotation allows subsequently to reduce the use of pesticides through reduced weed pressure, diseases or pests. It is possible to meet the wishes of our policies and our people as to the moderate use of pesticides, reducing at the same time production costs on farms.

With the fixation of nitrogen (150 kg N / ha), which is a key feature of pulses, it is possible to reduce inputs of nitrogen for the following crop. This contributes to sustainable production and reduced use of fertilizers. The soil and its quality will be improved, either directly by plants or indirectly through a diversified crop rotation, which also has a positive impact on biodiversity.

In the forage production, pulses are also important. These include for example clover and alfalfa, which increase the value of forage and make it more balanced. The feed mixtures containing legumes also allow to increase yields. Grassland value (natural or artificial) increases in proportion to the share of forage legumes in mixture. The effect is also positive for crops.

To sum up, pulses play an important role among the basic foodstuffs not only for human consumption but also for animal feeding. Pulses are also essential plants in a balanced crop rotation, with a positive impact on biodiversity and sustainability of agriculture.



2016: THE INTERNATIONAL YEAR OF PULSES

Gordon Bacon
CEO, PULSE CANADA

The United Nations has declared 2016 as the International Year of Pulses (IYP). This year-long celebration will focus global attention on what can be done to fully capital

ize on the positive contribution that pulse crops, including peas, beans, lentils and chickpeas, can have on addressing global issues like nutrition, food security and the environmental sustainability of food production systems that must gear up to feed 9 billion people by 2030.

Pulses and the United Nations

The Food and Agriculture Organization (FAO) officially launched IYP on November 10, 2015 at a ceremony in Rome.

“The slogan for the International Year of Pulses is ‘nutritional seeds for a sustain-

able future,’” said FAO Director General, José Graziano da Silva. “It will be a great opportunity to raise awareness of the benefits of pulses in the context of the Sustainable Development Goals.”

In September 2015, the UN General Assembly adopted the Agenda for Sustainable Development. The Agenda consists of 17 Sustainable Development Goals (SDGs) intended to stimulate action to end poverty and global hunger over the next 15 years. Efforts to increase global pulse production will be key to achieving many of the SDG’s, and in particular SDG #2 that strives to “end hunger, achieve food security and improved nutrition, and promote sustainable agriculture”.

Healthy People, Healthy Planet

Achieving the Sustainable Development Goals requires addressing many challenges simultaneously. The World Health Organization notes that 790 million people around the world suffer from acute or chronic undernourishment. At the same time, more than 2 billion people are now classified as overweight or obese. Whatever the



food choices, the outcome must ensure that the health of people and the health of the planet are both protected and enhanced.

Pulses are a smart addition to a diet to address undernourishment. They are high in protein, high in fibre, and contain many important micronutrients. The nutritional profile of pulses is complementary to the nutrition provided by cereal crops like rice, wheat and corn. Together the protein profiles of cereal grains and pulses can provide a complete protein with all of the essential amino acids.

The nutritional profile of pulses can help maintain good health and address some of the problems associated with obesity. Eating foods rich in protein and fibre can increase satiety which can help with weight management. The complex carbohydrates in pulses, along with the fibre and protein, contribute to stable blood sugar levels and longer lasting energy. Pulses are also a heart healthy food choice. Eating pulses can help lower cholesterol and reduce blood pressure, and help with weight management, which are all risk factors for heart disease.

Pulses also play an important role in crop rotations and contribute to a diet that supports a healthy planet. Pulses have a low carbon footprint and use less water than most other sources of protein. Jason Clay, Senior Vice President, Food & Markets for the World Wildlife Fund recently noted that the production of food already has the largest environmental impact globally of any human activity. Growing and processing food accounts for 70% of water used by people, close to 80% of deforestation worldwide, nearly a third of greenhouse gas emissions and 70% of all biodiversity loss.

"Pulses represent some of the best options we have to ensure a sustainable future," says Clay.

One major goal of IYP is to increase the production of pulses worldwide.

In developing nations in particular, pulses provide another cropping option for growers, and an important plant based protein source for their diets and the diets of their livestock.

