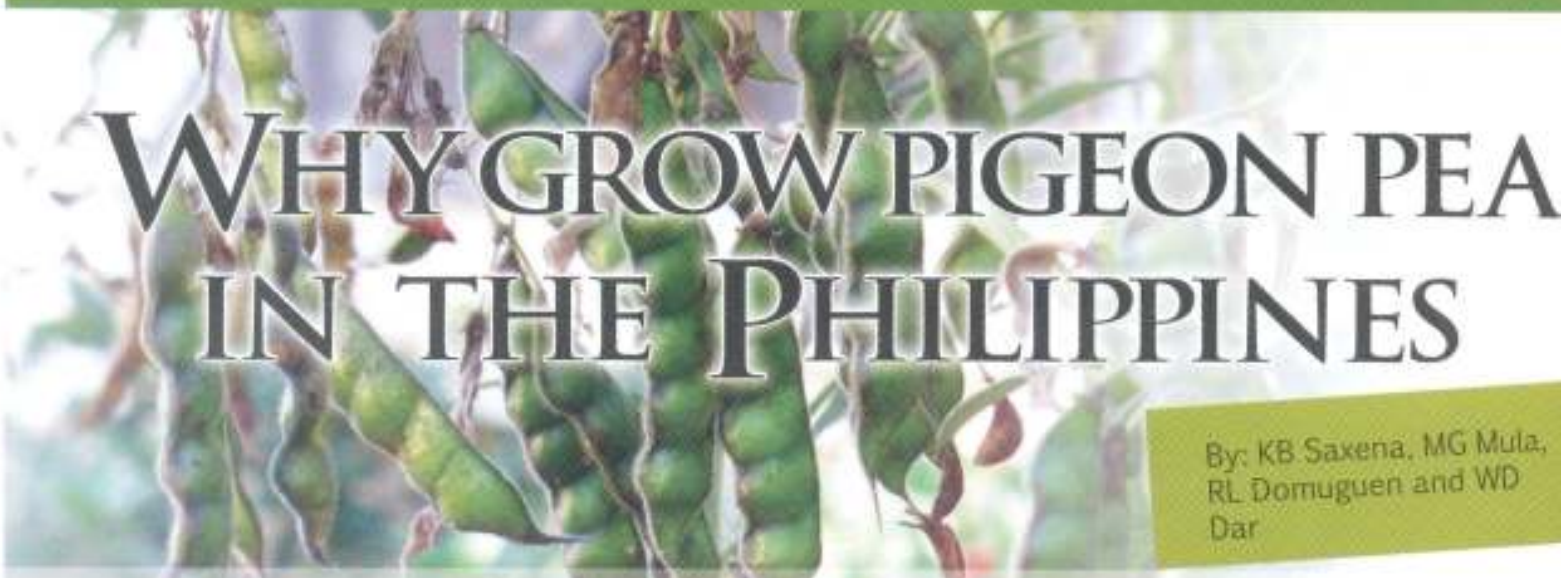

WHY GROW PIGEON PEA IN THE PHILIPPINES

By: KB Saxena, MG Mula, RL Domuguen and WD Dar

The diversity in morphological characteristics of pigeonpea makes it a crop with great potential for the dry areas in the Philippines. Various maturity types available in pigeonpea make it ideal for the various cropping systems in the country. The introduction of pigeonpea will not only help in soil amelioration but also generate more income per unit of land. Pigeonpea is likewise ideal for home gardening because of its nutritive value. This can be one good crop to combat malnutrition especially among pre-school children. Apart from its use as food and fodder, pigeonpea can be used for preparation of processed food of long shelf life which can generate employment through small-scale industries. Since pigeonpea also produces quality fodder, it can also be integrated in the crop-livestock farming system or as supplement feed in aquaculture.

3.1 Adapted varieties and their agronomy

The collaboration between the Philippines through Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD) and ICRISAT started as early as 1975. Initial research results revealed that medium and short duration of ICRISAT bred pigeonpea lines were tested in Laguna and Ilocos Norte during the dry season after rice (October to February planting) and have obtained yields of 1 to 3.9 t/ha. In the mid-eighties ICRISAT bred pigeonpea lines were evaluated in the northern areas of the Philippines. These showed a lot of promise (Table 2). ICPL 83024 was found to be the best variety with green seed yield of 3,585 kg ha-1 This line matured in 127 days. The 100-green seed mass was also high (28.7g) with more than 50% shelling ICPL 151 matured early (107 d) and stood second in green seed yield (309 kg ha-1). This genotype showed highes (68%) shelling. The 100-green seed mass varied from 22.2g (ICPL 151) to 28.7g (ICPL 83024).

Table 2. Performance of short-duration pigeonpea lines (vegetable) grown in Ilocos Norte, Philippines during dry season of 1989.

