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Scott II-27—58,001—4-11-46.

EDH (1948) Department.

MS SERIES.

G.O. NO. 595 Edn

Dated 20-3-48

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[Despatch Abstract.]

~~Bragers Scholarships~~ Misc. papers
1947-48

Tech. Edn Overseas - 1945 46 - M. & Ch. Visvanatha Rao - Extension in the period of Scholarship - granted - papers - Recorded.

It is hoped that the Government of Madras will also consider the prop. favourably and communicate their decision to this Ministry urgently.

I have the honour to be,
Sir,
Your most obedient servant,

DK Hnigaran
for SECRETARY.

Copy of letter No. G.401 dated 20th November 1947 from Educational Liaison Officer, Indian Embassy, Washington To The Ministry of Education, Government of India, New Delhi.

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Please refer to the file of 1945 Madras Government candidate, Mr. G.V. Rao.

This candidate, as you are no doubt aware, was transferred from the United Kingdom to this Country. I have asked him to let me have a detailed report of his activities which when received, will be forwarded to you.

In the meanwhile I enclose copies of periodic reports which I found in his file, and which may be of interest toyou.

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COPY

STUDY OF DEALER SALESMAN COURSE FOR HARVESTER THRESHERS.

Study of the methods employed in modern streamlined methods of selling. Course of Instruction for the 123-Sp and No.123-Sp Special Harvest er Thrsecher-

Outline of Presentation- dvantages of Self-Prepelled Harvester Thresher-orward Vision and Finger tip control-Enclosed Platform with Hydraulic Life-Power Driven six-bat reel with adjustable pitc to assure even feed to the cylinder that is essential to good harvesting-under shot slatted conveyor to cylinder to comb out the cut material so that it si fed by the stripper beater to the cylinder in an even stream-Pickup attachment in operating in flax-Full width rasp-bar cylinder to meet various operating conditions-Advantages of the adjustable concave grate-4-Section all-steel straw rack- Full length Grain pan, Chaffer, and adjustable Chaffer extension-Cleaning shoe and its utility in giving a second cleaning action.

Course of Instruction fo Combine Harvesting-

Explanation of the principle and utility of Combine Harvesting-Basic Operations of the Harvester Threesher-
1. Cutting the standing crop. 2. Feeding the cut grain to the Cylinder.
3. Threshing or removing the grain from the head or seed from the pod.
4. Seperating or winnowing grain from the mass of straw and coarser material. 5. Cleaning th grain from the remainingchaff and finer residue.

Study of the parts involved in the Cutting Operation-Divider-Cutter Bar-Cutting Height-Reel-Reel Adjusements-Adjustable Reel adjustment to permit control of the reel height from the tractor seat means of a crank-Four-bat reel-

Study of parts involved in Feeding Operation-Scoop type feeder-augerscoop type feeder-Lower feeder conveyor-Upper feeder conveyor Pickup attachement.

Parts involved in the Threshing Operation- Cylinder and types of cylinders Cylinder speed-Verable speed drive-Cylinder attachment Special Cylinder attachment-Concave and its importance- Danger of over threshing - Feed plate- results of too close threshing-Points involved in the seperating Operation- Concave and finger grates - cylinder boater- adjustable check flap - straw rack Grain Pan and Return Pan-
Cleaning Operation- Chaffer-Controlled air blast-chaffer extensi tailings-cleaning shoe and cleaning fan - Gran Tank- Two-way bagger- Points to remember in combining-Crop must be in threshabl condition- Constant speed of Gylinder Fan and Straw Rach and Cleaning shoe essential- Speed of the Concave-

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Course of Instruction for the No.52-R Harvester Thresher - 5-Foot Combine-

Its gran and seed saving features- Its operating conveniences- Power driven Reel- Even Feeding - Variable speed full Width Rasp-bar Cylinder-Large Capacity Concave and Finger Grate seperation- All Steel Straw Rack and Full Length Grain- Double cleaning action at the Chaffer and Shoe-Adjustable cleaning Fan with curved bledes Large capacity grain Tank-Roomy beagging platform and other special features-

STUDY OF DEALER SALESMAN COURSE FOR HARVESTER THERESHERS (CONTD)

Course of study for the No. 62 six-foot harvester Thresher-

Suitable for all grain and seed growing sections where a 6 foot combine is suited to acreage requirements-It is the only combine of its kind which has a concave with adjustable openings- Auger-scoop feed which enables handling of straw without wrapping or bunching-Variable speed Rasp-bar cylinder and the adjustable concave-Full length grain pan-auxiliary engine which can be ordered to operate mechanism at any constant speed-

Picking attachments is available as a special equipment study of the3-point seperation-advantage of the adjustable chaffer extension-action of the straw rack.

