

Dr. Leonardo Velasco

Research Scientist, Oilseed breeding and genetics

Institute for Sustainable Agriculture

National Scientific Research Council (CSIC)

Alameda del Obispo s/n. 14004 Córdoba, Spain

lvelasco@ias.csic.es

EDUCATION

1991 Agricultural Engineer, University of Córdoba, Spain

1996 PhD Genetics, University of Córdoba, Spain

RESEARCH TOPICS

- Novel analytical approaches for evaluation of seed quality traits in plant breeding programmes
- Breeding oilseed crops for modified seed and oil quality
- Broomrape resistance in sunflower
- Breeding for canola-quality Ethiopian mustard
- Breeding energy crops
- Genetic studies
- Molecular genetics
- Main research on the following oilseed crops: sunflower, Ethiopian mustard, safflower.
- Sporadic research on other oilseed crops: rapeseed, camelina, crambe, castor bean, jatropha

SELECTED PUBLICATIONS

Velasco, L., J.M. Fernández-Martínez, and A. De Haro. 1995. Isolation of induced mutants in Ethiopian mustard (*Brassica carinata* Braun) with low levels of erucic acid. *Plant Breeding* 114:454-456.

Velasco, L., J.M. Fernández-Martínez, and A. De Haro. 1996. Screening Ethiopian mustard for erucic acid by near infrared reflectance spectroscopy. *Crop Science*. 36:1068-1071.

Velasco, L., J. M. Fernández-Martínez, and A. De Haro. 1996. An efficient method for screening seed colour in Ethiopian mustard using visible reflectance spectroscopy and multivariate analysis. *Euphytica* 90:359-363.

Velasco, L., J.M. Fernández-Martínez, and A. De Haro. 1997. Use of near infrared reflectance spectroscopy to screen Ethiopian mustard lines for seed weight. *Agronomy Journal* 89:150-153.

Velasco, L., J.M. Fernández-Martínez, and A. De Haro. 1997. Determination of the fatty acid composition of the oil in intact-seed mustard by near-infrared reflectance spectroscopy. *Journal of the American Oil Chemists' Society* 74:1595-1602.

Velasco, L., J.M. Fernández-Martínez, and A. De Haro. 1997. Induced variability for C18 unsaturated fatty acids in Ethiopian mustard. *Canadian Journal of Plant Science*. 77:91-95.

Velasco, L., J.M. Fernández-Martínez, and A. De Haro. 1997. Selection for reduced linolenic acid content in Ethiopian mustard (*Brassica carinata* Braun). *Plant Breeding* 116:396-397.

De Haro, A., J. Domínguez, R. García-Ruiz, L. Velasco, M. Del Río, J. Muñoz, and J.M. Fernández-Martínez. 1998. Registration of six Ethiopian mustard germplasm lines. *Crop Science* 38:558.

Pérez-Vich, B., L. Velasco, and J.M. Fernández-Martínez. 1998. Determination of seed oil content and fatty acid composition in sunflower through the analysis of intact seeds, husked seeds, meal and oil by near-infrared reflectance spectroscopy. *Journal of the American Oil Chemists' Society* 75:547-555.

Velasco, L., J.M. Fernández-Martínez, and A. De Haro. 1998. Application of near-infrared reflectance spectroscopy to estimate the bulk density of Ethiopian mustard seeds. *Journal of the Science of Food and Agriculture* 77:312-318.

Velasco, L., L.M. Martín, and A. De Haro. 1998. Within-plant variation for seed weight and seed quality in white lupin (*Lupinus albus* L.). *Australian Journal of Agricultural Research* 49:59-62.

Velasco, L., and H.C. Becker. 1998. Estimating the fatty acid composition of the oil in intact-seed rapeseed by near-infrared reflectance spectroscopy. *Euphytica* 101:221-230.

Velasco, L., and H.C. Becker. 1998. Analysis of total glucosinolate content and individual glucosinolates in *Brassica* spp. through near infrared reflectance spectroscopy. *Plant Breeding* 117:97-102.