Increasing Global Production and Fostering Global Demand

Just as the "Green Revolution" sparked investments to increase the yield of carbohydrate-rich crops like corn, rice and wheat, the global pulse industry hopes that IYP 2016 will drive investments that will make pulses more attractive to farmers in the developing world. Yield increases in pulse crops have not kept pace with cereal crops and farmers will always focus first on crops that provide them with the highest incomes. As efforts are successful in improving production of pulses, the global pulse industry wants to ensure that the nutritional and health benefits of pulses along with their contribution to sustainability is recognized by consumers and food manufacturers. This will ensure a balanced approach to increase production of pulses at the same time as consumers increase their demand for pulses.

A wide range of activities have been held, and more activities will be held throughout 2016 in countries around the world. Many events focus on the need for improved varieties and agronomic practices to increase pulse yields.

Governments are also being encouraged to look at domestic and international policies to ensure that the production and trade of pulses are on an equal footing with other crops.

Other activities are focused on drawing consumer attention to pulse crops and the valuable contribution that they make. A global pulse brand was created and launched for 2016 and is intended to provide an ongoing focus for the contribution that pulses can make in improving nutrition, improving human health, and in ensuring that adequate food for 9 billion people can be grown in the most sustainable way possible.

TO LEARN MORE ABOUT THE WIDE RANGE OF ACTIVITIES THAT ARE UNDERWAY, A RANGE OF WEBSITES HAVE BEEN DEVELOPED.

THE FAO'S OFFICIAL SITE FOR THE INTERNATIONAL YEAR OF PULSES:
www.fao.org/pulses-2016/en

A LOOK AT IYP INITIATIVES AROUND THE GLOBE:
www.iyp2016.org

LEARN MORE ABOUT THE BENEFITS OF PULSES AND FIND GREAT PULSE RECIPES:
www.pulses.org

INTRODUCE PULSES INTO DIETS FOR PEOPLE NOT CURRENTLY EATING PULSES:
www.pulsepledge.com



HIGH IMPACT OF CROP RESEARCH ON LENTIL PRODUCTIVITY AND PRODUCTION IN ETHIOPIA

Shiv Kumar Agrawal

FOOD LEGUMES COORDINATOR, ICARDA

Rajita Majumdar

COMMUNICATIONS MANAGER, ICARDA

In Ethiopia, lentil is an important food crop as a source of income for small-scale farmers and for export, being a major lentil producer in the sub-Saharan Africa region.

However, lentil cultivation area and production was declining in the country for several reasons: use of low-yielding landraces, diseases, insect pests, frost, water-logging and poor cultural practices like late planting which leaves the plant young and vulnerable to fight off disease. For example, in the 1997-98 season, about 23,000 ha of late-planted lentil in the highlands were completely wiped out by a rust epidemic. The Ethiopian Institute of Agricultural Research's (EIAR)

legume research program has been focusing on increasing the country's lentil productivity and production by developing improved lentil varieties in partnership with CGIAR's International Center for Agricultural Research in the Dry Areas (ICARDA). The research outputs combined with smart dissemination strategies such as gender focus have been gradually turning the tide for Ethiopia over the past decade as yields have shot up and lentil production is steadily growing, as is the cultivated area.

Under the research partnership focused on food legumes (pulses), ICARDA has been providing improved germplasm and varieties of lentil, chickpea and faba bean to EIAR for testing on farmers' fields for adaptability to the local environment. After crossbreeding with local varieties, those demonstrating the highest yield potential were released.

So far about a dozen high-yielding, disease-resistant lentil varieties have been released with wide and specific adaptations, ten of which were selected from ICARDA's elite germplasm by Debre Zeit Agricultural Research Center (DZARC), located in the Oromia region. In conjunction with improved varieties, research has also focused on developing improved agronomic practices, such as optimal seed rate and weeding practices; and early planting (August) using ridge and furrow, and broad-bed and furrow systems to tackle excess water problem with vertisols (soil with a high content of clay). The technology 'package' developed demonstrated 270% yield increase: up to 2.6 tons/hectare (t/ha) compared to 700 kg/ha from traditional varieties and practices.

The technology package has been aggressively promoted in the central highlands, where rust epidemics, water-logging and frost are key production constraints. To accelerate dissemination of improved varieties, farmers participating in the popularization program produced seed under DZARC's supervision which were then distributed from farmer to farmer and promoted through field days. Some farmers even went on to become the nucleus of Farmer Research Groups in different districts, scaling up the benefits.



