



Registration of “Sezgin” Chickpea (*Cicer arietinum* L.) Variety

“Sezgin” is a chickpea (*Cicer arietinum* L.) variety developed and registered in 2019 by Eastern Mediterranean Agricultural Research Institute (EMARI) of Turkey. The variety is well adapted to winter conditions of Mediterranean, Aegean and South East Anatolia Region of Turkey. “Introduction Breeding Method” was used to develop the variety from ICARDA’s FLIP0342C source material.

Plants of Sezgin variety are well adapted to mechanised harvest due to erect growth habit, 37-70 cm plant height and 14-38 cm first pod height. Time to flowering is 63-114 days and time to physiological

maturity is 107-178 days. Grain is beige colored and cornered which has 34-46 g 100-grain weight. Water absorption capacity is 0.38-0.41 ml/grain; water absorption index is 1.02-1.06%; swelling index is 2.28-2.38%; eight mm sieve value is 42.1-55.8%; Protein ratio is 23-24%. Time requirement for cooking is 55-59 minutes.

Sezgin variety yield potential is high however; high yield can be obtained if environmental conditions are favourable and good agronomic practices are applied; Average grain yield of field tests is 2.7 t/ha with tolerance to *Ascochyta* blight.

Figure 1. Plant growth habit, grain and pod morphology of the Sezgin variety (Original).



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References and Notes

- Anonymous (2019). Seed Registration and Certification Center Directorate Report, Ankara.
- Mart D, Öktem G, Türkeri, M, Yücel D, Karaköy T, Dumlu SE, Atmaca E and Çankaya N (2019). Evaluation of Yield and Morphological Characteristics of Registered Chickpea (*Cicer arietinum* L.) Varieties in Different Regions, World Conference on Sustainable Life Sciences (Wocols, Science for Life), 30th June-07th July 2019, Budapest, Hungary (Oral presentation)
- Mart D, Öktem G, Can C and Özyiğit İ (2019). *Ascochyta* Blight (*Ascochyta rabiei*) Tolerance of Registered Chickpea (*Cicer arietinum* L.) Varieties at Southeastern Anatolia Region, World Conference on Sustainable Life Sciences (Wocols, Science for Life), 30th June-07th July 2019, Budapest, Hungary (Oral presentation)

Registration of “Caner” Chickpea (*Cicer arietinum* L.) Variety

“Caner” is a chickpea (*Cicer arietinum* L.) variety developed and registered in 2019 by Eastern Mediterranean Agricultural Research Institute (EMARI) of Turkey. The variety is well adapted to winter conditions of Mediterranean, Aegean and South East Anatolia Region of Turkey. “Selection Breeding Method” was used to develop the variety from single plant selected from ICARDA’s segregating 05TH21C source material.

Plants of “Caner” variety are well adapted to mechanised harvest due to erect growth habit, 33-64 cm plant height and 9-29 cm first pod height. Time to flowering is 61-113 days and time to physiological

maturity is 103-180 days. Grain is beige colored and round-cornered which has 36-48 g 100-grain weight. Water absorption capacity is 0.44-0.46 ml/grain; Water absorption index is 1.05-1.10%; Swelling index is 2.36-2.37%; Eight mm sieve value is 53.8-56.0%; Protein ratio is 22-26%. Time requirement for cooking is 44-51 minutes.

Caner variety yield potential is high however; high yield can be obtained if environmental conditions are favourable and good agronomic practices are applied; Average grain yield of field tests is 2,7 t/ha with tolerance to *Ascochyta* blight.

Figure 1. Plant growth habit and grain and pod morphology of the Caner variety (Original).