- Velasco, L., A. Schierholt, and H.C. Becker. 1998. Performance of near infrared reflectance spectroscopy (NIRS) in routine analysis of C18 unsaturated fatty acids in intact rapeseed. *Fett/Lipid* 100:44-48.
- Velasco, L., B. Matthäus, and C. Möllers. 1998. Nondestructive assessment of sinapic acid esters in species of *Brassica*: I. Analysis by near infrared reflectance spectroscopy. *Crop Science* 38:1645-1650.
- Velasco, L., B. Pérez-Vich, and J.M. Fernández-Martínez. 1998. A rapid and simple approach to identify different sunflower oil types by means of near-infrared reflectance spectroscopy. *Journal of the American Oil Chemists' Society* 75:1883-1888.
- Velasco, L., F.D. Goffman, and H.C. Becker. 1998. Variability for the fatty acid composition of the seed oil in a germplasm collection of the genus *Brassica*. *Genetic Resources and Crop Evolution* 45:371-382.
- Velasco, L., and C. Möllers. 1998. Nondestructive assessment of sinapic acid esters in species of *Brassica*: II. Evaluation of germplasm and identification of phenotypes with reduced levels. *Crop Science* 38:1650-1654.
- Velasco, L., J.M. Fernández-Martínez, and A. De Haro. 1998. Increasing erucic acid content in Ethiopian mustard through mutation breeding. *Plant Breeding* 117:85-87.
- Goffman, F.D., L. Velasco, and W. Thies. 1999. Quantitative determination of tocopherols in single seeds of rapeseed (*Brassica napus* L.). *Fett/Lipid* 101:142-145.
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- Goffman, F.D., L. Velasco, and H.C. Becker. 1999. Tocopherols accumulation in developing seeds and pods of rapeseed (*Brassica napus* L.). *Fett/Lipid* 101:400-403.
- Grüneberg, W.J., F.D. Goffman, and L. Velasco. 1999. Characterization of yam bean (*Pachyrhizus* spp.) seeds as potential sources of high palmitic acid oil. *Journal of the American Oil Chemists' Society* 76:1309-1312.
- Lickfett, T., B. Matthäus, L. Velasco, and C. Möllers. 1999. Seed yield, oil and phytate concentration in the seeds of two oilseed rape cultivars as affected by different phosphorus supply. *European Journal of Agronomy* 11:293-299.
- Velasco, L., B. Pérez-Vich, and J.M. Fernández-Martínez. 1999. Nondestructive screening for oleic and linoleic acid in single sunflower achenes by near-infrared reflectance spectroscopy (NIRS). *Crop Science* 39:219-222.
- Velasco, L., C. Möllers, and H. C. Becker. 1999. Estimation of seed weight, oil content and fatty acid composition in intact single seeds of rapeseed (*Brassica napus* L.) by near-infrared reflectance spectroscopy. *Euphytica* 106:79-85.

- Velasco, L., F.D. Goffman, and H.C. Becker, 1999. Development of calibration equations to predict oil content and fatty acid composition in *Brassicaceae* germplasm by near-infrared reflectance spectroscopy. *Journal of the American Oil Chemists' Society* 76:25-30.
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- Velasco, L., and F.D. Goffman. 1999. Chemotaxonomic significance of fatty acids and tocopherols in *Boraginaceae*. *Phytochemistry* 52:423-426.
- Velasco, L., B. Pérez-Vich, and J.M. Fernández-Martínez. 1999. The role of mutagenesis in the modification of the fatty acid profile of oilseed crops. *Journal of Applied Genetics* 40:185-209.
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- Velasco, L., J. Domínguez, J. Muñoz-Ruz, B. Pérez-Vich, and J. Fernández-Martínez. 2003. Registration of Dw 89 and Dw 271 Dwarf Parental Lines of Sunflower. *Crop Science* 43:1140-1141.
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