NINE varieties of alfalfa have been registered previously, as follows: Ranger, Buffalo, and Meeker Baltic (4); Narragansett (1); Vernal (2); and Atlantic, Cali- 
verde, Lahontan, and Williamsburg (3). Three new varie-
ties are included in this registration.

MOAPA (Reg. No. 10)

Moapa was developed by the U. S. Department of Agri-
culture, Crops Research Division, and the Nevada Agricul-
tural Experiment Station, in cooperation with the Ento-
mology Research Division, Agricultural Research Service,
U. S. Department of Agriculture. It was released by the 
foregoing agencies and the Agricultural Experiment Sta-
tions of Arizona and California in 1957.

Moapa is a synthetic variety consisting of the seed in-
crease of nine spotted alfalfa aphid-resistant clones (C-903 
through C-911), which were selected from the aphid-
susceptible variety African. Clones C-904 through C-910 
were selected from a 6-year-old field of alfalfa in Moapa 
Valley, Nevada, C-911 from an established field in Coa-
chella Valley, California, and C-903 from seedling plants 
grown in the greenhouse.

Moapa is highly resistant to the spotted alfalfa aphid.
Field tests of Moapa have shown good establishment and 
unimpaired growth under heavy infestation of the spotted 
alalfa aphid, whereas stands of susceptible varieties failed 
or were greatly reduced in growth. Greenhouse tests of 
seedling plants showed that Moapa had a level of resist-
ance equal to that of Lahontan.

In 1958, a new biotype of the spotted alfalfa aphid was 
discovered near El Centro, California, and designated as Ent. A (5). Four of the 9 parent clones (C-903, C-908, 
C-910, and C-911) were moderately susceptible to the new 
race in cage tests. The remaining five parent clones were 
resistant. The new race has not spread beyond the area in 
which it was first found so has not as yet become a problem under field conditions. Each of the nine parent clones has 
continued to be resistant to the common form (Ent. B) of 
the aphid found in the field.

Moapa is a non-winter-hardy variety. It is much like 
African in growth characteristics but is somewhat darker 
green. Moapa is more resistant to bacterial wilt than 
African but less resistant than Ranger. It is expected to give 
best performance in areas where African has been recom-
mended in the past. Additional information on perform-
ance is available (6).

Certified seed for the first commercial hay fields became 
available in the fall of 1958. Production of certified seed 
in 1959 was estimated to be about 2 1/2 million pounds. 
Breeder seed of Moapa is obtained from rooted cuttings of 
the nine parent plants grown in an isolated natural crossing 
block. It is constituted by mixing equal amounts of seed 
from each parent.

Application for registration was submitted and informa-
tion on the origin, history, and performance was provided 
by Oliver F. Smith.

NEW MEXICO 11-1 (Reg. No. 11)

New Mexico 11-1 was developed by Glen Staten, of the 
New Mexico Agricultural Experiment Station, and released 
in 1953. It is a synthetic variety consisting of six lines 
maintained by seed. Four of them originated from New 
Mexico Common, one from Buffalo, and one from a Virginia strain.

In 8 New Mexico tests, the new variety yielded 
1% more than New Mexico Common, and was somewhat more 
resistant to bacterial and Fusarium wilts (7). Hay from 
this variety is leafy and high in quality. New Mexico 11-1 
begins growth a little earlier in the spring than New 
Mexico Common and recovers a little more quickly after 
cutting, but has a definite dormant period during the 
winter. Its foliage is darker green than that of New Mexico 
Common. New Mexico 11-1 is susceptible to the spotted 
alalfa aphid, however. For that reason, it is expected that 
it will be replaced in time by the variety Zia.

New Mexico 11-1 has yielded well in blocks and in commercial seed fields. There were approximately 16,500 pounds of certified seed produced in 1959.

Application for registration was submitted and informa-
tion on the origin, history, and performance was provided 
by B. A. Melton.

ZIA (Reg. No. 12)

Zia was developed at the New Mexico Agricultural 
Experiment Station by M. L. Wilson, B. A. Melton, and 
C. E. Watson. The variety was released in 1957.

Zia was bred for resistance to the spotted 
alalfa aphid. New Mexico tests also have shown that it has...