Past impact studies showed that the individual components of the technology package (variety, early planting and weeding) increased yield by 70%, 135% and 62% respectively. The popular variety 'Alemaya' has been central to the success of the package. A cost-benefit study estimated the returns from research investment in developing 'Alemaya' at a net benefit of about \$17 million and an internal rate of return of 44%.

Technology adoption and diffusion were slower than expected due to shortage of seeds of improved varieties. To overcome this, DZARC's lentil team has trained several district extension experts and farmers on seed production and processing. Many farmers have now joined contract-based village seed production schemes with the Ethiopian Seed Enterprise, farmers unions and NGOs. During 2014, farmer-based seed production was initiated in various districts in Ethiopia involving some 1100 farmers, resulting in 715 tons of seed production of the two most popular high-yielding lentil varieties – 'Alemaya' and 'Derash'.

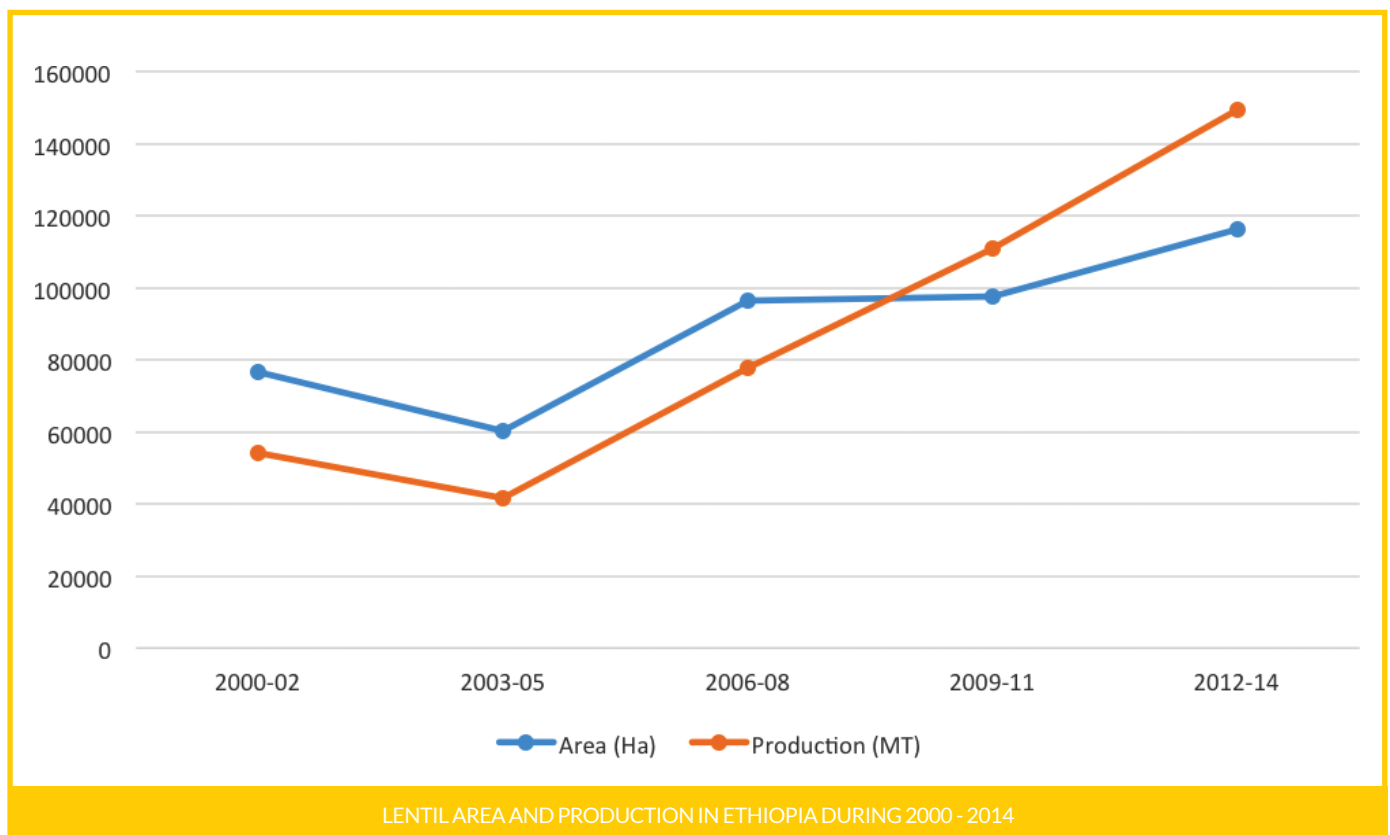
The lentil production has doubled from 54,227 million tons (MT) in 2000-02 to 110,913 MT in 2012-14. During the same period, cultivation area has increased by about 27.3%, suggesting the increase in lentil production in Ethiopia to stem mainly from increase in average yield – from 707 kg/ha in 2000-02 to 1286 kg/ha in 2012-14. The improved lentil varieties are not only higher yielding but also richer in iron and zinc content than local varieties, contributing to alleviating micronutrient deficiency – a severe and common malady in developing countries.