Course of study of the No. 122 Harvester Thresher-

Study of the features of the Open-end auger-Advantages of the variable speed cylinder-principle of action of under-shot conveyor One man operation with Tractor seat -Enclosed platform with Hydraulic Lift Control-Variable speed control and adjustable concave- 6-cylinder engine with self-starter- Open-end auger and undershot conveyor-12 foot cut-

Course of study of the No. 51 Hillside 14 Foot Thresher-

Features for hillside harvesting-rugged construction-self levelling cleaning unit-raddletype straw carrier- and an efficient power-levelling mechanism-study of the mechanism of th raddle type straw carrier-Action of the power levelling device- Advantage of a floating type haeader-

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OBSERVATIONS MADE WITH THE INTERNATIONAL HARVESTER INPLEMENTS.

McCormick Deering Tractor Manure Spreader-No.200 F-

Its utility to handle fresh fluid manure-Study of its mechanical construction, adjustments and operation- how to load-adjusting the apron chain-speed of apron-chain raising-study of the feed device-upper and lower cylinders-function of the spiral-chain raising shield-field cam shield and wheels-principles involved in setting up-

McCormick Deering Training Lime Spreader-

Points to note in lubrication-opeation and maintenence-precautionsin operation-function of agitator in the hopper-assembly of axle-fans and countershaft-hitch extensions-hopper-maintanance-main frame and wheels.

Study of installation of and Operation of the TD-9 Bycyrus Erie Bull Grader-

Principle of Hydraulic Operation of Bucyrus Erie Bull-Graders and Dozers on International T-6; T-D-6; or TD-9; Trace-Tractors- Hydraulic control system and its study;-

Installation of Valve and Tank
Installation of Front Pump
Installation of rear pump
Hand Lever, Quadrant, and reach Rod
Piping - Front pump to valve and reae pump to valve
Piping from Valve to cylinders and to scraper units.

Function of Hydraulic Control Unit-how to start the Unit-Causes of trouble and their remedy-adjustments of control lever-air leaks - oil level-load con rol valve-Points to note for proper maintenance of the unit.

Maxx Fermall Cub Tractor with Cub 22 Mower-

Study of setting up maintenance and operation-Lubrication- Adjusting thedriver mechanism-Tilting the cutter bar and register of the Knife-Lead or cutter bar allignment- Knife clips and cutter appartus-The Height of cut and points to note in cutting close to ground and in passing over stumps orstones and in turning around corners- fuction of the grass-board-attaching and removal of the Pitman-Attaching the cutter bar and transportation-study of mechanism of master con rol lever and front reck-shaft-study of flywheel shaft assembly-study of drag bar inner shoe and gag lever assembly-study of drive pulley, pullet belt and pulley shield assembly.

McCormick Deering Cub-151-Disc Plow-

26" d sk with average width of cut of 10" and a depth of approx 8" its utility for small acreages-Lubrication and importance of removing the varnish-functions of the scraper, rear furrow wheel, disc and chilled type disc bearing and timken roller type bearings-Rear adjusting lever levelling and precautions in proper aligmentof wheels-assembly of axles, scrapers, steering links and bearings:-

McCormick Deering Plain Double run Feed Grain rills-

Study of setting up,operation and maintenance-of Hoe Zigzag bars-axles and wheels-hopper-study of mechanism of and installation of grain drive unit- Hand measure and hoe drills- Disc and shoe drills-helper string device-poles and horse hitches-seat attachment-shoe drills- furrow oneners-study of grass seed attachment ment- rear delivery tubes-center foot borad attachment- end foot borad attachment-full length foot board attachment- Wheel scraper attachment-hand lift attachment and center lever-study of power lift attachment-study of grain agitator attachment-

Adjustments and Operation-
Depth of seeding and how to adjust it-single disc attachment-double disc attachment-Helper spring device adjustment-In-and Out of Gear adjustments-Lift and Pressure adjustments -

Precautions and somedeny's in operating the Grain Drill.