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References and Notes

- Anonymous (2019). Seed Registration and Certification Center Directorate Report, Ankara.
- Mart D, Öktem G, Türkeri M, Yücel D, Karaköy T, Dumlu SE, Atmaca E and Çankaya N (2019). Evaluation of Yield and Morphological Characteristics of Registered Chickpea (*Cicer arietinum* L.) Varieties in Different Regions, World Conference On Sustainable Life Sciences (Wocols, Science for Life), 30th June-07th July 2019, Budapest, Hungary (Oral presentation)
- Mart D, Öktem G, Can C and Özyiğit İ (2019). *Ascochyta* Blight (*Ascochyta rabiei*) Tolerance of Registered Chickpea (*Cicer arietinum* L.) Varieties at Southeastern Anatolia Region, World Conference on Sustainable Life Sciences (Wocols, Science for Life), 30th June-07th July 2019, Budapest, Hungary (Oral presentation)

Registration of “Deren” Pea (*Pisum sativum* L.) Variety

“Deren” is a pea (*Pisum sativum* L.) variety developed and registered in 2020 by Eastern Mediterranean Agricultural Research Institute (EMARI) of Turkey. The variety is well adapted to winter conditions of Mediterranean, Aegean and South East Anatolia Region of Turkey. “Selection Breeding Method” was used to develop the variety from single plant selected from local population source materials.

Plants of “Deren” variety are well adapted to mechanised harvest due to 70-127 cm plant height and

12-37 cm first pod height. Time to flowering is 37-92 days and time to physiological maturity is 102-138 days. 100-grain weight is 14.0-18.6 g. Water absorption capacity is 0.25 ml/grain; water absorption index is 1.26-1.49%; swelling index is 2.41-2.73%; eight mm sieve value is 50.8-51.8%. Protein ratio is 26-27%. Time requirement for cooking is 50-54 minutes.

Average grain yield of “Deren” variety in field tests is 2.2 t/ha.

Figure 1. Plant growth habit and grain and pod morphology of the Deren variety (Original).



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References and Notes

- Anonymous (2020). Seed Registration and Certification Center Directorate Report, Ankara.
- Mart D, Türkeri M and Yücel D (2018). Pea (*Pisum sativum* L.) Breeding Studies and Variety Registration in Cukurova Region, 8th Seed Congress, 10-13 September 2018, Niğde, (Oral presentation)
- Mart D and Türkeri M (2019). Investigation of Yield and Yield Properties of Edible Pea (*Pisum sativum* L.) Genotypes in Eastern Mediterranean Conditions, Turkey 13th National Congress and 1st International Agronomy, 01-04 November 2019 Antalya (Oral presentation).

Registration of “Akçalar” Hungarian Vetch (*Vicia pannonica* Crantz) Variety

Akçalar is a Hungarian vetch (*Vicia pannonica* Crantz.) variety developed by Transitional Zone Agricultural Research Institute and registered in 2019. Selection breeding method was used in breeding studies.

Morphological characteristics of the variety are as follows; ratio length/width of leaflet of second primary leaf in seedling is low, intensity of anthocyanin coloration on the base of the stem in seedling is weak, intensity of green color of foliage in plant is medium, time of beginning of flowering in plant is medium, hairiness of upper internodes in stem is strong, anthocyanin coloration of leaf axil in stem is medium, shape of tip of leaflet (on middle third of plant) in leaf is straight, width of leaflet in leaf is medium, anthocyanin coloration of nectaries in stipule is absent or weak, color of standard in flower is white, hairiness in pod is strong, length in pod (excluding beak) is medium, width of pod is medium, length of beak in pod is medium, number of ovules in pod is medium, seed weight is medium, seed shape is slightly irregular,

Ground color of testa in seed is greyish green, brown ornamentation in seed is speckles and blotches, extension of brown ornamentation in seed is large, blue-black ornamentation in seed is speckles and blotches, extension of blue-black ornamentation in seed is small, color of cotyledons in seed is orange.