The key factors in the success of research impact on lentil production in Ethiopia have been the release and effective diffusion of improved lentil technologies (high yielding, rust and wilt resistant varieties with wide adaptation, integrated pest management practices and early planting) and improved knowledge and skills of farmers.

The enhanced lentil production in Ethiopia is the fruit of a longstanding research partnership – the EIAR-ICARDA research

partnership traces back to as early as 1980s, when ICARDA started out with shipping of large numbers of its germplasm and breeding lines to EIAR stations for evaluation. Soon after, the program had expanded to include breeding, agronomy and disease management research.

The outcomes also point to the critical role of genetic conservation of crops and its utilization in strengthening national food security and improving farmer incomes. ICARDA's Genebank has globally the largest holding of lentil seeds, along with chickpea, faba bean, and grasspea – most of which are landraces and their wild relatives. The collection is an international public good and an invaluable genetic resource for crop breeders seeking to develop improved legume crop varieties – a high-return investment in climate-smart agriculture. As legume crops have the unique nitrogen fixation ability for replenishing soils while being highly water-efficient crop option, they have the potential to work magic for food production in degraded and drylands of the developing world.



ICARDA'S LEGUMES RESEARCH IN ETHIOPIA OVER THE PERIOD HAS BEEN GRACIOUSLY SUPPORTED BY THE INTERNATIONAL FUND FOR AGRICULTURAL DEVELOPMENT (IFAD) AND THE GOVERNMENT OF NETHERLANDS.

ETHIOPIAN FARMERS TRY OUT NEW CHICKPEA VARIETY



ICRISAT
International Crops Research Institute
for the Semi-Arid Tropics

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At a field day organized at East Beles-sa, Gondar, to create awareness on Ejere, a chickpea variety that is new to the area, farmers expressed their interest to engage in

seed production in the coming season after seeing its performance. The Habru variety, introduced earlier, had increased the productivity of chickpea in East Belessa District from an average of 0.6-0.7 t per ha (for the local variety) to 2.4 t per ha.

To meet next year's demand for seed, farmers have been grouped into two clusters, one producing Ejere and the other producing the Habru variety. The Habru variety will be grown on 10 ha while Ejere on 12.5 ha. The seeds will be certified by the Amhara Seed Laboratory.

Three years ago, the Tropical Legumes II (TL II) project started work in the new intervention districts of East and West Belessa which have an average annual rainfall of about 650 mm. Farmers' participatory varietal selection was conducted and the Habru variety that performed well in farmers' fields was promoted.

Under the TL III project, Gondar Agricultural Research Center has been implementing innovative ways of seed security in the area by clustering together farmers producing the same variety.

After inspection and certification by the Amhara Seed Laboratory, the farmers are then linked to multipurpose cooperatives who buy and then sell the seed to other farmers at affordable prices.

At the field day, farmers requested the scientists to support them to solve tef and sorghum production challenges, especially with regard to Striga.

Another major challenge for researchers and policy makers included creating linkages to reliable markets because as production increases, farmers will be challenged to profitably sell their produce.

The field day, held on 31 October, had 14 women and 83 men participants. They included farmers, development agents, woreda (district) officials, subject specialists, Zonal Agriculture and Bureau of Agriculture staff and representatives from research organizations.



SHORT-DURATION PIGEONPEA A BOON TO FARMERS OF RAJASTHAN, INDIA

ICRISAT
International Crops Research Institute
for the Semi-Arid Tropics

Farmers in the Indian state of Rajasthan consider short-duration pigeonpea varieties a boon as the crop requires fewer inputs, thrives well even under limited water con-

ditions due to its deep root system, and matures in 120 days. This gives farmers the opportunity to grow post-rainy season crops like wheat, chickpea and mustard.