McCormick Deering Side Delivery Rake No. 10*-

Its utility in handlinghay gently-in preventing shattering and thus saving of nutritional values of the leaves-levelling the reel-tension of the floating reel-reel lift control- proper alignment of reel drive chain-setting up- main frame-wheels, lifting jack and hitcj, plate-reel hinge-reel shaft, eccentric, and reel plates, drive knuckle and chain-construction and attachment of hydraulic cylinder hoses, rope and rop guideshitch connection and cylinder hoses-

McCormick Deering Tractor Manure Spreader No. 100-

Setting up, maintenance and operation- setting up of-apron arch, axle, rear apron shaft - beater- chain raising device-draw bar-feed device-front levers and draw bar, - rear apron shaft-rearend arch and shields- spiral, upper and lower beater-

Adjusting the drag apron-chain adjusting adjustment- speed of apron-instructions on how to operate- how to load-p oints to note for good care and lubrication of the manure spreader-

Assignments-

1. Study of Blue Ribbon Course of Farmall H-Unit and Power-Unit.
2. Study of Blue Ribbon on Farmall A and AV Tractors and U-2 Power Unit-
3. Study of Instruction Course of Dealer Salesman for the Harvester Threshers-

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OBSERVATIONS MADE DURING TRAINING IN THE STUDY OF INTERNATIONAL HARVESTER IMPLEMENTS IN THEIR UPKEEP AND MAINTENANCE AND CONSTRUCTION.

Study of the Farmall CUB- Its utility for small farms-its suitablity to conditions in India-precision built engine-outstanding fuel economy -study of the high compression combustion chamber-pressure lubrication -thermo-syphon lubrication system-good ignition and other features . Study of matched quicj change implements-universal mounting frame-master control for all implements-moldboard 2-way Plow-Disc Plow-Disc harrow-1 row planter-4-row vegetable planter and cultivator-Mower-been cultivator-their mechanical features and attachments to the CUB-

Study of general line of Tractors-

Farmall A- 6 to 7 acres a day in average soil- sheel tread 40 to 68 ins Farmall H-can pull 2-14 inch plows in normal conditions-can cultivate about 35 acres of corn with a 2 row cultivator-
Farmall M-for largere acreage or difficult soil conditions-
Farmall CUB- for small acreages and an all-purpose cute set-international Crawler Tractors.

With Deisel or carburettor type-5 types-small TD-6 to large Powerful TD-24-offer e ceptional good tractive capacity for use in soft yielding soil or high terrain where whell-type tractors are not suitable.

McCormick-Deering Orchard and Grove Tractors-

2 functonall streamlined types were offered- O-4- and O-6-no projections or crevices from radiator to drasbar

Study of McCormick Deering Trailer Mower No. 9:-

Study of setting up and operation-maintenance-attaching cutterbar-connecting pitman and knife-method of assembling tilting lever and quardran-gag-liver hinge-attaching grassboard-attaching trailer-mower hitch.

Study of principal points of lubrication- all bearings and

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moving parts- gears must run in oil-pitman box and lower and frequentl
daily lubricate clutch shifter-shoe hinge pins and bgs-gag lever-
cam and pivote-shoe hinge on coupling bar-main wheels.

Study of adjustments and operation-knife clips-cutting apparatus-gear
shifting-gag link adjustment-tilting guards-height of cut-cutting
close to ground-excessive draft-passing over stones and bumps-turning
corners-transporting - ligting spring-grass board-removing
wheels-

Study of McCormick Deering Self-Dump Hay Rake Type M-

Study of adjustments operation and maintenance-trip rod
rods and stops-height of pole and thills-rake wheels-thill frame-rake
teeth-cleaner rods on cleaner bar angle-slide tongue tie rod clips with
eye bolt on cleaner rods-attachment of solid tongue to hay rake-study
of remote control trip attachment for 10,11,121 and 14 Ft rakes-tractor

Study of McCormick Deering Improved All Purpose Farm Truck.

Study of mechanical construction, assembly and setting up-
chasis assembly- doubletrees-neckyoke-hitches-reach pipe extension-
stay pipes and chains-steel tongue-stub tonue tractor hitch-supple-
mental bolster attachment- thrills-

Study of sub-Soilers-

Their utility for breaking up hardpan, digging drainage ditches
and heavy study plowing of soil below normal tillage depth-study
of mechanical details of construction, assembly and maintenance-
power lift-hardened steel axles running on removable hardened steel
sleeves- Types model KU-for adobe clay suitbale around Santa Barbara
county specially to subsoil around 22" deepfor lima beans-
supplementary attachments like the beet wings, for beet foliage and
moles for mole-drainage 1-2-3-subsoiler standards-

Demonstrations attended-

Demonstartion of the Farmall CUB for S.B. County.
Demonstartion of Atlas Scrapers run with Harvester
Tractors in the ranch in the Santa Ynez Valley in
S.B. County.

Copy of letter No. G.401/45 dated 11th December 1947 from the Deputy Educational Liaison Officer, Washington, to the Ministry of Education, Government of India, New Delhi.

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In continuation of my letter of even number dated 28th November 1947 I enclose a rreport received from the 1945 Madras Candidate, Mr. ~~xxx~~ G.V. Rao, together with a copy of a covering letter from Mr. Rao to me. I am not retaining a copy of this report because only one copy was submitted by him. I have, however retained the original of his letter dated 28th November 1947.