Entry Name	Days to		Plant height (cm)	100-green seed weight (g)	Plant stand (no.)	Green pod yield (kg ha^{-1})	Green seed yield (kg ha^{-1})	Shelling (%)
	Flower	Mature						
ICPL 83024	77	127	119	28.7	250	6848	3585	52
ICPL 151	74	107	99	22.2	253	4605	3095	68
ICPL 86010	73	129	106	22.8	245	4433	2455	54
ICPL 86005	77	131	123	24.4	245	3573	2188	62
ICPL 87	78	131	96	22.8	273	3345	1858	55
ICPL 85031	74	131	109	22.9	248	2528	1348	55
SEm	±0.2	±1.2	±2.4	±0.09	±9.0	±403.1	±219.8	±3.4
Mean	75.5	126.0	108.7	23.96	252.3	4222.0	2421.5	57.7
CV(%)	0.7	1.9	4.5	7.84	7.14	19.0	18.2	11.5

From 1986 to 1989 dry season, Cudapas et al. (1989) tested 16 high yielding cultivars from ICRISAT at the Mariano Marcos State University (MMSU), Batac, Ilocos Norte. The promising varieties are ICPL 85016, ICPL 151, ICPL 85015, ICPL 85014, ICPL 84032 and UPAS 120, which yielded 2.2 t/ha to 2.8 t/ha. ICPL 85016 was consistent in its yield performance giving the highest mean of 2.8 tons/hectare and likewise performed very well in the first year at 3.74 tons/hectare. Aside from ICRISAT cultivars, five (5) promising Queensland pigeonpea varieties were also evaluated. QPL 67 has the highest seed yield of 2.1 t/ha.

From 1991-1994 a few short duration lines were tested in different dates of sowing (November, December, and May). ICPL 84032 registered the highest yield of 2,127 kgs/ha (Table 3). In 1996 to 1997 dry season, Sugui et al. (1997) also revealed that ICPL 93015 produced the highest mean yield of 8,214 kg/ha when harvested as green pods and 2,085 kg/ha as grain among the eight vegetable lines tested (Table 4).

Table 3. Performance of promising pigeonpea varieties grown in Ilocos Norte, Philippines during dry season of 1991-1994.

Characters	Varieties							
	ICPL 87	ICPL 85012	ICPL 85015	ICPL 85014	ICPL 84032	ICPL 84037	ICPL 312	295-4-7
Days of flower (no.)	62	62	62	62	62	62	71	71
Days to mature (no.)	113	113	113	113	113	113	122	122
Plant height at maturity (cm)	90	72	91	80	91	58	61	129
Growth habit	DT	DT	DT	DT	DT	DT	DT	IND
Percent pod damage	23.74	19.84	30.79	28.29	32.56	26.89	28.50	10.0
Resistance to YMV	1	1	1	1	1	1	1	1
Resistance to bacterial wilt	1	1	1	1	1	1	1	1
Pods per plant (no.)	32	40	46	42	46	40	34	64
Seed per pod (no.)	4.5	4.7	4.9	4.1	4.7	5.3	4.8	4.4
Pod length (cm)	7.38	6.96	8.61	6.76	7.51	8.58	7.17	5.81
100-seed mass - fresh (g)	29.0	25.7	24.0	25.0	29.0	25.3	29.9	27.0
100-seed mass - dry (g)	11.22	11.28	10.65	10.69	11.85	11.22	12.28	9.80
Shelling ratio (%)	62	61	60	59	59	60	61	59
Seed yield per ha (kg)	2174	1674	2082	1852	2127	1601	1711	1756

Table 4. Performance of promising pigeonpea varieties grown in Ilocos Norte, Philippines during dry season of 1996-1997.

Characters	Varieties							
	ICPL 93015	ICPL 93020	ICPL 93058	ICPL 93064	ICPL 93066	ICPL 93070	ICPL 87091	ICPL 87(ck)
Days of flower (no.)	62	62	62	62	62	62	62	58
Days to mature (no.)	130	130	130	130	130	130	130	124
Plant height at maturity (cm)	145	134	131	153	130	142	126	120
Growth habit	DT	DT	DT	DT	DT	DT	DT	DT
Seeds per pod (no.)	5.6	6.3	6.3	5.3	6.6	5.6	5.3	5.0
Pod length (cm)	8.7	9.5	9.4	8.7	8.9	8.8	9.7	6.3
100-seed mass - fresh (g)	32.0	30.9	31.6	36.6	31.9	32.8	32.2	24.0
100-seed mass - dry (g)	13.6	13.7	13.8	15.0	13.9	14.1	13.9	11.3
Shelling ratio (%)	59	59.5	60	60	61	59.3	60.2	61.7
Green pod yield per ha (kg)	8214	5659	4144	6885	5802	5524	5326	7631
Seed yield per ha (kg)	2085	1211	1000	1489	1249	1170	1116	1958

Note: Green pod yield (whole fruit with shell and pods); Seed yield (dried seeds); DT-determinate type

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March is Rabies Awareness Month

The Department of Agriculture- Regional Field Unit-CAR observes Rabies Awareness Month this coming March.