Earlier, farmers avoided pigeonpea due to its long maturity period. But introduction of short-duration varieties in the region have encouraged more farmers to grow pigeonpea. Villages of Jaipur district (Padasoli and Badwa) are known as pigeonpea villages as traditional crops like pearl millet have been replaced by pigeonpea.

Karauli district of Rajasthan was originally a traditional area for pigeonpea. But over the last two decades farmers have stopped cultivating pigeonpea due to unavailability of quality seed. A progressive farmer Mr Himmat Singh of Malupada village of Karauli was selected to demonstrate the short-duration variety, ICPL 88039, developed by ICRISAT.

At the field day at Malupada village there were 200 women farmers among the 500 farmers who participated. To encourage more farmers to adopt improved pigeonpea technology in their fields, awards for the 'Best Pigeonpea Farmer' were awarded to: Mr Gangashyam Singh (Satwas, Bharatpur), Ms Krishna Devi (Badwa, Jaipur), Mr Mool Chand Jat (Kherli Pichnot, Alwar), and Mr Gopal Sharma and (Nangal Bela, Dausa) for achieving high yields.

During the 2015 cropping season, more than 1,500 ha has been covered in nine districts of Rajasthan (Jaipur, Dausa, Alwar, Karauli, Sawai Madhopur, Bharatpur, Tonk, Dhaulpur and Ajmer) by the short-duration pigeonpea variety. Under the project, the area under pigeonpea in Rajasthan has expanded to more than 5,000 ha and its performance has encouraged more farmers to adopt this variety.

Chief Guest Dr SJ Singh, Local Coordinator and Director, Rajasthan Agricultural Research Institute (RARI), Durgapura, Jaipur, encouraged farmers to take advantage of improved pigeonpea technology developed by ICRISAT.

Dr CV Sameer Kumar, Coordinator and Senior Scientist, ICRISAT, elaborated on the package of practices in pigeonpea cultivation, selection of suitable variety for dryland conditions of Rajasthan.

He explained the 'one village one variety' concept for seed production and also about farmers' participatory seed production program, which can help farmers get quality seed at village level.

Dr Anupama J Hingane, Principal Investigator and Special Project Scientist, ICRISAT, briefed farmers about project activities and improved pigeonpea cultivation technology along with short-duration varieties and hybrids developed for Rajasthan. Further, emphasizing the role of women farmers in agriculture, she encouraged women to take up pigeonpea cultivation in their fields, and also get involved in various activities like seed production, post-harvest processing and other value addition activities like weaving baskets out of dried stalks of pigeonpea. She urged male farmers to support their wives and daughters. Convinced by the returns earned by the farmers in Jaipur district, 150 women from four other districts have expressed their willingness to take up pigeonpea seed production on their farms.

Mr Vijay Kumar, Senior Manager, ICRISAT, explained the advantages of early pigeonpea and dual cropping system. On this occasion, farmers shared their experiences in pigeonpea cultivation. Officers from Department of Agriculture, Odisha, were also invited to the field day.

Mr Gangadhar Das, Joint Secretary, Agriculture, Mr NC Swain, Consultant and Mr BK Dey, Agronomist from Odisha, visited pigeonpea fields and saw the performance of the pigeonpea varieties. They requested ICRISAT to demonstrate this improved pigeonpea technology in the state of Odisha as well.

Visits to the pigeonpea fields were organized by Mr Uttam Chand, Scientific Officer, ICRISAT, and team, giving farmers an opportunity to see on-farm performance and also interact with scientists.

The field day was organized on 15 October by ICRISAT in collaboration with RARI, Durgapura.



2016, THE INTERNATIONAL YEAR OF PULSES

Tamara Chabvuta
NASFAM Communication Officer

Pulse is a word used to describe crops harvested for their dry seeds. They include beans, peas, lentils and oil seeds such as groundnuts and soya beans.

They have been consumed for many centuries and are among the most extensively used foods in the world for humans and animals.

Pulses are a reliable supply for proteins, dietary fibre and minerals, and vitamins. Consuming a half a cup of beans or peas a day enhances diet quality. The highest consumption of pulses are registered in those parts of the world where animal proteins

are scarce and expensive (such as in South Asia and Africa). Thus pulses have been justifiably described as the 'poor man's meat'.

