

Explanatory notes on the 2009/2010 Legume International Testing Program (LITP), ICARDA

International Adaptation Trials

International Adaptation trials of Grasspea (*Lathyrus sativus*) with 1) high biomass (GIYT-HB) and earliness (GIYT-E) provide opportunities to test the improved elite lines under a wide range of environments to identify superior high yielding and widely adapted lines. The lines included in these trials are selected on the basis of their performance at several ICARDA sites. Cooperators are encouraged to include their local checks for making comparisons.

Chickpea International Adaptation trial (CAT) with diversified elite cultivars released in different countries provided the opportunity to group into zones with similar environments.

Scientists who wish to enter their lines into these adaptation trials should send approximately 1 kg seed per entry to ICARDA, latest by early October. This seed will be used for increase at ICARDA and included in the trials for the next year.

International Elite Nurseries (IENs)

The objective of these international elite nurseries is to furnish advanced breeding lines (F₅, F₆, F₇ etc.) for initial evaluation by national programs.

The IEN in lentil for Mediterranean Region is divided into large (**LIEN-L**) and small seeded types (**LIEN-S**). The large seeded nursery comprises entries with seed size equal or more than 4.5 g/100 seeds. Another elite nursery with early lines is also available particularly for South Asia and Africa (**LIEN-E**).

An elite nursery of chickpea (**CIEN-SL1**) is available for South Asia. An extra early nursery (**CIEN-SL2**) is available for more southern latitudes such as East Africa, Bangladesh and Burma where the growing season is short. A nursery of extra-large seed size (>40 g/100-seed) is available for Latin American countries (**CIEN-LA**). For the Mediterranean region the elite nurseries include: elite nursery for winter (**CIEN-W**) and elite nursery for spring (**CIEN-S**). A Faba Bean International Elite Nursery- Rainfed (FBIEN-R) has been initiated for the first time for rainfed areas between 300-400 mm.

Cooperators who wish to enter material in an international elite nursery should send approximately 1000 seeds for each entry for increase and inclusion in the next year's nursery.

F₃, F₄ & F₅ Bulk Populations

Nurseries of segregating populations are available for breeders to do single plant selection for local adaptation. The F₃ nurseries in chickpeas are split into two: Chickpea International F₃ Nursery - Mediterranean Region (**CIF₄-MR**) and Chickpea International F₃ Nursery - Southern Latitudes (**CIF₄N-SL**). Similarly in lentils, segregating populations include: F₃ Nursery Large Seed (**LIF₃N-L**) and F₃ Nursery Small Seed (**LIF₃N-S**) for Mediterranean Region; F₃ Nursery Southern Latitudes (**LIF₃N-E**) and F₃ Nursery Cold Tolerance (**LIF₃N-CT**) and F_{4/5} Nursery, E (**LIF_{4/5}N-E**). In Faba bean one nursery with improved populations (**FBISPN**) is available.

Stress Tolerance Nurseries

The available stress nurseries include:

- a) Chickpea International Ascochyta Blight Nursery (CIABN).
- b) Chickpea International Fusarium Wilt Nursery (CIFWN).
- c) Chickpea International Leaf Miner Nursery (CILMN)
- d) Chickpea International Cold Tolerance Nursery (CICTN).
- e) Chickpea International Drought Tolerance Nursery (CIDTN).
- f) Chickpea International Cyst Nematode Nursery (CICNN)
- g) Lentil International Cold Tolerance Nursery (LICTN).
- h) Lentil International Drought Tolerance Nursery (LIDTN).
- i) Lentil International Fusarium Wilt Nursery (LIFWN).
- j) Lentil International Rust Nursery (LIRN).
- k) Faba Bean International Chocolate Spot Nursery (FBICSN).
- l) Faba Bean International Orobanche Nursery (FBION).
- m) Faba Bean International Ascochyta Blight Nursery (FBIABN)

These nurseries contain lines showing tolerance/resistance to the respective stresses and are intended to furnish to cooperators genotypes suitable for targeted growing conditions.

Genotypes in Lentil Drought Tolerance Nursery have been selected for drought escape through early flowering and maturity under the Mediterranean conditions. Genotypes in Chickpea Drought Tolerance Nursery include lines with intrinsic ability to withstand drought.

Seed Quality Nurseries:

Two nurseries of lentil genotypes with red (-MNR) and yellow (-MNY) seed cotyledon with enhanced micro nutrient properties like Iron and Zinc have been prepared for distribution to NARS for the coming season. Also one nursery of improved Faba Bean lines with low tannin content and one yield trial of grasspea with low ODAP have been developed for evaluation in the targeted environments.

Lentil International Micronutrient Nursery -Red Cotyledon (LIMN-R)

Lentil International Micronutrient Nursery -Yellow Cotyledon (LIMN-Y)

Faba bean International Nursery - Low Tannin Content (FBIN-LT)

Grasspea International Yield Trial - Low ODAP Content (GIYT-LO)

Request Form for the 2009/2010 Legume International Testing Program (LITP), ICARDA

Mailing Address

Name of cooperator(s):

Department:

Institute:

Street:

Town/city: P.O.Box: / Zip Code.....

Country : Fax no.:

Tel: no.: Email address:

Shipping Address

Name:

Department:

Institute:.....