Growth habit of Akçalar is erect and it grows to about 67-70 cm depending on the growing conditions. Akçalar is grown for herbage and seed. Green herbage yield, dry herbage yield, seed yield on average are 2740 kg da⁻¹, 690 kg da⁻¹, 140 kg da⁻¹, respectively. Quality characteristics of Akçalar as follows; thousand grain yield of it's seed is about 34.8 g, dry matter ratio is 91.83% (in herbage) and 92.08% (in seed), crude protein ratio is 18.92% (in herbage) and 28.01% (in seed), crude cellulose ratio is 26.22% (in herbage) and 6.5% (in seed), NDF (in herbage) is 44.21%, ADF (in herbage) is 33.06%, ADL (in herbage) 5.41%, RFV (relative feed value in herbage) is 132.9. Akçalar is resistant to pest and diseases. This Hungarian vetch variety is a winter crop for Central Anatolia and Transitional Zone and similar locations.

Figure 1. Flower and grain of the Akçalar variety (Original).



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References and Notes

Anonymous (2019). Registration Experiment Report,
Variety Registration and Seed Certification
Center, Ankara

Registration of “Karaman 2016” Dry Bean (*Phaseolus vulgaris* L.) Variety

“Karaman 2016” dry bean variety was developed by Transitional Zone Agricultural Research Institute and registered in 2016. One of the parents of Karaman 2016, 4F-675-1 coded line has a coarse-grained, climbing plant habits, but its tolerance to viral diseases is not good. In order to increase the line’s tolerance to viral diseases and at the same time maintain the current grain size, hybridization was performed with the resistance source 4F-2833. From the obtained 4F-675-1 / 4F-2833 pedigree population single plants were selected using single plant selection method. In order to transfer the bacterial halo blight (*Pseudomonas syringae* pv. *phaseolicola*) disease resistance gene and earliness character to the 5th selected plant (4F-675-1/4F2833-5), it was hybridized with the foreign disease-tolerant Weihing variety in 2004. In 2009, single plant selection was made in the F₅ generation and in 2011 this material was taken for yield trials.

Karaman 2016 variety is semi-climbing (65-81 cm) and coarse grain type. Karaman 2016’ grain is larger

than the other climbing type varieties’ grain. The number of days of flowering varies between 38-69 days and the number of physiological ripening days between 106-114 days.

Average yield in the registration trials was recorded 180.6 kg / da. In breeding trials, the highest yield obtained from Karaman 2016 is 350 kg da⁻¹. It is recommended for dry bean cultivating areas.

The variety, Karaman 2016 has a medium tolerance to bacterial diseases, and it attracted attention with its tolerance to root rot disease in the registration trials.

100 seed number, hydration capacity, swelling index, cooking time and protein rate of Karaman 2016 are between 35.2-42.0 g, 0.42-0.47 g/grain, 2.06-2.41%, 35-41 min. and 21.3-23.5%, respectively, and its cooking flavor is quite good. Breeder material and gradual seed production are conducted by TZARI.

Figure 1. Pod, plant and grain of the Karaman 2016 variety (Original).



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References and Notes

Anonymous (2016). Variety Registration and Seed Certification Center Directorate Report, Ankara

Registration of “Sabribey” Barley (*Hordeum vulgare* L.) Variety

Sabribey is two rowed barley (*Hordeum vulgare* L.) variety (Figure 1) developed by Transitional Zone Agricultural Research Institute (TZARI) and registered in 2019. Sabribey cross is CWB117-5-9-5/ST5819//Kalaycı97 with YEA4193-0E-0E-0E-1E-0E pedigree. Crossing was made in 1998 and yield test began in 2004-2005 growing year.

Similar to cv. İnce04 and cv. Ünver, cv. Sabribey is two rowed cultivar and its spike is moderately long. Depending on the growing conditions, plant height varies between 85 and 100 cm. Since, Sabribey is medium early and has high adaptation ability, it can be grown all Medium Anatolian Region and Transitional Zone of Turkey. Thus, high yield can be obtained from both fertile and less fertile soils. Sabribey shows high tolerance to net blotch (*Pyrenophora teres*) and scald *Rhynchosporium commune* (formerly known as *R. secalis*) diseases.