Pulses provide a large proportion of the proteins required for adults and children. In man, proteins help in the repair of body tissue, synthesis of enzymes and in the supply of energy for the body. In children, consumption of pulses should be encouraged as this helps to furnish the child with the amino acids required for growth. Their use is also essential in malnourished children. Furthermore, the use of pulses as components of weaning foods in combination with cereals is highly recommended.

In animals, pulses are used as feeds more especially for cows, pigs and poultry.

As a farming fraternity, pulses help us in contributing to healthy soils and climate change mitigation through their nitrogen fixing properties. The UN General Assembly declared 2016 as the International Year of Pulses. It is expected that this will create awareness on the nutritional value of pulses in the lives of the global population.

The more the farmers are aware of the nutritional value of pulses, the higher will be the production of pulses globally. This will help to address the Sustainable Development Goal on Food Security and nutrition. Awareness will also be created on increased consumption of pulses concurrently with efforts to eliminate food waste and loss; for, more than one third of the pulses produced are either lost or wasted and, 800 million people are suffering from chronic hunger. In order to feed the world by 2050, global food production must increase by 60 %. Reducing food waste will play a significant role in achieving this goal.

With increased production of pulses, farmers will sell the excess and use the proceeds to improve on their livelihood.





As a rural woman smallholder farmer, pulses are an integral part of my family's diet. The beans/ peas are available and relatively cheap compared to meat. I can afford to have it on my plate at every meal and sustain the nutritional level of my family members.

Secondly, it is cheaper to prepare a meal of pulses than that of meat/ chicken. Pulses require less water and fuel to prepare. For instance, a kilogram of meat takes ten times more water to cook than a kilogram of daal. This also means that more firewood will be used in the process, implying that the environment will be gradually degraded by cutting trees for firewood.

Furthermore, pulses are easier to store over a long period of time than animal proteins foods. Besides, they are a sure source of proteins for any rural family.

Once such a family has approximately one hundred kilograms of beans, one is assured of sauce for the family until the next harvest and only has to scratch for the cereals to go with it.

It is therefore my ardent appeal to fellow farmers to double production in pulses not only to improve family health and livelihood but also to rid the world of malnourishment and chronic hunger because the biggest source of poverty is lack of food. Once people have food to eat, they can be healthy and productive. We should aim at feeding the world by 2050.



THE INTERESTS OF YOUNG IN PULSE

Virginia Cravero

ITALIAN YPARD REPRESENTATIVE

The Food and Agriculture Organization of the United Nations (FAO) has nominated 2016 as the International Year of Pulses (IYP).

The IYP 2016 aims to heighten public awareness of the nutritional benefits of pulses as part of sustainable food production aimed towards food security and nutrition. The Year 2016 will create a unique opportunity to encourage better utilize pulse-based proteins, further global production of pulses, better utilize crop rotations and address the challenges in the trade of pulses.

Pulses are annual leguminous crops yielding between one and 12 grains or seeds of variable size, shape and colour within a pod, used for both food and feed. The term “pulses” is limited to crops harvested solely for dry grain, such as lentils, beans, peas and chickpeas.

Pulses are a vital source of plant-based proteins and amino acids for people around the globe and should be eaten as part of a healthy diet to address obesity, as well as to prevent and help manage chronic diseases such as diabetes, coronary conditions and cancer; they are also an important source of plant-based protein for animals.

In addition, pulses are leguminous plants that have nitrogen-fixing properties which can contribute to increasing soil fertility and have a positive impact on the environment (FAO, 2015).

Nowadays, many young farmers are growing pulse in their field. One main example can found out in India, in Latur district of Maharashtra,

where a group of young farmers are working to demonstrate that a change about crop plantation is not just necessary, but beneficial.

These youngsters have different ideas about farming. They are either post graduates or have left university midway, seeing greener pastures in the fields that their elders had tilled. Mahesh has a master’s degree in chemistry, as does his fellow farmer and friend, Anant Patil. Shivaji Venkat Kendre has an MA in Hindi; Ravindra quit a diploma course in pharmacy, deciding to dispense pesticides in his fields rather than pharmaceutical drugs to customers.

They have formed a group called Evergreen that regularly meets on Mondays to discuss the status of the crop in their village and plan activities to improve the crop and overall yields. They consult scientists, department officials and company executives for knowledge and share this with their elders and other farmers.