I have gone through the report and I am of the opinion that the candidate has summed up his activities in this country rather well.

You will observe in para four of his letter ~~xxxxxx~~ to me that he talks of being awarded a Fellowship. I am writing to him to enquire if he got any renumeration while he has been Fellow.

According to our records, the candidate arrived in this country on 27th March 1946, after spending about 2½ months in the U.K. I should like you to let me know, in consultation with the Provincial Government whether his training should be ~~xx~~ continued until April 1948, as already approved previously by this Department, or you want him to cut short his trainingand return to India.

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DETAILED REPORT OF PRACTICAL TRAINING OF G.V.RAO.

Practical Training with Messrs Ransomes Sims & Jeffries,Ltd, Ipswich,England while arrangements were being made for Training in the U.S.A.

Underwent Practical Training in the Design,Manufacture and Use of Agricultural Implements in their following departments;-

1. Plow Works . 2. Thresher Works. 3. Lawn Mower Works.
4. Disc Harrow and Disc Plow Works. 5. M.G.Tractor Works and other Departments.

In view of the fact that this was an arrangement till suitable facilities were arranged in the United States the Training was arranged to get just an overall picture of the various Implements.

Practical Training with the International Harvester Co of Chicago, Illinois, from April 1947 to June '47-

Practical Training in the actual operation of all the various Tractors, and other implements like the plows, harrows, discs, seed drills, harvesters, threshers, combines and other agricultural machinery of the International Harvester Co, at their Experimental and Research farms at Hinsdale, Illinois. Active participation in their workshops also helped me in the study of all the recent developments and improvements in the design of the agricultural Implements carried out at these experimental farms.

Educational Tours were arranged for me to get a thorough grasp of the manufacturing processes involved in the manufacture of Tractors and other agricultural Impelements at their various factories in the vicinity of Chicago like the 1. McCormick Deering Works and Twine Mills at Blue Island.
2, International Harvester Tractor Works at Chicago.
3. West Pullman Works where all precision bearings are manufactured for use in all International equipments.
4. Milwaukee Works and others in the vicinity.

Practical Training and Attended the Soil Conservation Experimental Station and the School at the Training Centre at La Crosse, Wisconsin-June '47 to July '47

The following subjects were reviewed-

1. Soil and Plant Relationship.
2. Agricultural Engineering Surveys.
3. Water Disposal.
4. Erosion-Soil Conservation Experiments.
5. Herbaceous and Woody Plants
6. Farm Management Conseideartions
7. Development of a Farm Conservation Plan.

Successfully graduated from the School securing a Grade. ' Excellent ' in all the subjects and the following were the remarks quoted in the certificate of Award:-

" An outstanding individual who should do excellent work in his Field, and he has the ability to decide what is important and what is not "

Practical Training with the Soil Conservation Service, of the U.S.Department of Agriculturefrom June '46 till 'June '47-

On successful completion of the La Crosse Basic Training Corse I was awarded a Fellowship to have my Training with the Soil Conservation Service, for my Training before I reverted back to the International Harvester Co-

After a period of orientation at the Regional Office for the West Coast at Portland and the State Offices at Berkeley I started my Field Training at the Various centres as directed by the Soil Conservation Service studying the following-

Need for Erosion control and its need in India-Causes of Erosion-Land Classification for proper land use-Land use on the Farm-Problems handled in California similar to those likely in the province of Madras-
Sheet, Gully and Streambank Erosion.
Deterioration of Range Lands.
Water Wastage and water-logged lands.
Erosion caused by wind.
Misuse of land in various farms.

Remedial practices adopted-
Contour planting and cultivation.
Subsoiling and Terracing.
Crop residue and its utilisation.
Channel and Bank protection.
Stubble mulching-
Cover cropping and strip cropping.
Tree Planting and Check dams.
Soil Conservation amd Water problems on Farm and Range Lands.

Special emphasis was paid to the Agricultural Implements used by the Soil Conservation Services-
Drag Scrapers and their study in Land levelling- Carryall for cut and fill levelling- Bull dozers for filling gullies and removing brushes- FloatLeveller for finished Grading after rough levelling.

Study of the principles involved in Terracing-
Building the terraces with the Plows - Building terraces with the Bull grader and the Blade- terrace maintenance-

Study of the various International and other Agricultural Implements used in the various conservation methods adopted for preventing erosion of soil.

Practical Training with the International Harvester Agency and Branch House of the International Harvester Co of Chicago from July '47 to March '48 when the two year period of stay expires-

The Practical Training consists in actually working in the Farm Workshops of the International Harvester Agency to get thoroughly acquainted with the Overhaul, Upkeep and Maintenance of all agricultural Implements,
And to see the demonstration of all the various Implements actually working in the Farms where International Harvester Equipment is being used.

