Irrigation projects on North-West Stations

W. N. Nunn
IRRIGATION PROJECTS

By W. M. NUNN,
B.Sc. (Agric.),
Officer-in-Charge,
North-West Branch

OPINION varies considerably as to the economics of irrigation projects on station properties. Some consider that they offer a potential that should be assessed and developed wherever possible, while others incline to the view that the effort and capital put into them would always be better spent on improvements leading to better management of the broader acres of the general grazing area.

The truth of the matter undoubtedly lies somewhere in between these extreme views, and a separate decision must be made for each station according to the opportunity and need in each case.

There are many stations which have the water and soil, and which could produce reserves of fodder at much lower cost than they eventually pay for it in drought periods.

Fig. 1.—An uncut crop of lucerne, Doman Estates, Wiluna
There are probably some instances also, where the time and interest lavished on the lucerne plot may have detracted from management requirements farther from home.

One thing is certain, and that is that if the job's worth doing, it's worth doing properly. If you really have the water supply, the soil and the opportunity, then you should get reliable advice and make a thorough job of it.

Eight tons of lucerne hay per year is a reasonable yield to expect per acre, and lucerne hay, well made and stacked on the property, is probably worth three or four times as much in feed value as the indifferent cereal hay which is landed on the station in time of need, at perhaps £30 or £40 per ton.

In this article it is not intended to urge stations into lucerne production, but simply to bring to the notice of station people the wide range of possibilities, and to show, principally by means of illustrations, the varied methods in operation on North-West and Kimberley properties.

In the Murchison area, Mr. Finch at Lorna Glen, Doman Estates at Wiluna, and Mr. Meehan at Austin Downs, have each grown upwards of 20 acres of lucerne in recent years. Water in each of these instances is pumped from wells or bores which tap supplies in water bearing fluviatile sediments at comparatively shallow depth.

At Wiluna the water is only 12-20 feet down, in a series of wells, and five 3-inch low level centrifugals, separately operated by small stationary engines, deliver a total of about 30,000 gallons per hour to the irrigation channels. Mr. Fowler who manages this project, claims that he gets eight cuts per year and averages 25 cwt. per cut.
Mr. Meehan has a central powerhouse in which a 34 h.p. Ruston Hornsby engine supplies 440-volt, 50-cycle A.C. current, to operate a series of electric motors driving vertical spindle centrifugal pumps at the water points. He is one who hopes to expand his lucerne operations as a major part of his station operation and sheep-feeding programme.

Mr. Finch is about to start a very interesting system to try and make his water go further than it did with conventional flood irrigation. He now has about 50,000 gallons per hour from five bores, each separately equipped with engine and pump, and he will send this water over comparatively large areas via a system of furrows which he has made with a furrow opener of his own design and construction, pulled by a 60 h.p. crawler tractor. He is counting on the hard pan a few feet down to spread the water laterally from these furrows.

In Kimberley there are a number of small-scale projects using water from river pools. Perhaps the two that serve best to illustrate the method and problem in this region, are Liveringa and Noonkanbah.

At Liveringa the soil is rather heavy for lucerne, but *Paspalum scrobiculatum* and *Clitoria* give promise as a pasture and hay crop. The electric motor at the pump on the billabong is operated by power line from the main station powerhouse, which seems to operate just everything on Liveringa, and, as can be seen from the illustration, there is provision for running the motor and pump up a 20ft. tower to clear flood waters when the Fitzroy really flows.
At Noonkanbah the lucerne plot is clear of flood waters, but the pump again has to rise and fall with the river level, so the pump and engine are mounted on a pontoon anchored to the river bank.

Boolaloo, on the Ashburton River, is the site of the most ambitious of station irrigation ventures yet started. Here Dr. B. Rumich, a former officer of the Department of Agriculture, has gone into partnership with the Barrett-Lennard Bros. of Boolaloo Pastoral Co. The partnership calls itself Ashburton Development Pty. Ltd., and their aim is 200 acres of lucerne producing 2,000 tons of lucerne hay per year, and providing, regularly, the main proportion of the feed ration for probably 8,000 sheep.

Water is pumped from a pool in the Ashburton River. A 7-inch and a 4-inch centrifugal between them, deliver at a rate of 140,000 gallons per hour, and cutting and baling will be carried out on 40 acres of lucerne and 30 acres of Sudan grass this summer.

Next year they hope to increase plantings at this site to water 100 acres of lucerne, and then to duplicate the entire installation at another river pool a few miles downstream.

The better management of station country, getting away from the continuous grazing practice which inevitably leads to the disappearance of the better feed...
species and their replacement by less desirable types or by soil erosion, must be our number one urge for the pastoral areas in general. But where lucerne production is practicable on a worthwhile scale, it is not difficult to imagine seasonal handfeeding playing an important part in future, in enabling a station to defer grazing at appropriate periods on areas selected for regenerative treatment.

---

**FARMERS! PASTORALISTS! GRAZIERS!**

**FOR YOUR TIMBERCUTTING CLEARING FENCING**

You MUST have a **“TREECLEARGER” PORTABLE CIRCULAR SAW AND ATTACHMENTS**

- **SLIDING TOP BENCH**
- **AIR COMPRESSOR**
- **POST-HOLE DIGGER**
- **FENCE POST BORER**

Self-propelled on both wheels . . . Power range from 5 H.P. to 14 H.P. . . . Solid tubular steel frame, light but strong . . . Fully guaranteed

Write now for Illustrated Literature, Price, Terms, Etc.

**GEORGE MOSS PTY. LTD.**

**OFFICE & WORKS, 10 WOOLWICH ST., LEEDERVILLE. Phone W 2371**

Please mention the “Journal of Agriculture, W.A.,” when writing to advertisers
When you receive your Mobilco in its sturdy carton with fuel tin, oil measure, high quality tool kit and guarantee card, it's a good enough sight and it spells quality all the way through... But it is not until you take this mighty little monster and press the chain deep into a hardwood log that you realise what a good machine you have got. There is light weight here and full genuine five horsepower performance... enough to keep a man going day after day, year after year, turning timber into profit at a minimum of toil and sweat.

Write for all the details now. They will be posted to you right away.

Mobilco ONE-MAN CHAIN SAW

QUICK SERVICE COUPON
Please send me straight away and without obligation all details of the Mobilco chain saw.
Name.................................................................
Address................................................................

MOBILE INDUSTRIAL EQUIPMENT LTD.
293 HAY STREET, EAST PERTH - PHONE: BF 2971 and BF 2617
HEAD OFFICE: 410-422 WHITEHORSE RD., MITCHAM, VIC. Phone: WU 2771 (10 lines)
BRANCHES: - SYDNEY, ADELAIDE, BRISBANE
AGENTS: LAUNCESTON AND HOBART. - Authorised Dealers throughout Australia.