Pulses in India have traditionally been a rainfed crop, and most farmers use minimal irrigation. One of their recent experiments has been setting up drip irrigation in their fields for pigeon pea crops with the help of Jain Irrigation. Till then, drip irrigation in pulses was unheard of in Kumta.

Says Mohan, one of the group’s more enthusiastic members, “I was the first to come back to farming, straight from university. Seeing my success, all my other friends have joined the bandwagon. Believe me, there is so much that can be done today in agriculture, thanks to the improvement in information flow. We use the internet extensively to know more about pulses and other crops. Representatives from agro industries also provide us with lots of information.”

Mahesh also added: “We want to do something different in pulses to achieve the best of yields”. After years of being cultivated using set traditional methods, there now seems

to be a lot of new breakthroughs occurring in pulses cultivation. Little wonder then that in this village, the elders all praise the youth – the youth are showing the way to a better future (Shankar, 2010).

Across Europe, the Middle East, the Indian subcontinent and South America pulse crops thus are a leading staple of people's daily diets. For a third year running, Montana (US) has maintained its position as the nation's largest producer of dry edible peas and lentils and is the nation's third largest producer of garbanzo beans (or chickpeas, depending upon where your culinary loyalties lie).

The viability of pea, bean and lentil production in Montana is tightly woven to international markets, and nowhere is that more apparent than in the person of a dynamic, young Italian pulse broker who has spent the past year in Great Falls, training for an executive position with Columbia Grain.

Pierfrancesco Sportelli was born into the pulse trading industry. His uncle, Franco Sportelli, founded one of Europe's top grain brokerage companies.

By the time he was 20, Pierfrancesco was already working as a broker in his uncle's firm. Within four years he was actively managing much of Franco Sportelli Import/Export's daily operations. Now just 25, Sportelli is poised to assume a major role as a marketer of Columbia Grain pulse products in Europe, South America and Africa.

At the time, Columbia Grain was just establishing its European pulse export markets and did not have an immediate opening for the young Italian. But the young man made a lasting impression on the executive. In 2014, Columbia Grain was looking to expand its presence in the European market and began searching for a marketer to assist them. A nationwide candidate search produced no results.

VanPevenage, senior vice president of Columbia Grain, recalled the young Italian from five years earlier, who had impressed with his language skills, knowledge of the pulse industry and well established business contacts throughout European markets.

Sportelli was appointed as a representative to the U.S. Foreign Marketing Committee, a subdivision of the U.S. Pea and Lentil Council which promotes U.S. pulse products across the world. He was also selected by the Montana Department of Agriculture for the state's "Pulse Champion of the Year" award for his work in developing export markets in Europe, South America and Africa.

Columbia Grain, VanPevenage and Sportelli held a feast in Great Falls to showcase dishes made from local pulse crops as part of the effort to raise awareness for the emerging crops (Murray, 2016).

These two examples aim to show how pulse are well adopted by young implicated in agri-food systems both at the production and marketing levels. Hence, an increasing willingness to work with these leguminous crops is already existing being ready to be expanded.

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10 WAYS TO CELEBRATE THE INTERNATIONAL YEAR OF PULSES

2016 is the United Nations International Year of Pulses (IYP). Pulses, or grain legumes, include 12 crops such as dry beans, dry peas, chickpeas, and lentils, which are high in protein, fiber, and micronutrients.

<http://bit.ly/1RZS7FW>

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PULSES (CROPS OF LEGUMES) ARE BIG IN 2016

What's trending in nutrition for the new year? Here's a big one: The United Nations has declared 2016 the International Year of Pulses.

<http://bit.ly/1RvKbh9>

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INAUGURAL LAUNCH OF 2016 INTERNATIONAL YEAR OF PULSES, TURKEY

Mediterranean Cereal, Pulse, Oily Seeds & Derivatives Exporters' Association (MEA) defined as the heart of Turkish pulse food, is located in Mersin province from where 90% of Turkish total pulse food is exported. Furthermore exclusively the members of this association export constitutes 80% of Turkish total pulse food export.

<http://bit.ly/1ln3on7>

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THE PULSES CONCLAVE

India Pulses and Grains Association will host a three day mega event for the global pulses trade and industry during in Jaipur, India.

<http://www.fao.org/pulses-2016/events/en/>



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