Dr. Arlene Sagayo, Regional Rabies Coordinator announced the lined-up activities to celebrate this important event.

Sagayo said Rabies month is observed yearly to create awareness on every individual to take care of man's best friend.

She said that this year's calendars of activities include dog vaccination; and information dissemination campaign regarding responsible dog ownership.

Dr. Sagayo added that the info campaign is intended to make the Cordillera Region rabies free and likewise intended to remove in the minds of people same beliefs on the use of tandoc or blackstone to cure rabies; hearsays that most cats and dogs will become ill within three (3) days of shedding rabies virus on their saliva and that there is no reported case of rabies in Philippine Wildlife.

Meanwhile the Regional Animal Disease and Diagnostic Laboratory (RADDL) located at the Baguio Dairy Farm is always ready to examine suspected rabies cases brought to the said laboratory. This is according to Dr. Pranin D. Kiwang,RADDL Chief.

Dr. Kiwang advised that if a dog has bitten a person , the owner must restrain the animal with a leash or confine in a cage.The dog must be observed for any sings of rabies which may develop.

She added that killing the animal is not advisable. She said that if the animal dies within 14 days, cut-off the head and places it in a sealed leak-proof plastic bag or container filled with ice and submit the specimen immediately to the RADDL.

Dr. Kiwang further said that there is no known effective cure for rabies once the symptons of the illness has manifested,thus the need for prevention.

In the meantime, Dr. Anthony Bantog, livestock Sector Division Chief said that the celebration of Rabies Awareness month is under Executive Order #84; while World Rabies Day is on September 28 as per Republic Act 9482 named Anti-Rabies Act.

Dr. Bantog added that all provinces of CAR will be involved together with the Department of Health (DOH) : City Veterinary office; hospitals and the RADDL.

Rabies is a dangerous disease of animals particularly dogs and cats cause by a virus that is transmissible to humans through the bites of infected animals through contact of the saliva with an opening or wound in the skin.

It can be describe as an acute viral encephalomyelitis. Rabies infection is surely a cause of death.

According to Bantog , rabies is a preventable disease with the proper care of pets which include proper nutrition, provision of shelter,health management and rabies vaccination.

Dr. Jerry Sabado , DA Livestock Veterinarian recommends first aid treatments for humans bitten by dogs wherein the victims should allow the would to bleed for a while;wash immediately affected area with soap and water ."After Washing , apply either alcohol or tincture of iodine, " Sabado said.

Most importantly Dr. Sabado adviced the victim to consult a doctor.

Dr. Sabado said that the rabies virus enters the body through a cut or scratch or through the mucous membrane (such as the lining of the mouth and eyes), then travels through the central nervous system (brain and spinal chord).

Once infection is established in the brain, the virus trvels down the nerves from the brain and multiplies in many different organs.

Authorities advised that prevention is the best defense against Rabies.

For more information, and to know more about Rabies, call DA Livestock Sector-hotline -4449872,4449871 ;or email at livestock region @ yahoo.com.

This year Rabies Awareness Month theme is : Let us be.... PRO-DOG. "Pinoy Responsible Owners of Dogs".Alice Tabuno/Delila Guzman

why grow pigeonpea..from page 19

In 2005, 16 new cultivars of different types (short, medium and late varieties) from ICRISAT were tested in Mariano Marcos State University, Batac, Ilocos Norte, Philippines. Of the 16 cultivars tested, ICPL 88039 (early maturing grain type) and ICP 7035 (medium duration vegetable type) were found adapted to the region. ICPL 88039 was discovered the best alternative crop after rice in the rice fallow cropping system of the rainfed areas of Ilocos Region (Picture 2) while ICP 7035 is a potential intercrop to maize (Picture 3). In 2008-2009 cropping season, main crop of ICPL 88039 productivity was 875 kg ha-1 and after ratooning, it generated a yield of 625 kg ha-1. In 2007-2008 cropping season, the Isabela State University revealed that ICP 7035 productivity was remarkable at 2.2 to 3.1 t ha-1 while ICPL 88039 produced 3.2 t ha-1 from the alluvial plain. These identified cultivars are now being tested in the different regions of the Philippines (Region 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10) for multi-location trials.

Aside from the mentioned varieties, other icrisat bred lines that are showing good potential are the ICPL 81, ICPL 87091, and ICPL (long durat'.on forage type). (Picture 5)

With these numerous research undertakings, results suggest that commercial pigeonpea cultivation could take place in the Philippines.