A series of Blue Ribbon Practical Training Courses and Dealer Salesman Courses are being sent periodically from Chicago and assignments are allotted for the study of all the various agricultural Implements.

The following Blue Ribbon Training Courses have been completed:-

1. Blue Ribbon Training Courses for the Farmall M and AV Tractors and for the Farmall M and U-4 Power Unit.
2. Blue Ribbon Courses and Dealer Salesman Course for the Harvester Thresher.

The Study of the following Implements have been made in their overhaul, upkeep amd maintenance-

1. Study of McCormick Deering Trailer Mower No.9.
2. Study of McCormick Deering Self-dump Hay Rake Type M-
3. Study of McCormick Deering Improved All Purpose Farm Truck.
4. Study of Sub-Soilers.
5. McCormick Deering Tractor Manure Spreader.
6. Study of McCormick Deering ~~Mxxxxxx~~ Lime Spreader.
7. Study of Installation and Operation of TD-9 Bucyrus Erie Bull Grader.

The Following Agricultural Implements will be studied during the 4 months that follow till March '48 and the Blue Ribbon Courses studied will be-

1. Blue Ribbon Training Course for the Farmall A and AV; and B and BN; and the U-2 Power Unit.
2. Blue Ribbon Courses for the most useful tractors for India, the Trac--Tractors of the type TD-6; TD-9; TD-18;TD-14; and the T-6; T-9- series.
3. Blue Ribbon Course for the latest and the most useful Tractor for small Farms similar to those in India- the Farmall 'CUB'-
4. Blue Ribbon Course for the McCormick Deering Orchard and Grove Tractors, the O) and O)-4 Series.

The following Implements will also be studied;-

1. Farmall Cub 22 Mower.
2. McCormick Deering Cub-151 Plow.
3. McCormick Deering Double Run Feed Drills.
4. Side Delivery Rakes.
5. No 18 Highway Mower.
6. Study of the Hydraulic Remote Control Lift for the O4 and OS4 Tractors.
7. McCormick Deering Cream Seperator.
8. McCormick Deering Tractor Genius Plow No10.
9. Study of Bucyrus Erie Cable Power Control Winch for International Tractors.
10. Bucyrus Erie P-24 Winch and TD-14 Trac-Tractor.
11. McCormick Deering A-437 Cultivators.
12. Study of the Pneumatic Liftall for all Tractors.
13. McCormick Deering No.192 A 12" Bottom and other Plows.
14. Model Td-35 Diesel Trac Tractor.

The Practical Training also consists in going with the field men in participating in the actual demonstrations in the correct use and operation of the vrious implements in the fields.

Two special demonstrations were attende till now-

1. The Demonstartion for the new Farmall 'CUB ' the latest Tractor in the field of Agriculture and which has a great future for use in the Farms of India.
2. The Demonstartion of the Atlas Scraper Unit at the Santa Ynez Vallley at the San Lucas Ranch.

The Training is proving exteremely useful and the actual oppurtunity to work with the implements in their overhaul as well as in their operation is giving me an experience that is bound to prove exteremly useful in the work in India.

31/12/12

Copy of letter No. G.401/45 dated 13th December 1947
From the Educational Liaison Officer, Washington, to
the Ministry of Education, Government of India, New Delhi.

In continuation of my letter of even number dated December 11th 1947, I enclose a copy of a further report received for the 1945 Madras candidate Mr. V.G. Rao

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REPORT OF STUDY OF DEALER SALESMAN COURSE IN TRAC-TRACTORS FOR AGRICULTURE OF INTERNATIONAL HARVESTER.

Training Assignment No. 1.
List reasons that Trac Tractors are adaptable to this trade territory.

Balmced Power - Power economy and Operator Comfort - Ease in control and operation- Accessibility-Superior quality construction- Variery of working speeds- Fine engine desig Large, accessible over-centre type engine clutch- East operating multiple disc steering clutch- Positive track alignment- Track shoes keyed to track links- Special Equipment and attachments available for every need - Outstanding features of track rollers-
The T-6 and TD-6- Harvester's answer to growing demand for small crawler tractors- handles 3 04 4-bottom moldborad plow or 6-furrow disc plow-
The T-9 and TD-9- Medium small member of the family to meet most power requirements of crawler tractors users- Handles 4- or 5-bottom moldboard plows or 7-furrow disc plows-
The T-14 and TD-14- Medium large member of family- handles 5 to 8- bottom moldboard plow, or 6 or 7 furrow disc plows- Has the famour Harvester 4 cycle fuel diesel engine with gasoline conversion starting system-
The TD-18- Largest member of tractor family- handles up to 12 bottom moldboard plow or three 7 furrow disc plows- Has a heavy duty, 6 cylinder diesel engine and is an outstanding example of economical power-

Training assignment No.2.