When appropriate environmental conditions and good agronomic practices are provided, yield potential is high. The highest grain yields were 6254 and 6716 kg ha⁻¹ in Eskişehir location during 2017-2018 growing years, respectively. Average yield of the variety was 4600 kg ha⁻¹ in Eskişehir conditions. Suggested planting rate is between 400-450 seeds/m². Malting quality is good. Quality results of indicated that test weight 65.5 kg, thousand kernel weight 39.5 g, protein content 13.4%, sieve value 76.2%, hull content 9%, extract 75.9, extract difference 7%, friability 28.0% .

Pre-Basic and Basic seeds of the Sabribey cultivar have been produced by TZARI. Certified seed of the Sabribey are produced by both private companies and state farms.

Figure1. Spike and grain of the Sabribey cultivar (Original).



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References and Notes

- Anonymous (2017). Transitional Zone Agricultural Research Institute Annual Report, Eskişehir, Turkey (in Turkish)
- Anonymous (2019). Malting Barley in Dry Condition Registration Report in Middle Anatolian Region, Ankara, Turkey (in Turkish)

Registration of “NKU Asiya” Bread Wheat (*Triticum aestivum* L.) Variety

NKU Asiya is a winter bread wheat (*Triticum aestivum* L.) variety developed using combination breeding by Tekirdağ Namık Kemal University, Agricultural Faculty and registered in 2018. The pedigree of NKU Asiya is Selianka/Krasunia and its history TURCBWW05TD0065-099TD-099TD-099TD-015TD-0TD. Crossing was made in 2005 and grain yield test began in 2011-2012 growing year. The spike of the NKU Asiya variety is moderately long and density, white, awned. The flag leaf is twisted, dark-green, and with medium glaucousity. Grain is oval, semi hard and red color. NKU Asiya is a mid-tall variety, similar to Flamura 85 and Esperia varieties. Plant height is between 85 and 95 cm depending on the growing conditions. NKU Asiya variety is a winter type, mid-early, resistant to winter hardiness, good tolerant to drought, high ability of tillering and trashing, and since its wide adaptability, it can be grown safely not only in the Thrace-Marmara Region, but also in other wheat production areas of our country.

NKU Asiya variety is tolerant to powdery mildew *Blumeria graminis* f. sp. *tritici* (Syn. *Erysiphe graminis*) and to stripe rust (*Puccinia striiformis* f. sp. *tritici*) and moderate susceptible to leaf rust (*Puccinia triticina*). It shows high yield stability ranging from 6.3-8.4 t ha⁻¹ in Thrace Region, however If environmental conditions are appropriate and agronomic applications

are apply well, it has the ability to increase grain yield even more. The highest grain yield was determined in Tekirdağ location with mean value of 9.645 t ha⁻¹ in 2012-2013 growing season. Suggested sowing rate is 500 seeds m². Depending on the soil type and structure and soil analysis results, it is recommended to apply 70 kg ha⁻¹ pure phosphorus and 170-180 kg ha⁻¹ pure nitrogen.

Bread-making quality is good. The mean values of some grain qualities of the official variety testing experiment (2016 and 2017) are; test weight 76.7 ± 2.1 kg hl⁻¹, thousand kernel weight 35.4 ± 3.0 g, protein content 13.3 ± 1.3%, water absorption 56.1 ± 1.7% and Zeleny sedimentation 50.1 ± 11.1 ml, alveograph energy value (W) 202.4 ± 16.5 10⁻⁴ joule. The highest quality values such as thousand grain weight, test weight, protein content, gluten ratio, gluten index, Zeleny sedimentation value, alveograph energy (W) and flour yield for the variety were analyzed with averages of 44 g, 79.1 kg/hl, 15.7%, 44.0%, 87.5, 68 ml, 230 joule and 71% respectively, in 2012-2013 growing season.

Pre-Basic and Basic seeds of the NKU Asiya variety have been produced by Tekirdağ Namık Kemal University, Agricultural Faculty. Certified seed of the NKU Asiya variety are produced by a private seed company.

Figure 1. Spike and grain of the NKU Asiya variety (Original).



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References and Notes

Anonymous (2018). Cool Season Cereals, Variety
Registration Report, Ankara (in Turkish).