Street:

Town/city: P.O.Box: Zip Code.....

Country : Fax no.:

Tel: no.: Email address:

Airport for delivery (with custom clearance facility):

Preferred shipment mode: air-parcel post () or air-freight ()

A phytosanitary certificate is provided with each shipment along with a Material Transfer Agreement (MTA). Please indicate if you also need the following documents:

Certificate of donation: Yes (), No () Invoice: Yes (), No ()

Please, indicate clearly any additional declaration to be stated in the phytosanitary certificate for the requested crop(s). Please, indicate also any eventual shipping instructions and when you wish the requested material to reach you.

Paper field books will be included in your Nursery shipments and if you wish to receive electronic versions of the data field books, please download a copy from our intranet WEB site

http://www.icarda.cgiar.org/NurseriesFieldBook/NurseriesFieldBook_index.htm

Request Form for 2009/2010 Legume International Testing Program (LITP), ICARDA

	<u>Approximate</u> No. entries	<u>area</u> (m ²)	No. of sets requested	Name of the locations
Chickpea				
Elite Nursery Winter (CIEN-W-10)	36	300	.....	.....
Elite Nursery Spring (CIEN-S-10)	36	300	.....	.....
Elite Nursery, Southerly Latitudes-1 (CIEN-SL1-10)	36	300	.....	.....
Elite Nursery, Southerly Latitudes-2 (CIEN-SL2-10)	36	300	.....	.....
Elite Nursery, Latin American (CIEN-LA-10)	36	300	.....	.....
Adaptation trial (CAT)	36	300	.....	.....
F ₃ Nursery, Mediterranean Region (CIF ₃ N-MR-10)	20	800	.....	.....
F ₃ Nursery, Southerly Latitudes (CIF ₃ N-SL-10)	20	800	.....	.....
Ascochyta Blight Nursery (CIABN-10)	40	300	.....	.....
Fusarium Wilt Nursery (CIFWN-10)	40	150	.....	.....
Leaf Miner Nursery (CILMN-10)	40	150	.....	.....
Cold Tolerance Nursery (CICTN-10)	40	150	.....	.....
Drought Tolerance Nursery (CIDTN-10)	40	150	.....	.....
Cyst Nematode Nursery (CICNN-10)	15	100	.....	.....
Lentil				
Elite Nursery, Large seed (LIEN-L-10)	25	120	.....	.....
Elite Nursery, Small seed (LIEN-S-10)	64	350	.....	.....
Elite Nursery, Early (LIEN-E-10)	49	260	.....	.....
Micronutrient Nursery -Red Cotyledon (LIMN-R-10)	20	150	.....	.....
Micronutrient Nursery -Yellow Cotyledon (LIMN-Y-10)	20	150	.....	.....
F ₃ Nursery, Large seed (LIF ₃ N-L-10)	12	80	.....	.....
F ₃ Nursery, Small seed (LIF ₃ N-S-10)	25	150	.....	.....
F ₃ Nursery, Cold Tolerance (LIF ₃ N-CT-10)	10	60	.....	.....
F ₃ Nursery, Early (LIF ₃ N-E-10)	25	150	.....	.....
F ₅ Nursery, Early (LIF ₅ N-E-10)	25	150	.....	.....
Cold Tolerance Nursery (LICTN-10)	16	100	.....	.....
Drought Tolerance Nursery (LIDTN-10)	16	80	.....	.....
Fusarium Wilt Nursery (LIFWN-10)	40	250	.....	.....
Rust Nursery (LIRN-10)	20	150	.....	.....
Faba bean				
Elite Nursery - Rainfed (FBIEN-R-10)	15	300	.....	.....
Improved Segregating Population Nursery, (FBISPN-10)	12	1000	.....	.....
Nursery -Low Tannin Content (FBIN -LT-10)	25	600	.....	.....
Chocolate Spot Nursery (FBICSN-10)	25	300	.....	.....
Orobanche Nursery (FBION-10)	36	450	.....	.....
Ascochyta Blight Nursery (FBIABN-10)	16	200	.....	.....
Grass pea (Lathyrus)				
Yield Trial - High Biomass (GIYT-HB-10)	25	500	.....	.....
Yield Trial - Early (GIYT-E-10)	16	300	.....	.....
Yield Trial - Low ODAP (GIYT-LO-10)	16	300	.....	.....

Questionnaire Form 2009/2010 ICARDA

Please answer the following questions:

Since when have you been participating in this International Testing Program (ITP)?

- 1) Did you find the nurseries useful for your country?.....
- 2) Did you identify or release material for general cultivation from this ICARDA ITP?.....
- 3) If yes, please fill the following table.

Crop	Variety name	Pedigree	Year of release	Special features	No.of Hectares planted to the variety

- 4) Do you run the on-farm trials including ICARDA lines? If so, please list the entries selected, which are in the current on-farm trials.
- 5) Did you find stress nurseries useful for identification of resistant sources in your country? If yes, please indicate the crop, stress and sources of resistance (Line Names) for particular stress.

Crop	Stress	Resistant source (Line names)

- 6) Please, let us know your viewpoints towards improving the International Testing Program.

Kindly return this form along with your duly filled Request form.

Please, if returning by E-mail, send to ICARDA-INT-NURSERY@cgiar.org

Thank you very much for your attention and kind cooperation.