Assisted in servicing and delivering 3 new Trac-Tractors to the Santa Ynez Valley and in the vicinity- Two TD-6's and a T-6*

Training Assignment No 3-

Operated a Td-6 Trac Tractor in the field in the Pos Publes Ranch off Highway 101 near Santa Barbara County to study its mechanical principles involved in operating the tractor as different from the Farmalls-

Training Assignment No 4-

Studied the answers and got thoroughly acquainted with all the essential features of the Trac Tractors and to all the answers listed in the questions enclosed with the Dealer Salesman course- Studies the Literature connected with them as well-

Training assignments No 5-

Study all manuals connected with it- And also studied the principles involved in the operation, overhaul and maintenance of the Trac Tractor under question a T-6 Trac Tractor-

Study of specifications- Instruments and control - Precautions to be observed when starting a new tractor-
Lubrication - Study of the engine cooling system- Study of the fuel system- Operating a distillate- gasoline engine on distillate- function of radiator shutter- Manifold heat control- starting the engine,during warm weather or with engine warm- during cold weather or with engine cold- after engine starts- after engine warms up- stopping the engine- manifold shield and its function-
Study of operating of high-compression gasoline engine- points to note in driving the Tractor- gear shifting, 5 speeds forward- engine speed control lever- steering the tractor-Operating over an obstruction- steering down grade-
Study of operating precautions and rules for safety in tractor operation- how to drain the system-tracks frozen to ground and its remedy- use of anti-freeze solutions and their use-
Periodic inspections- pts to be libricated after 10 hours of operation- after 60 hrs- after 120 hrs- after 250 hrs- after 400 hrs of operation respectively-
Precautions to be noted in storing and housing the tractor-pts to note in starting the engines that have been in storage-
Brakes (steering)- how to adjust them- how to renew brake linings-
Minor Chassis service operation- how to wash transmission- how to replace main frame parts - Study of 12" over centre engine clutch- care of the clutch, operation and adjustment- how to adjust-

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Draft Telegram

35/14 Edn Hlth 14

Telegram and P.C. issued

Educind
New Delhi

Reference Your Letter [No] F. 3-11/45-OD IV (dated) Twentieth Instant regarding (Mr) C. Viswanatha Rao, 1945 Scholar Stop This Govt agree (to) ~~Scholarship~~ extension of period of scholarship upto April 1948 Stop (It is) Presumed (that the Govt of) India will bear half (the) cost (of) Scholar ['s training (for) this period ~~also~~

29.1.48

Pc to Secy to Govt of India, Ministry of Edn, New Delhi, 3

29.1.48

JRM 29/1/48

Edhealth.

29/1/48

Cooling system- how to clean dirt and sludge- how to fill cooling system- care of the radiator- how to adjust, remove and replace the fan belt- water pump packing and how to remove the water pump- how to install water pump-

Study of the principal components of the Tractor- the engine- the engine clutch- transmission- steering clutches- sprocket drives- track assemblies- specifications- Study of main points of lubrication before starting a tractor-
Study of cooling system-
Study of fuel system-
Study of electrical system-
Study of working of controls and instruments-
Precautions in maintenance of electrical equipment- storage battery and its care-

CABLE CORW STATE

INDEMBASSY

WASHINGTON

F 3/11/45/ODIV REFERENCE YOUR LETTER G 401/45 ELEVENTH DECEMBER 1947 AND THIS MINISTRY ENDORSEMENT EVEN NUMBER TWENTIETH JANUARY 1948 REGARDING EXTENSION IN SCHOLARSHIP PERIOD FOR G VISWANATHA RAO 1945 MADRAS SCHOLAR AAA PROVINCIAL GOVT AGREE EXTEN ION UPTO APRIL 1948 AAA GOVT OF INDIA ALSO AGREE AAA

EDUCIND

Post copy by air mail.
Copy to the Secretary to the Govt. of Madras, Education and Public Health Deptt., Madras, with reference to his ✱ telegram dated the 2nd Feb., 1948. Mr. G. Viswanatha Rao will continue to be treated as a Provincial Govt. sponsored scholar the expenditure on whose studies will be shared equally between the Provincial and Central Govts.

A copy of the report on the scholar's training with the International Harvester, Chicago is also forwarded herewith, for the information of the Provincial Govt.

D K Hujgoram
for Secretary,
Ministry of Education,
New Delhi 3, the 9th Feb., 1948.

