

January 18, 1971

Dr. Donald R. Nielsen
Associate Dean of Research
University of California
Davis, CA. 95616

Dear Don:

I am pleased to inform you that an experimental rice variety designated as 5734eS-1-4 is, in the opinion of our plant breeders, ready for certification.

In order to give recognition to the three cooperating agencies, it was previously agreed that new varieties would be jointly released by the U.S.D.A., the University, and the Foundation. The data regarding this variety is enclosed for your review. If the University and U.S.D.A. agree that this variety should be released, we will prepare the required form requesting certification.

Before applying for certification the variety should be named. In 1968 the Foundation's Board accepted the following naming system. That the letter CS be used to designate California Station, the letters are to be followed by an S (short grain), M (medium grain) or L (long grain) to designate grain type which will be followed by a release number. For example, CS-M3 is a medium grain variety - third release. Dr. Merton Love, who was in charge of the research program, concurred with this system.

It has been suggested that a specific release number not be used to designate more than one variety. This method would eliminate the risk of a person mixing varieties because he read only the number without noticing the designation of grain type. For example, the number 3 would not be used on a short

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or long grain because it has been used on a medium grain (CS-M3). Your comments regarding the naming procedure will be appreciated.

If the three agencies concur that this variety should be released, an official description of the variety will be developed for signatures of personnel representing the three agencies.

I will look forward to hearing from you regarding the University's position on the release of 5734e5-1-4.

Sincerely,



Morton D. Morse
Station Director

MDM/vb

cc: Frank G. Parsons
J. Weil Rutger
Milton D. Miller ✓
A. A. Grigarick
C. Roy Adair
L. O. Drew

DESCRIPTION AND PERFORMANCE OF THE EXPERIMENTAL RICE VARIETY
5734e5-1-4 1/

H. L. Carnahan and J. J. Mastenbroek 2/

January 18, 1971

A. ORIGIN AND BREEDING PROCEDURES:

5734e5-1-4 is a pure line selection from the cross (487A1-12 X 'Caloro' = C.I. 1561-1) made in 1957 at the California Cooperative Rice Research Foundation's Rice Experiment Station near Biggs, California, by J. R. Thysell 3/. The parent, 487A1-12 was a smooth selection from the cross (Cl-1-1-2 sm. X Caloro). Cl-1-1-2 in turn was selected from the cross (Caloro X Smooth No. 3, unrecorded origin). Selection and purification to the present were also carried out at the Biggs Station.

B. ADAPTATION:

5734e5-1-4 has performed well in all areas of California where tested. It should do well in all areas where Caloro is being grown.

C. VARIETAL DESCRIPTION:

5734e5-1-4 is a smooth-grain (pearl) variety having short awns, and glabrous lemma, palea and leaves. Usually a few hairs are found on the lemma bow. The 1000-grain weight is about 6% less than that of Caloro. Milled rice of 5734e5-1-4 has slightly less white belly than Caloro. Heights of 5734e5-1-4 and Caloro are similar. 5734e5-1-4 heads either at the same time or 2 to 3 days earlier than Caloro. As many as 15 plants per acre of an early heading mutant otherwise similar to the variety have been noted in 5734e5-1-4.

The chemical properties, iodine value and alkali reaction, for 5734e5-1-4 were 23 and 6.3 as compared to 22 and 7.0, respectively, for Caloro. A taste-panel comparison of the cooked rice of 5734e5-1-4 and Caloro revealed no preference for one over the other.

D. YIELD DATA:

5734e5-1-4 has been compared with Caloro in 15 yield trials having from 4 to 11 replications since 1965 and representing a cross-section of the rice area in California. In all trials

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- 1/ Cooperatively developed by the California Cooperative Rice Research Foundation, Inc., California Agriculture Experiment Station and the Crops Research Division, Agricultural Research Service, U. S. Dept. of Agriculture.
 - 2/ Director of Plant Breeding and Plant Breeder, respectively, Rice Experiment Station, Biggs, California.
 - 3/ Research Agronomist, Crops Research Division, Agricultural Research Service, U.S.D.A., formerly at the Biggs Station.

5734e5-1-4 yielded higher than the check variety Caloro or 'Calrose'. The average yield advantage of 5734e5-1-4 was 7.3%. Individual test results were as follows:

<u>YEAR</u>	<u>LOCATION</u>	<u>TYPE OF TEST</u>	<u>REPLICA- TIONS</u>	<u>YIELD OF 5734e5-1-4 IN % OF CALORO</u>
1965	Biggs <u>4/</u>	12' Row	4	101.7
1966	"	12' Row	4	113.0
1967	"	8.5' X 50'	4	103.6
1967	"	4' X 4'	6	117.0
1968	"	8.5' X 50'	6	100.6
1968	"	10' X 2 Rows	4	113.1 <u>5/</u>
1968	Yolo Co.	16' X 40'	5	115.5
1968	Butte Co.	16' X 40'	5	104.9
1968	Fresno Co.	8' X 76'	5	107.5
1969	Yolo Co.	16' X 40'	5	102.5
1970	Biggs <u>4/</u>	4' X 6' & 8.5' X 40'	10	104.8
1970	Davis	5' X 6' & 7' X 40'	11	109.3
1970	Fresno Co. (W.S.F.S.)	5' X 6' & 7' X 40'	11	105.7
1970	Sutter Co.	5' X 6'	8	101.9
1970	Yolo Co.	5' X 6'	8	108.3
Average of 15 comparisons-----				107.3

4/ At the Rice Experiment Station, Butte County.

5/ Calrose rather than Caloro was the check variety in this trial.

E. PROCEDURE FOR MAINTAINING PURE SEED:

Head-row, Breeder and Foundation seed of 5734e5-1-4 will be maintained by the California Cooperative Rice Research Foundation, Inc., P. O. Box 306, Biggs, California, 95917.

F. AVAILABILITY PENDING JOINT APPROVAL TO RELEASE:

Foundation seed will be produced in 1971 and Registered seed in 1972.