REPORT OF OBSERVATIONS MADE WITH THE INTERNATIONAL HARVESTER IMPLEMENTS

37
16
18

McCormick D eering Cream Separator

Installation-Operation and maintenance - Assembling the Separator - Precautions and points to note before installing or operating the separator - cleaning the separator - assembling the bowl after cleaning - function of the bowl housing drain - care of rubber ring - drying the bowl - removing the discs from the bowl - taking the bowl apart - washing the bowl and discs.

Operation of separator - clarifying the milk-cran speed and its control - flushing bowl - opening the faucet - making butter - making perfect cream - making dairy spread - milk regulating screws and their function - skimming - standardising the milk.

Power Drive-study of adjustments and minor operations-removing and replacing the bowl spindle - removing and replacing spindle drive gear and bearings - study of a cross-sectional view of a Cream Separator.

McCormick Deering Tractor Plow No. 10. (3 and 4 furrow)

Study of instructions for adjusting and operation - Lubrication - Necessity for removing the varnish before starting the plow - scouring - horizontal hitch adjustment and how to adjust it - hitch point with relation to side draft - vertical hitch adjustment - method of adjusting the roller coutlers - function of plain jointers - raising and lowering the plow - how to adjust the rear wheel - removing quick detachable shares - how to sharpen the plow-shares properly - precautions fundamentally essential in operation of a plow.

Method of setting up 3 or 4 furrow plows - beams and braces - clutch and its function - furrow axle and wheel hand axle and hitch - plow bottoms - pneumatic tyre wheels - raising cranks rolling coulter shank and clamp-spring release hitch-attaching rolling coulters - adjustments of land and furrow wheels - Points to note in the maintenance on the farm.

No. 18 Highway Mower

Principles involved in setting up and operation. Principal points to note in lubrication - rear housing and gear case - Push pipe guide - Points at which pressure gun is to be used daily - and points to be attended weekly.

Study of mechanical points of interest. The driving mechanism - Inner shoe height control - automatic safety release - Lead or cutter bar alignment - Tilting the cutter bar and register of knife - Lifting knife - Guard ledger plates - knife clips - wearing plates and sections - grass board - how to regulate the height of cut - how to regulate the cutter bar for transportation - wheel positions.

Study of instructions of setting up - Methods of attaching an d removing the pitman - Utility of tractor power knife grinder andknife rack.

Lift-All Hydraulic Remote control Lift for O-4 and OS-4-Tractor

Study of special features such as the 3-3/8 x 4½x4 Cylinder gasoline engine with distributor ignition - Principle of operation of remote control lift - To mise the implement - To lower the implement - Precautions in attaching the implement and operating it -

Study of O-4 Hydraulic System complete - Remote control cylinder assembly - Control Valve and auxiliary control valve and hose connections - Oil reservoir and strainer - safety valve assembly.

Lubrication-Distribution cap - method of adjusting the ignition timing - Utility of Hydraulic lift-all system - Its possible application to all agricultural Implements.

4/17

17

McCormich Deering A-437-Cultivators for use with Farmall A Tractor
(4 Row vegetable)

Method of setting up - Tool equipment - right and left side of tractor- Tool bar attachment - function and utility of rear track sweep attachment - Study of independent lift rear section - method of attaching double tool bar attachment - cultivator shield and its attachment - use and utility of disc hillers -

Method of adjusting and operating shields - setting up of sweeps and shovels - spring trips and their function - Parallel link adjustment - pressure rods and their adjustment - pressure springs and raising springs - adjustment of width of rows-20" -15" -16" - etc.

Setting up and Operation of Pneumatic Lift-All Connections for McCormick Deering Farmall Cultivator A-437

Study of Lift-all connecting parts - Instructions in attachment of adjusting lever (rear section) - cultivator connecting parts - front lifting rock shat - pneumatic liftall connecting parts - rear rock shaft - adjusting levers and supports - front lifting rock shaft - Rear rock shaft - Lubrication.

BuCyrus Erie Cable operated Bull Grader & P-24 Winch with TD-14 Tractor

Study of installation instructions - Installation of the Winch - remove I.H. fenders - install Bucyrus Erie fenders - remove lubrication fittings - assemble right and left rear outer supports - assemble the front inner supports - install right and left blade support beam - secure all bolts - Instal balde support beam braces - place adaptor ends of main frame on trunnions with sheave frame - reeve cable over sheaves in blade support beams and on main frame - Place blade in working position on the ground or blocks - Installation of winch on Tractor-Operation of the winch- how to adjust the clutch ban and the brake bands etc.

Overseas Scholarships 1945-46 - Mr. G. Visvanatha Rao - Extension in the period of Scholarship

C.No.5719 Edn, From the C. of I., No. F.3-11/45-ODIV dt. 20-1-48

Pl. see the letter from the C. of I. and its enclosures on pp 1-3 ante. Mr. G. Visvanatha Rao is a Scholar selected in 1945-46 for advanced Studies in "Mechanical Engg - Manufacture of Agricultural Implements" and is intended, after completion of Studies, for absorption in Industries (Govt and Private Enterprise). Mr. Visvanatha Rao's normal period of Scholarship ~~had~~ expired by Dec 47, having reached the U.K. in Dec 45 though subsequently he was sent to the U.S.A. for his Studies. The Edl. Liaison Officer attached to the Indian Embassy at Washington and the C. of I. recommend that an extension of 4 months ~~may be given for~~ in the period of Scholarship may be given to Mr. Visvanatha Rao to complete his training at the International Harvester. In the Circumstances stated by the C. of I. in their letter ~~on~~ pp 1-2 ante and in view of the fact that notwithstanding the present proposal, the Scholar will have to be granted an extension as he has already overstayed the normal period of two years, the extension proposed in his Studies upto April 48 may, ~~perhaps~~ be granted.

Dev and Fin. may see for remarks before circulation.

Edn U.O.5719/Edn/48-1 27/1/48 ES 26-1-48 27.1.48

27/1/48 S/Sec/1148 Dev: Fin.

11153 DI/48 27.1.48

To AS

Dev. Dept (II)

The letter from the Govt of India and its enclosures at pp 1-33 ante and the notes of the E&PH Dept at p 1 above may be perused. ~~This Dept~~ The views of the E&PH at 'H' in p 1 above may be accepted in this Dept and the file passed on to Fin.

CPL 28.1.48 JS

Hn 27.1.48 Hn 28/1/48

Hn 28/1 Fin

SECRETARY TO GOVERNMENT 5246 END 29 JAN 1948 FINANCE DEPARTMENT

DEV. NO/NG 1145 DI 29.1.48

6 MAR 48

Finance E III

Please see the notes of E.P.H and Devt from p 1 above. This deptt may agree to the proposal of E.P.H at ~~1~~ 'H' above. While sending a reply to the Govt of India, E.P.H will, no doubt, express the usual presumption that (50% of) the Cost on the scholar during the period of extension will be ~~shared by us on 50:50 basis~~ borne by the Govt of India ~~and this Govt as usual~~.

Hn 28.1.48 Hn 29/1/48

6883

MR 29/1/48

EPH (C2)

Fin. no 524 (E III) 29/1/48.

A draft telegram is submitted for approval. H.M (Edn) and H.M (And) may see.

DR 29/1/48 DR 29/1/48 Hn (Edn) Hn (And)

EJ 29-1-48 CVRA 29.1.48

Hn 30/1 SECRETARIAT, EDN. AND P.H. DEPT. 30 JAN 1948 GOVERNMENT OF MADRAS

TSA 30-1-48

(Issued as Telegram 2 p/1/48.
From The Govt of India Endt No F. 3-11/45-OD IV (2) 9-2-48)

Pl. see the Endt from the Govt of India and its enclosures on pp 37-41 infra. No further action is called for on this file. The papers may be recorded after perusal by Dev & Fin.

DR 26948 D2/48 Edn No 5719 C2/48-2 4/3/48

EJ 26-1-48 CVRA 29.1.48

Dev: Dept

To AS

[This Department last noted in this case at p 2 above.]

19

The Endt from the G.o.I and its enclosures at pp 37-41 ante and the notes of E&PH at p 2 above, may be perused and the file passed on to Fin Dept.

Hn 5.3.48 Hn 5/3/48

CPL 12-3-48 Fin

Finance E III

Dev. No 26946 D2/48-1 12.3.48.

A/c p 37 ante

ASST. SECRETARY TO GOVERNMENT 1741 13 MAR 1948 FINANCE DEPARTMENT

(Previous note of Finance on p 2 above)

The further communication from the Govt of India, together with the enclosures at pp 37-41 ante and the note of E.P.H at the bottom of p 2 above may be perused and the case returned to E.P.H

DR 15.3.48 DR 15.3.48

2 15/3 E-PH-(C2)

Fin. no 1674 1 E III 15/3/48.

E.P.H

The papers may be

Co. no 595 Edn dt 2p 3-48

Recorded

DR 15/3/48

GOVERNMENT OF MADRAS 19 MAR 1948 EDUCATION AND PUBLIC HEALTH DEPARTMENT

19817

EJ 17-3-48

Govt. Tech. Edn. Bursar-1945-46. Mr. K. Viswanatha Rao - Extension of the period of scholarship granted - papers - Recorded.